This chapter includes the automobiles scenario in general and in India in particular. It includes the background, history of development growth rate in automobiles, key statistics and future prospects of automobile industries in India. The supply chain of automobile industries is also presented. A comprehensive list of automobile manufactures in India and foreign companies manufacturing or assembling automobiles in India has also been prepared. The information presented in this chaptered is gathered directly from From Wikipedia, the free encyclopaedia and other websites available on internet.

5.1 INTRODUCTION

During early 60s & 70s, automobiles came largely in twos.

- In scooters, you had a Lambretta or a Vespa.
- In motorcycles, you had a Bullet or a Java.
- In cars, you had to choose between an Ambassador and a Fiat.
- In trucks, it was either an Ashok Leyland or a Tata.
- In tractors, it was between a Swaraj and a Mahindra.

This situation reflected the India of yester years. Economic reforms and deregulation have transformed that scene. Automobile industry has written a new inspirational tale. It is a tale of exciting multiplicity, unparalleled growth and amusing consumer experience – all within a few years. India has already become one of the fastest growing automobile markets in the world. This is a tribute to leaders and managers in the industry and, equally to policy planners. The automobile industry has the opportunity to go beyond this remarkable achievement. The Indian automobile industry is going through a technological change where each firm is engaged in changing its processes and technologies to maintain the competitive advantage. Starting from the
two wheelers, trucks, and tractors to the multi utility vehicles, commercial
vehicles and the luxury vehicles, the Indian automobile industry has achieved
splendid achievement in the recent years. “The opportunity is staring in your
face. It comes only once. If you miss it, you will not get it again”.

On the canvas of the Indian economy, auto industry maintains a high-
flyng place. Due to its deep frontward and rearward linkages with several
key segments of the economy, automobile industry has a strong multiplier
effect and is capable of being the driver of economic growth. A sound
transportation system plays an essential role in the country’s rapid economic
and industrial development. The well-developed Indian automotive industry
skillfully fulfils this catalytic role by producing a wide variety of vehicles:
passenger cars, commercial vehicles, multi-utility vehicles such as jeeps,
motorcycles, three wheelers, tractors etc. The automotive sector is one of the
core industries of the Indian economy, whose prospect is reflective of the
economic resilience of the country. Continuous economic liberalization over
the years by the government of India has resulted in making India as one of
the prime business destination for many global automotive players. The
automotive sector in India is growing at around 18 per cent per annum.

“The auto industry is just a multiplier, a driver for employment, for
investment, for technology”. The Indian automotive industry started its new
journey from 1991 with delicensing of the sector and subsequent opening up
for 100 per cent FDI through automatic route. Since then almost all the global
majors have set up their facilities in India. The automobile sector has been
contributing its share to the shining economic performance of India in the
recent years. With the Indian middle class earning higher per capita income,
more people are ready to own private vehicles including cars and two-
wheelers. Product movements and manned services have boosted in the sales
of medium and sized commercial vehicles for passenger and goods transport.
Side by side with fresh vehicle sales growth, the automotive components
sector has witnessed big growth.
5.2 AUTOMOBILE INDUSTRY IN INDIA - AN OVERVIEW

The Indian Automobile Industry manufactures over 11 million vehicles and exports about 1.5 million each year. The dominant products of the industry are two-wheelers with a market share of over 75% and passenger cars with a market share of about 16%. Commercial vehicles and three-wheelers share about 9% of the market between them. About 91% of the vehicles sold are used by households and only about 9% for commercial purposes. The industry has a turnover of more than USD $35 billion and provides direct and indirect employment to over 13 million people. The supply chain is similar to the supply chain of the automotive industry in Europe and America.

Interestingly, the level of trade exports in this sector in India has been medium and imports have been low. However, this is rapidly changing and both exports and imports are increasing. The demand determinants of the industry are factors like affordability, product innovation, infrastructure and price of fuel. Also, the basis of competition in the sector is high and increasing, and its life cycle stage is growth. With a rapidly growing middle class, all the advantages of this sector in India are yet to be leveraged. With a high cost of developing production facilities, limited accessibility to new technology, and increasing competition, the barriers to enter the Indian Automotive sector are high. On the other hand, India has a well-developed tax structure. The power to levy taxes and duties is distributed among the three tiers of Government. The cost structure of the industry is fairly traditional, but the profitability of motor vehicle manufacturers has been rising over the past five years. Major players, like Tata Motors and Maruti Suzuki have material cost of about 80% but are recording profits after tax of about 6% to 11%.

