CHAPTER 2

Industry overview
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2.1 Introduction

Since, all two-wheelers are part of the automobile industry; an attempt has been made to look into the details related to the automobile industry. Initial part of this chapter provides the information related to Automobile in general, global automobile industry, and Indian automobile industry. In the later part, two-wheeler industry details are provided. At the end, the motorcycle segment of two-wheeler industry is discussed.

2.1.1 Automobile

Automobile\(^8\) may be defined as a vehicle or mechanism, especially a self-propelled vehicle suitable for the use on the street or roadway. It is usually propelled by internal combustion engine, steam engine or electric motors. It is a wheeled vehicle that carries its own engine.

The automobile is a unique technological achievement – an improvement over the other modes of surface transportation. The automobile is a carriage unit that must be steerable from within it and must be able to travel safely and comfortably over the roads. It should have an entirely self contained power unit to propel the vehicle by rotating its road wheels and should have means for stopping the vehicle.

2.2 Global Automobile Industry

Automobile industry has a special impact on the daily life of the modern day man, which requires fast mobility with reliability. Automobile is one of the important industries in the world, which provides employment to 25 million

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\(^8\) http://everything2.com/title/Automobile accessed on 19/10/2008.
people in the world\textsuperscript{9}. The global automobile industry is a highly diversified sector that comprises of manufacturers, suppliers, dealers, retailers, original equipment manufacturers, aftermarket parts manufacturers, automobile engineers, motor mechanics, auto electricians, spray painters or body repairers, fuel producers, environmental and transport safety groups, and trade unions. United States, Japan, China, Germany and South Korea are the top five automobile manufacturing nations throughout the world\textsuperscript{10}. The United States of America is the world’s largest producer and consumer of motor vehicles and automobiles.

The automobile and automotive parts manufacturers constitute a major chunk of automobile industry throughout the world. The automobile manufacturing sector consists of automobile manufacturers, motor vehicle body manufacturers, and motor vehicle parts and supplies manufacturers. This establishment is engaged in manufacturing of automobiles and light duty motor vehicles, motor vehicle bodies, chassis, cabs, trucks, automobile and utility trailers, buses, military vehicles, and motor vehicle gasoline engines.

\textbf{2.2.1 Size of the automobile industry\textsuperscript{11}}

The automobile industry occupies a leading position in the global economy, accounting for 9.5\% of world merchandise trade and 12.9\% of world export of manufacturers. This industry manufactures self-powered vehicles, including passenger cars, motorcycles, buses, trucks, farm equipments, other commercial vehicles, automobile components and parts. The United States of America is the major revenue source for the global automobile industry with a

\footnotesize\textsuperscript{9} http://www.automotive-online.com/auto-industry.html accessed on 19/10/2008.


\footnotesize\textsuperscript{11} http://rajmangalam.wetpaint.com/page/Automotive+&+Automobile+World+Wide+Market accessed on 20/10/2008.
market share of $432.1 billion, occupying for 37.2 percent of the world’s marketplace. In the year 2006, America sold around 16.5 million vehicles.

### 2.2.2 Major manufacturing regions

In automobile industry, the manufacturing of parts are concentrated to several regions due to some reasons like scale of economy, expert labour, availability of raw materials etc. North-eastern United States and Southern Great Lakes Region, North-western Europe, Western Russia and the Ukraine, and Japan are the major manufacturing regions of automobile in the world\(^\text{12}\).

In North America, the prominent automobile manufacturing regions are New England, New York and the Mid-Atlantic, Central New York, Pittsburgh - Cleveland, Western Great Lakes, St. Lawrence Valley, Ohio and Eastern Indiana, Kanawha and middle Ohio Valley, St. Louis, the South-eastern region, Gulf Coast, Central Florida, and the West Coast.