The level of technology change in the Motor vehicle Industry has been high but, the rate of change in technology has been medium. Investment in
the technology by the producers has been high. System-vendors of integrated components and sub-systems have become the order of the day. However, further investment in new technologies will help the industry be more competitive. Over the past few years, the industry has been volatile. Currently, India's increasing per capita disposable income which is expected to rise by 106% by 2015 and growth in exports is playing a major role in the rise and competitiveness of the industry.

Tata Motors is leading the commercial vehicle segment with a market share of about 64%. Maruti Suzuki is leading the passenger vehicle segment with a market share of 46%. Hyundai Motor India and Mahindra and Mahindra are focusing expanding their footprint in the overseas market. Hero Honda Motors is occupying over 41% and sharing 26% of the two-wheeler market in India with Bajaj Auto. Bajaj Auto in itself is occupying about 58% of the three-wheeler market. Consumers are very important of the survival of the Motor Vehicle manufacturing industry. In 2008-09, customer sentiment dropped, which burned on the augmentation in demand of cars. Steel is the major input used by manufacturers and the rise in price of steel is putting a cost pressure on manufacturers and cost is getting transferred to the end consumer. The price of oil and petrol affect the driving habits of consumers and the type of car they buy.

The key to success in the industry is to improve labour productivity, labour flexibility, and capital efficiency. Having quality manpower, infrastructure improvements, and raw material availability also play a major role. Access to latest and most efficient technology and techniques will bring competitive advantage to the major players. Utilizing manufacturing plants to optimum level and understanding implications from the government policies are the essentials in the Automotive Industry of India.

Both, Industry and Indian Government are obligated to intervene in the Indian Automotive industry. The Indian government should facilitate
infrastructure creation, create favourable and predictable business environment, attract investment and promote research and development. The role of Industry will primarily be in designing and manufacturing products of world-class quality establishing cost competitiveness and improving productivity in labour and in capital. With a combined effort, the Indian Automotive industry will emerge as the destination of choice in the world for design and manufacturing of automobiles.

5.3 TRACTOR INDUSTRY IN INDIA – AN OVERVIEW

Recovery in industrial performance and fiscal incentives initiated by the government of India during the global slowdown has led to a substantial growth in the overall economy and also agricultural sector. Tractor industry plays an important part as agriculture sector has a major contribution to India’s GDP. Tractors are part of agricultural machinery industry. Tractors came to India through imports and later on were indigenously manufactured with the help of foreign collaborations. The manufacturing process started in 1961-62. Indian tractor industry is relatively young but now has become the largest market worldwide.

There are currently 14 players in the industry. Mahindra & Mahindra is the leading player in the industry. Monsoon season is a key driver for sales of tractors. A series of good or bad monsoon can affect the sales. In recent years the industry has registered a good growth in sales, both domestic as well as exports. This is also partly because of the initiative of the government to boost up agriculture and agricultural machinery industry. The tractor penetration level in India is very low as compared to the world standards. Also the penetration levels are also not uniform throughout the country. While the northern region is now almost saturated in terms of new tractor sales, the southern region is still under penetrated. The medium horse power category tractors, 31-40 HP, are the most popular in the country and fastest growing segment.
Currently low levels of tractor penetration in India, strong governmental focus on availability of finance for agriculture mechanization tools and on rural development and high irrigation potential will drive the overall growth of the tractor industry. In addition, government initiatives such as the implementation of National Rural Employment Guarantee Act (NREGA) and increased usage in non-agricultural domains such as haulage in construction and infrastructure projects will further increase demand of tractors. Also, many manufacturers are introducing new models of tractors into the market to leverage the growing demand.

Main manufacturers of tractors in India include Mahindra and Mahindra, Escorts, TAFE Ltd, ITL and Eicher. The industry is dominated by Mahindra and Mahindra (M&M) followed by Tractors and Farm Equipments (TAFE), Escorts, L&T-John Deere, and International Tractors Limited.

5.4 GROWTH RATE IN AUTOMOBILES

As India’s economy continues to grow at a rapid pace, the automobile industry will be a key beneficiary. This is widely true across automotive markets—from those serving customers with two-wheelers and four-wheelers to those offering commercial vehicles. The main factors behind such growth are the increasing affluence of the average consumer, overall GDP growth, the arrival of ultra-low-cost cars, and the increasing maturity of Indian original equipment manufacturers (OEMs). However, India’s path to mass motorization will be very different from that of developed countries; it must first develop the new technologies, business models, and government policies that will pave the way to increased automobile penetration. Other challenges—for example, the current global economic crisis and high commodity prices—may slow down the country in the short term, but they will not be able to stop it.
5.5 AUTOMOTIVE INDUSTRY IN INDIA - A BACKGROUND

The automotive industry in India is one of the largest in the world and one of the fastest growing globally. India's passenger car and commercial vehicle manufacturing industry is the seventh largest in the world, with an annual production of more than 3.7 million units in 2010. According to recent reports, India is set to overtake Brazil to become the sixth largest passenger vehicle producer in the world, growing 16-18 per cent to sell around three million units in the course of 2011-12. In 2009, India emerged as Asia's fourth largest exporter of passenger cars, behind Japan, South Korea, and Thailand. In 2010, India reached as Asia's third largest exporter of passenger cars, behind Japan and South Korea beating Thailand.

As of 2010, India is home to 40 million passenger vehicles. More than 3.7 million automotive vehicles were produced in India in 2010 (an increase of 33.9%), making the country the second fastest growing automobile market in the world. According to the Society of Indian Automobile Manufacturers, annual vehicle sales are projected to increase to 5 million by 2015 and more than 9 million by 2020. By 2050, the country is expected to top the world in car volumes with approximately 611 million vehicles on the nation's roads.

The majority of India's car manufacturing industry is based around three clusters in the south, west and north. The southern cluster near Chennai is the biggest with 35% of the revenue share. The western hub near Maharashtra is 33% of the market. The northern cluster is primarily Haryana with 32%. Chennai, is also referred to as the "Detroit of India" with the India operations of Ford, Hyundai, Renault and Nissan headquartered in the city and BMW having an assembly plant on the outskirts. Chennai accounts for 60% of the country's automotive exports. Gurgaon and Manesar in Haryana form the northern cluster where the country's largest car manufacturer, Maruti Suzuki, is based. The Chakan corridor near Pune, Maharashtra is the western cluster with companies like General Motors, Volkswagen, Skoda,
Mahindra and Mahindra, Tata Motors, Mercedes Benz, Land Rover, Fiat and Force Motors having assembly plants in the area. Aurangabad with Audi, Skoda and Volkswagen also forms part of the western cluster. Another emerging cluster is in the state of Gujarat with manufacturing facility of General Motors in Halol, Tata Nano at Sanand. Ford, Maruti Suzuki and Peugeot-Citroen plants are also set to come up in Gujarat. Kolkatta with Hindustan Motors, Noida with Honda and Bangalore with Toyota are some of the other automotive manufacturing regions around the country.

5.6 HISTORY OF AUTOMOBILES

The first car ran on India's roads in 1897. Until the 1930s, cars were imported directly, but in very small numbers. Embryonic automotive industry emerged in India in the 1940s. Mahindra & Mahindra was established by two brothers as a trading company in 1945, and began assembly of Jeep CJ-3A utility vehicles under license from Willys. The company soon branched out into the manufacture of light commercial vehicles (LCVs) and agricultural tractors.

Following the independence, in 1947, the Government of India and the private sector launched efforts to create an automotive component manufacturing industry to supply to the automobile industry. However, the growth was relatively slow in the 1950s and 1960s due to nationalization and the license raj which hampered the Indian private sector. After 1970, the automotive industry started to grow, but the growth was mainly driven by tractors, commercial vehicles and scooters. Cars were still a major luxury. Japanese manufacturers entered the Indian market ultimately leading to the establishment of Maruti Udyog.

In the 1980s, a number of Japanese manufacturers launched joint-ventures for building motorcycles and light commercial-vehicles. It was at this time that the Indian government chose Suzuki for its joint-venture to
manufacture small cars. Following the economic liberalization in 1991 and the gradual weakening of the license raj, a number of Indian and multi-national car companies launched operations. Since then, automotive component and automobile manufacturing growth has accelerated to meet domestic and export demands.