The European Union has the largest automobile production regions in the World. The key automobile manufacturing regions are Germany's Berlin-Brandenburg, United Kingdom, Rhine-Ruhr River Valley, Upper Rhine - Alsace - Lorraine region, and the Po Valley in Italy. In the Western Russian and Ukraine Region, the leading industrial regions are Moscow, the Ukraine region, the Volga region, the Urals regions, and the Kuznetsh Basin Region.

The international organization for motor vehicle manufacturers (OICA) produces the data of automobile manufacturing every year. Country wise automobile production data in the year 2008 is given in the annexure I\(^\text{13}\). From the statistics given in the annexure, it was found that in cars and commercial vehicles segment major producers were in the countries like Japan, USA, China and Germany.

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2.2.3 Major segments of automobile industry\textsuperscript{14}

The global automobile industry is highly diverse, comprising of various sectors such as four wheelers, two wheelers, utility vehicles, commercial vehicles, and automobile parts and accessories.

**Four-wheelers industry** is one of the largest segments of global automobile industry that produces different type of four wheelers namely passenger cars, jeeps, vans etc. The key manufacturers of four wheelers in the world are General Motors, Toyota, Ford, Volkswagen AG, Daimler Chrysler AG, Nissan Motor Company Ltd., Honda, Maruti-Suzuku and PSA Peugeot. All developed countries are the main market for this segment.

**Two-wheelers industry** comprises of five broad segments i.e. scooters, motorcycles, Step thru’s, mopeds and scooterates. The key manufacturers are Hero-Honda, Bajaj, TVS, Suzuki, Yamaha, Royal Enfield etc. Japan, India and China are the largest producers of two wheelers in the world. As far as India is concerned, majority of the people use two wheelers for their private transport.

**Commercial vehicles industry** comprises of units engaged in manufacturing and selling of commercial motor vehicles. The commercial vehicles include light commercial vehicles, rigid vehicles, articulated trucks, buses and non-freight carrying truck. United States, Japan and China are the largest manufacturers of commercial vehicles in the world.

**Utility vehicles industry** consists of units engaged in manufacturing and selling of Sports Utility Vehicle and the Multi Utility Vehicles. The key utility vehicles manufacturing regions of the world are North America, Europe, China and India.

\textsuperscript{14}http://www.automotive-online.com accessed on 07/01/2008.
**Automobile parts and accessories industry** comprises of establishments engaged in manufacturing of automobile stampings; carburettors, pistons, piston rings, valves; chassis; rubber tires and braking systems; ignition systems; lighting equipment; seating, flooring and related materials; gasoline and fuel systems; storage batteries; and engine and transmission parts and accessories. This sector comprises of two major sub sectors namely original equipment suppliers and aftermarket parts manufacturers. The original equipment suppliers produce parts for automakers and aftermarket parts manufacturers produces replacement parts for vehicles. China, Italy and Taiwan are the largest automobile accessories and parts manufacturing countries.

**2.2.4 Future outlook**

The automobile industry is witnessing tremendous and unprecedented changes these days. This industry is slowly and gradually shifting towards Asian countries, mainly because of saturation of automobile industry in the western world. The principal driving markets for Asian automobile industry are China, India and ASEAN nations. Low cost vehicles such as scooters, motorcycles, mopeds and bicycles have led to the massive growth of some of the fastest developing economies like China and India. The future of automobile industry in the Asian countries such as Thailand, Philippines, Indonesia, and Malaysia is bright and promising because of the ASEAN free trade area under which the export tariffs are very less.

Latin America, Middle East, Eastern Europe, China, India, Malaysia and other South-Asian nations are now emerging as the dominant markets of the automobile industry. Most of the major automobile players are shifting their production facilities in these emerging markets with the main purpose of gaining better access and reduction in their production costs. There is estimation that the automobile markets in South America and Asia will witness a boom in the near future. The various factors such as cheap financing, prices
discounts, rising income levels and infrastructure developments will assist in the growth and development of automobile industry in majority of the Asian nations\textsuperscript{15}.

Due to rising pressures on cost and quality, computer aided designing and computer-aided manufacturing tools are increasingly adopted by the automobile companies so as to save months of time in designing and improving the quality of automobiles. The other technologies being used by automobile industry are rapid prototyping, virtual reality, on-board systems, global positioning systems, and display maps. Most of the automobile manufacturers are now resorting to environment friendly fuel vehicles like Electric fuel cell car, solar cars, Hydrogen cars, and hybrid cars.

The future seems encouraging for this industry in terms of the expected surge in global demand and upsurge in investments. Several trends such as over-capacity in developed markets, globalization, technological advancement, regulation and environmental consideration, market fragmentation and product proliferation will result in the rapid growth of automobile industry.

2.3 Indian Automobile Industry

The first wheel may have been used for transport about 5,000 years ago in India, it is said, but it was the 18\textsuperscript{th} century when the first horseless carriage actually hit the roads. But till 1897, there was no single motorized vehicle ran on the Indian road. It was in 1897 that a resident of Calcutta brought the first car to India. The next year, there were four cars in Bombay, one of them owned by Jamshedji Tata and the other three also by Parsis. In the same year, the first pneumatic tyres arrived in Bombay, with Dunlop opening an office in the city.

\textsuperscript{15} www.automotive-online.com/auto-industry.html accessed on 04/01/2008
Several Madras firms became agents for British, Continental and American motor car manufacturers. The pioneer was Addison & Co. Addison’s, who had pioneered the cycle industry in Madras, is variously mentioned as having imported petrol driven cars from 1901.

In 1903, Samuel John Green of Simpson & Co, Madras, built India’s first steam car and caused a sensation on the roads of the city. The Madras Mail hailed its appearance as the beginning of “a new industry for Madras.” Two years later, Simpson’s built the first steam bus. It ran between Bezwada (Vijayawada) and Masulipatam (Machilipatnam) and it was the first motor bus service in the country.

A future in building steam-powered vehicles was, however, not envisaged by Simpson’s who felt that its core business, carriage building, and, ergo, body-building should be exploited. In 1904, when it was experimenting with steam cars, it built a body on a Turner-Miesse chassis and supplied it to Gwalior, where it became the first motorized vehicle used in India for postal and passenger service. In 1907, it built the first Public Service Vehicle for a customer from Salem District, a 16-passenger body fitted to a long wheelbased 20/32 hp Darracq chassis. Due to this, four years later a real beginning of Public Service Vehicles was made. A 22-seater body on a 2-ton Halley chassis was supplied in 1911, again to the Salem District. This was followed in the same year by a passenger-cum-goods body for the Travencore Commercial Company. In 1912 it built a motor ambulance for a local institution.

T V Sundram Iyengar, founder of TVS group, started bus service for public in 1912. T V Sundram Iyengar and Sons Ltd (now Sundaram Motors) became a vehicle dealer in 1922 after the lifting of Government restrictions on imported vehicles of all types implemented during the Great War (1914-18). By 1920, the number of imported vehicles of all types had grown to nearly 13,500 and two international automobile manufacturers, Ford and General Motors,
sensing the potential, set up local companies in that year to sell and service their motor cars and trucks.

In 1928, General Motors India Ltd. commenced assembling trucks and cars in its factory in Bombay, the first car assembled in India rolling off the assembly line on fourth December. Two years later, Ford Motor Co of India Ltd. commenced assembly of automobiles in Madras, and next year in Bombay and Calcutta. And in 1936, Addison & Co. Ltd. commenced assembling of cars and trucks in Madras\textsuperscript{16}.

In 1935, Vissvesaraya’s proposal to establish an automobile industry was rejected by the central government then. However, the National Planning Committee of 1938, set up by Indian National Congress, appreciated the real, long range importance of this new means of transportation and its place in India’s planned economy. So the committee emphasized the importance of setting up of an organized automobile industry\textsuperscript{17}.