Following economic liberalization in India in 1991, the Indian automotive industry has demonstrated sustained growth as a result of increased competitiveness and relaxed restrictions. Several Indian automobile manufacturers such as Tata Motors, Maruti Suzuki and Mahindra and Mahindra, expanded their domestic and international operations. India's robust economic growth led to the further expansion of its domestic automobile market which has attracted significant India-specific investment by multinational automobile manufacturers. In February 2009, monthly sales of passenger cars in India exceeded 100,000 units and have since grown rapidly to a record monthly high of 182,992 units in October 2009. From 2003 to 2010, car sales in India have progressed at a CAGR of 13.7%, and with only 10% of Indian households owning a car in 2009 (whereas this figure reaches 80% in Switzerland for example) this progression is unlikely to stop in the coming decade. Congestion of Indian roads, more than market demand, will likely be the limiting factor. SIAM is the apex industry body representing all the vehicle manufacturers, home-grown and international, in India.

5.7 INDIAN MARKET SIZE

The Indian Automotive Industry after de-licensing in July 1991 has grown at a spectacular rate on an average of 17% for last few years. The industry has attained a turnover of USD $35.8 billion, (INR 165,000 crores) and an investment of USD 10.9 billion. The industry has provided direct and indirect employment to 13.1 million people. Automobile industry is currently contributing about 5% of the total GDP of India. India's current GDP is about $1.4 trillion and is expected to grow to $3.75 trillion by 2020. The projected
size in 2016 of the Indian automotive industry varies between $122 billion and $159 billion including USD 35 billion in exports. This translates into a contribution of 10% to 11% towards India's GDP by 2016, which is more than double the current contribution.

5.8 INTERNATIONAL MARKETS ANALYSIS

The Indian automotive industry embarked a new journey in 1991 with de-licensing of the sector and subsequent opening up for 100% foreign direct investment (FDI). Since then almost all global majors have set up their facilities in Indian taking the level of production from 2 million in 1991 to over 10 million in recent years. The exports in automotive sector have grown on an average compound annual growth rate of 30% per year for the last seven years. The export earnings from this sector are over USD 6 billion.

Even with this rapid growth, the Indian automotive industry's contribution in global terms is very low. This is evident from the fact that even thought passenger and commercial vehicles have crossed the production figures of 2.3 million in the year 2008, yet India's share is about 3.28% of world production of 70.53 million passenger and commercial vehicles. India's automotive exports constitute only about 0.3% of global automotive trade.

5.9 BASIS OF COMPETITION

Competition in this industry is high. Competition in this industry is increasing. Automotive industry is a volume-driven industry, and certain critical mass is a pre-requisite for attracting the much-needed investment in research and development and new product design and development. Research and development investment is needed for innovations which is the lifeline for achieving and retaining competitiveness in the industry. This competitiveness in turn depends on the capacity and the speed of the industry to innovate and upgrade. The most important indices of competitiveness are productivity of both labour and capital.
The concept of attaining competitiveness on the basis of low cost and abundant labour, favourable exchange rates, low interest rates and concessional duty structure is becoming inadequate and therefore, not sustainable. A greater emphasis is required on the development of the factors like innovation which can ensure competitiveness on a long-term basis.

India, with a rapidly growing middle class (450 million in 2007 as per NCAER Report), market oriented stable economy, availability of trained manpower at competitive cost, fairly well developed credit and financing facilities and local availability of almost all the raw materials at a competitive cost, has emerged as one of the favourite investment destinations for the automotive manufacturers. These advantages need to be leveraged in a manner to attain the twin objective of ensuring availability of best quality product at lower cost to the consumers on the one hand and developing and assimilating the latest technology in the industry on the other hand.

As per Automotive Mission Plan 2006–2016 (2008), the Indian Government recognizes its role as a catalyst and facilitator to encourage the companies to move to higher level of competitive performance. The Indian Government wants to create a policy environment to help companies gain competitive advantage. The government aims that with its policies its encourage growth, promote domestic competition and stimulate innovation.

5.10 INDUSTRY CONDITIONS

The automobile manufacturing sector is characterized by a high cyclical growth patterns, high fixed cost and break-even point levels, and an excessive number of participants. Barriers to entry into automobile manufacturing activity are formidable. Some of the barriers that need to be overcome by a new entrant include: the cost of developing high volume production facilities to benefit from economies of scale; and the ability to gain access to technology of major operators, as the present incumbents include
some of the largest multinationals, which have considerable claims to new technology. The relative large size of domestic market, together with high competition, has already seen significant rationalization of this industry.

5.11 INDUSTRY ASSISTANCE

The automobile industry has defined its target in the Automotive Mission Plan as “To emerge as the destination of choice in the world for design and manufacture of automobiles with output reaching a level of USD 145 billion accounting more than 10% of GDP and providing additional employment to 25 million people by 2016”. In order to achieve this plan interventions are required from both Industry and Indian Government. The Indian Government would play a key enabling role in facilitating infrastructure creation, promote the country's capabilities, create a favourable and predictable business environment, attract investment and promote research & development. The role of Industry will primarily be in designing and manufacturing products of world-class quality standards, establishing cost competitiveness, improving productivity of both labour and capital, achieving scale and R&D enhancing capability and showcasing India's products in potential markets. In order to achieve these goals the following key recommendations have been made in the Automotive Mission Plan to the Indian Government and Industry:

- Manufacturing and export of small cars, multi-utility vehicles, two- and three-wheelers, tractors, components to be promoted care to be taken of negative like and rules of the country with current negotiation of Free Trade Agreement and Regional Trade agreement with countries like Thailand, Singapore, Malaysia, China, Korea, Egypt, Gulf etc.
- Specific measures will be taken for expansion of domestic market.
- Incremental investment of USD 35-40 billion during the next 10 years.
- National Road Safety Board to act as the coordinating body for promoting safety.
• Inspection and Certification system to be strengthened by encouraging public-private partnership.

• National level Automotive Institute for training on automobile at International Training Institutes (ITIs) and Automotive Training Institute (ATIs) to be set up.

The profitability of motor vehicle manufacturers has been rising over the past five years, mainly due to rising demand and growth of Indian middle class. Major players of the industry, like Maruti Suzuki India and Tata Motors have been recording profits of 6% to 11% from the past five years. Whereas, earlier profit margins in the industry were only 1.5% to 3%. Cost of material has reduced from over 85% in the year 2001-2002 to fewer than 80% in the year 2008-2009. Wages and salary as a percentage of revenue has been declining and with the increasing labour productivity this is expected to decline further in the coming years.

5.12 INDUSTRY VOLATILITY

The level of volatility is medium. Over the past few years, the Motor Vehicle Manufacturing industry has become more volatile. This has been the result of fluctuations in metal prices and fuel prices, as well as changes in legislation and assistance packages. India's increasing per capita disposable income and growth in exports is playing a major role in the rise and the competitiveness of the industry. As per the BRIC report India's per capita disposable income from current year will rise by 106% in 2015. This increase in the spending power has been a forefront of the economic development. According to the Economic Times of India, economic liberalization – allowing unrestricted foreign direct investment (FDI) and removing foreign currency neutralization and export obligations – has been also been one of the key to India's automotive volatility. The set-up of automobile industries by major global players in India through joint ventures had also played a major role.
5.13 SUPPLY CHAIN OF AUTOMOBILE INDUSTRY

The supply chain of automotive industry in India is very similar to the supply chain of the automotive industry in Europe and America. The orders of the industry arise from the bottom of the supply chain i.e., from the consumers and go through the automakers and climbs up until the third tier vendors. However the products, as channelled in every traditional automotive industry, flow from the top of the supply chain to reach the consumers. Automakers in India are the key to the supply chain and are responsible for the products and innovation in the industry. The description and the role of each of the contributors to the supply chain are discussed as:

Third Tier Vendors: These companies provide basic products like rubber, glass, steel, plastic and aluminium to the second tier vendors.

Second Tier Vendors: These companies design vehicle systems or bodies for First Tier Vendors and Original Equipment Manufacturers (OEMs). They work on designs provided by the first tier vendors or OEMs. They also provide engineering resources for detailed designs. Some of their services may include welding, fabrication, shearing, bending etc.

First Tier Vendors: These companies provide major systems directly to assemblers. These companies have global coverage to follow their customers to various locations around the world. They design and innovate to provide "black-box" solutions for the requirements of their customers. Black-box solutions are solutions created by vendors using their own technology to meet the performance and interface requirements set by assemblers. First tier vendors are responsible not only for the assembly of parts into complete units like dashboard, breaks-axle-suspension, seats, or cockpit but also for the management of second-tier vendors.

Vehicle Manufacturers/Original Equipment Manufacturers (OEMs): After researching consumers' wants and needs, automakers begin designing
models which are tailored to consumers' demands. The design process normally takes five years. These companies have manufacturing units where engines are manufactured and parts supplied by first tier vendors and second tier vendors are assembled. Automakers are the key to the supply chain of the automotive industry. Examples of these companies are Tata Motors, Maruti Suzuki, Toyota, and Honda. Innovation, design capability and branding are the main focus of these companies.

Dealers: Once the vehicles are ready they are shipped to the regional branch and from there, to the authorized dealers of the companies. The dealers then sell the vehicles to the end customers.

Parts and Accessory: These companies provide products like tires, windshields, and air bags etc. to automakers and dealers or directly to customers.

Service Providers: Some of the services to the customers include servicing of vehicles, repairing parts, or financing of vehicles. Many dealers provide these services but, customers can also choose to go to independent service providers.

5.14 KEY STATISTICS

The production of automobiles has greatly increased in the last decade. It passed the 1 million mark during 2003-2004 and has more than doubled since. The key statistics are presented in Tables 5.1 to 5.5.

**TABLE - 5.1 FINANCIAL STATISTICS OF AUTOMOBILES**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Motor Vehicle Production</td>
<td>8,467,853</td>
<td>9,743,503</td>
<td>11,087,997</td>
<td>10,853,930</td>
<td>11,175,479</td>
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<tr>
<td>Industry Revenue USD Million</td>
<td>24,379</td>
<td>26,969</td>
<td>30,507</td>
<td>32,383</td>
<td>33,342*</td>
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<tr>
<td>Exports (Units)</td>
<td>629,544</td>
<td>806,222</td>
<td>1,011,529</td>
<td>1,238,333</td>
<td>1,530,660</td>
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<tr>
<td>Exports (Revenue)</td>
<td>1,915</td>
<td>2,231</td>
<td>2,552</td>
<td>3,008</td>
<td>3,718*</td>
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</table>
### TABLE - 5.2 GROWTH RATE IN AUTOMOBILE PRODUCTION

<table>
<thead>
<tr>
<th>Year</th>
<th>Car Production</th>
<th>% Change</th>
<th>Commercial</th>
<th>% Change</th>
<th>Total Vehicles Production.</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2,814,584</td>
<td>29.39</td>
<td>722,199</td>
<td>54.86</td>
<td>3,536,783</td>
<td>33.89</td>
</tr>
<tr>
<td>2009</td>
<td>2,175,220</td>
<td>17.83</td>
<td>466,330</td>
<td>-4.10</td>
<td>2,641,550</td>
<td>13.25</td>
</tr>
<tr>
<td>2008</td>
<td>1,846,051</td>
<td>7.74</td>
<td>486,277</td>
<td>-9.99</td>
<td>2,332,328</td>
<td>3.35</td>
</tr>
<tr>
<td>2007</td>
<td>1,713,479</td>
<td>16.33</td>
<td>540,250</td>
<td>-1.20</td>
<td>2,253,999</td>
<td>10.39</td>
</tr>
<tr>
<td>2006</td>
<td>1,473,000</td>
<td>16.53</td>
<td>546,808</td>
<td>50.74</td>
<td>2,019,808</td>
<td>19.36</td>
</tr>
<tr>
<td>2005</td>
<td>1,264,000</td>
<td>7.27</td>
<td>362,755</td>
<td>9.00</td>
<td>1,628,755</td>
<td>7.22</td>
</tr>
<tr>
<td>2004</td>
<td>1,178,354</td>
<td>29.78</td>
<td>332,803</td>
<td>31.25</td>
<td>1,511,157</td>
<td>23.13</td>
</tr>
<tr>
<td>2003</td>
<td>907,968</td>
<td>28.98</td>
<td>253,555</td>
<td>32.86</td>
<td>1,161,523</td>
<td>22.96</td>
</tr>
<tr>
<td>2002</td>
<td>703,948</td>
<td>7.55</td>
<td>190,848</td>
<td>19.24</td>
<td>894,796</td>
<td>8.96</td>
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<tr>
<td>2001</td>
<td>654,557</td>
<td>26.37</td>
<td>160,054</td>
<td>-43.52</td>
<td>814,611</td>
<td>1.62</td>
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<tr>
<td>2000</td>
<td>517,957</td>
<td>-2.85</td>
<td>283,403</td>
<td>-0.58</td>
<td>80,1360</td>
<td>-2.10</td>
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<td>1999</td>
<td>533,149</td>
<td></td>
<td>285,044</td>
<td></td>
<td>818,193</td>
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</tr>
</tbody>
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### TABLE - 5.3 AUTOMOBILE PRODUCTIONS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Vehicles</td>
<td>1,209,876</td>
<td>1,309,300</td>
<td>1,545,223</td>
<td>1,777,583</td>
<td>1,838,697</td>
</tr>
<tr>
<td>Commercial Vehicles</td>
<td>353,703</td>
<td>391,083</td>
<td>519,982</td>
<td>549,006</td>
<td>417,126</td>
</tr>
<tr>
<td>Three Wheelers</td>
<td>374,445</td>
<td>434,423</td>
<td>556,126</td>
<td>500,660</td>
<td>501,030</td>
</tr>
<tr>
<td>Two Wheelers</td>
<td>6,529,829</td>
<td>7,608,697</td>
<td>8,466,666</td>
<td>8,026,681</td>
<td>8,418,626</td>
</tr>
<tr>
<td>Total</td>
<td>8,467,853</td>
<td>9,743,503</td>
<td>11,087,997</td>
<td>10,853,930</td>
<td>11,175,479</td>
</tr>
</tbody>
</table>

### TABLE - 5.4 AUTOMOBILE SALES

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Vehicles</td>
<td>1,061,572</td>
<td>1,143,076</td>
<td>1,379,979</td>
<td>1,549,882</td>
<td>1,551,880</td>
</tr>
<tr>
<td>Commercial Vehicles</td>
<td>318,430</td>
<td>351,041</td>
<td>467,765</td>
<td>490,494</td>
<td>384,122</td>
</tr>
<tr>
<td>Three Wheelers</td>
<td>307,862</td>
<td>359,920</td>
<td>403,910</td>
<td>364,781</td>
<td>349,719</td>
</tr>
<tr>
<td>Two Wheelers</td>
<td>6,209,765</td>
<td>7,052,391</td>
<td>7,872,334</td>
<td>7,249,278</td>
<td>7,437,670</td>
</tr>
<tr>
<td>Total</td>
<td>7,897,629</td>
<td>8,906,428</td>
<td>10,123,988</td>
<td>9,654,435</td>
<td>9,723,391</td>
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### TABLE - 5.5 AUTOMOBILE EXPORTS

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<tbody>
<tr>
<td>Passenger Vehicles</td>
<td>166,402</td>
<td>175,572</td>
<td>198,452</td>
<td>218,401</td>
<td>335,739</td>
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<tr>
<td>Commercial Vehicles</td>
<td>29,940</td>
<td>40,600</td>
<td>49,537</td>
<td>58,994</td>
<td>42,673</td>
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<tr>
<td>Three Wheelers</td>
<td>66,795</td>
<td>76,881</td>
<td>143,896</td>
<td>141,225</td>
<td>148,074</td>
</tr>
<tr>
<td>Two Wheelers</td>
<td>366,407</td>
<td>513,169</td>
<td>619,644</td>
<td>819,713</td>
<td>1,004,174</td>
</tr>
<tr>
<td>Total</td>
<td>629,544</td>
<td>806,222</td>
<td>1,011,529</td>
<td>1,238,333</td>
<td>1,530,660</td>
</tr>
</tbody>
</table>
5.15 PASSENGER VEHICLES IN INDIA

5.15.1 Indian automobile companies

- Chinkara Motors: Beachster, Hammer, Roadster 1.8S, Rockster, Jeepster, Sailster
- Hindustan Motors: Ambassador
- ICML: Rhino Rx
- Mahindra: Major, Xylo, Scorpio, Bolero, Thar, Verito, Genio, XUV500.
- Premier Automobiles Limited: Sigma, RiO
- San Motors: Storm
- Tata Motors: Nano, Indica, Vista, Indigo, Manza, Indigo CS, Sumo, Grande, Venture, Safari, Xenon, Aria

5.15.2 Foreign automobile companies in India

5.15.2.1 Vehicles manufactured or assembled in India

- BMW India: 3 Series, 5 Series, X1, X3.
- Fiat India (in collaboration with Tata Motors): Grande Punto, Linea.
- General Motors India
- Honda Siel: Brio, Jazz, City, Civic, Accord.
- Hyundai Motor India: Eon, Santro, i10, i20, Accent, Verna, Sonata.
- Land Rover: Freelander 2
- Mercedes-Benz India: C-Class, E-Class, M-Class, S-Class.
- Mitsubishi (in collaboration with Hindustan Motors): Lancer, Lancer Cedia, Pajero.
- Nissan Motor India: Micra, Sunny, Evalia.
- Renault India: Pulse, Duster, Fluence, Koleos.
- Toyota Kirloskar: Etios Liva Etios, Corolla Altis, Innova, Fortuner.
- Volkswagen Group Sales India:
- Audi India: A4, A6, Q5.
- Škoda Auto India: Fabia, Rapid, Laura.
- Volkswagen India: Polo, Vento, Jetta, Passat.
5.16 COMMERCIAL VEHICLE MANUFACTURERS IN INDIA

5.16.1 Indian brands

- Force
- Hindustan Motors
- Premier
- Tata
- AMW
- Eicher Motors

5.16.2 Joint Venture Brands

- VE Commercial Vehicles Limited - VE Commercial Vehicles limited - A JV between Volvo Groups & Eicher Motors Limited.
- Ashok Leyland - originally a JV between Ashok Motors and Leyland Motors, now 51% owned by Hinduja Group
- Mahindra Navistar - a 51:49 JV between Mahindra Group and Navistar International
- Swaraj Mazda - originally a JV between Punjab Tractors and Mazda, now 53.5% owned by Sumitomo Group
- Kamaz Vectra - A JV between Russia's KaMAZ and Vectra Group

5.16.3 Foreign brands

- Volvo
- Tatra
- MAN
- Mercedes-Benz
- Rosenbauer
- Scania
- Iveco
- Hino
- Isuzu
- Piaggio
- Caterpillar Inc.
- Daimler AG

5.17 CURRENT MANUFACTURERS OF TRACTORS IN INDIA

- Angad Tractors, SAS Motors Limited
- Balwan Tractors, Force Motors Ltd. (formerly Bajaj Tempo Ltd.)
- Captain Tractors Pvt. Ltd
- Crossword Agro Industries
- Eicher Motors
- Escorts Ltd.
- HMT Tractors (Hindustan Machine Tools)
- Indo Farm
- John Deere
• Mahindra Gujarat Tractor Limited (MGTL)
• Mahindra & Mahindra (Mahindra Tractors)
• MARS Farm Equipments Ltd.
• New Holland
• Sonalika (International Tractors Ltd.)
• Standard Tractor
• TAFE (Tractors and Farm Equipment Limited)
• VST Tillers

5.17.1 Previous Indian Tractor Companies

Tractor companies that did not survive and were not acquired by other companies are:

• Auto Tractors Ltd.
• Asian Tractors Ltd
• Ford Tractors
• Harsha Tractors
• Haryana Tractors Ltd
• Kirloskar Tractors
• Pittie Tractors
• United Auto Tractors Ltd.

5.18 KEY COMPETITORS

5.18.1 Automobiles

• Tata Motors
  Market Share: Commercial Vehicles 63.94%, Passenger Vehicles 16.45%.
• Maruti Suzuki India
  Market Share: Passenger Vehicles 46.07%
• Hyundai Motor India
  Market Share: Passenger Vehicles 14.15%
• Mahindra & Mahindra
  Market Share: Commercial Vehicles 10.01%, Passenger Vehicles 6.50%, Three Wheelers 1.31%
• Ashok Leyland
  Market Share: Commercial Vehicles 22%.

5.18.2 Tractors

• Mahindra and Mahindra (M&M)
• Tractors and Farm Equipments (TAFE)
• Escorts
• L&T-John Deere
• International Tractors Limited
5.19 THREAT TO THE DREAM

India’s expedition to become a global auto manufacturing hub could be seriously challenged by its inability to uphold its low-cost production base. A survey conducted by the research, KMPMG firm reveals that the Indian auto component manufacturers are increasingly becoming skeptical about sustaining the low-cost base as overheads including labour costs and complex tax regime are constantly rising.

The survey said many executives believe that India’s cost advantage is grinding down fast as labour costs are constantly increasing and retaining employees is becoming more and more difficult. Increased presence of global automotive companies in the country was cited as one of the reasons for the high erosion rate. Indian auto businesses will only flourish if they boost investments in automation. In the longer term, cost advantage will only be retained if Indian capital can be used to develop low-cost automation in manufacturing. This is the way to preserve our low cost.

Global auto majors are also cynical about India’s low cost manufacturing base. India taxation remains a big disadvantage. This is not about tax rates it is just about unnecessary complexity. But some companies also believe there is scope for reducing the cost of doing business. In spite of this there are opportunities to exploit lower costs right across the board. It’s true that labour costs are definitely increasing but they are still five per cent of the total operational costs. The labour costs can be further reduced if companies are successful in bringing down other costs like reducing power costs. Low-cost base can never last long. The company said Indian industry has till now relied on very labour intensive model but it would have to switch to a more capital intensive model now.