A nascent components industry also began in 1936 when Dunlop’s Sahaganj factory, Calcutta, started producing tyres. A major development in this field initiated when Simpson’s in 1948 began manufacturing the Perkins P-6 automatic type diesel engines, backed by a campaign urging users of petrol-driven heavy vehicles to make the change-over. It also began manufacturing pistons.

Hindustan Motors Ltd, Calcutta, and Premier Automobiles Ltd, Bombay, were established in 1942 and 1944 respectively to progressively manufacture


complete automobiles. Hindustan Motors, a Birla group company, began manufacturing operations in 1948 by assembling Morris Oxford cars and Bedford trucks, gradually indigenising the components. In 1957, the Morris Oxford, substantially indigenized, was re-introduced as the Hindustan Ambassador.

Premier Automobiles Ltd (PAL) was promoted by Walchand Hirachand, in collaboration with the Chrysler Corporation of the USA. In March 1947, the company began assembling Chrysler products: Dodge, De Soto, and Plymouth cars and Dodge, De Soto and Fargo trucks. Indigenization started in 1949 with the manufacture of radiators, mufflers, springs, propeller shafts, shock absorbers, etc. In 1950 PAL entered into a collaboration with Fiat, SpA of Italy and started assembly of Fiat 1100 cars. In 1953, following the Tariff Commission report, the Government of India granted protection to the automobile industry, thus enabling Premier Automobiles to step up its manufacturing programme with full vigour and, in 1954, the first Indian-made ‘Fiat 1100’ cars rolled out.

With Government intent on having a motor industry set up near each of the three major port cities, Ashok Motors, incorporated in September 1948, was established in Madras to assemble Austin cars and trucks in India. In 1950, the company acquired the rights to manufacture Leyland vehicles in India. The name of the company was changed to Ashok Leyland Ltd in 1955.

Addison’s was the authorized agent in India for Nuffield products — Morris, Wolseley and Riley cars and vans — and for Chrysler’s Plymouth, Dodge and De Soto cars and trucks. In fact, at that time Addison’s was assembling Dodge trucks and Simpson’s was doing the same with Chevrolet trucks — using imported chassis and CKD — completely knocked down — packs. In 1949, Addison’s got permission to assemble Morris Minors and in November 1950, the first Morris car assembled by the company was driven off the assembly line.
The assembly operations had continued for about two years when Addison’s applied to Government for permission to go in for progressive manufacture. The Government had meanwhile set up a Tariff Commission which visited all the important assemblies in India — Premier’s, Hindustan Motors, Addison’s, and Ashok Motors— and recommended that Hindustan Motors should be permitted to manufacture the Morris-10 (it was called Hindustan-10), Premier’s the Dodge and Fiat, Addison’s the Morris Minor, and Ashok Motors the A-40\(^\text{18}\).

In initial years of post–independence, the industry was characterized by the unfavourable government policies. However, the era prior to 1980’s was characterised by the small scale operations, technological obsolescence and the absence of a competitive market. Till early 80’s, Indian markets were controlled by the government policies influenced by Fabian socialism, central planning and bureaucratic red-tapism. All production capacities were licensed. The import duties were high to protect the domestic market from global competition. Foreign investments were not allowed in domestic ventures. On the other hand, due to population and insufficient public transport system, the demand for automobile far exceeded the supply. The waiting period touched maddening level of 10-12 years. Buoyed by such magnitude of impending demand, manufacturers got into monopolistic frame of mind. Operating on virtually negative capital, there was neither any incentive nor business compulsion to upgrade the technology or to build reliability on the product. Manufacturers were focusing on cost cutting. There was no compelling reason to provide world class buying ambience and after sales service. It was seller’s market dominated by handful manufacturers. The choice of models, features, styling were limited. The manufacturers and dealers who stagnated in this era found it difficult to survive in the competitive open market\(^\text{19}\).


\(^{19}\) www.iloveindia.com/economy-of-india/automobile-industry.html accessed on 02/07/2007
The real big change in the industry started with the liberalization policies that government initiated in 1991. The liberalization policy has a salutary impact on the Indian economy and the automobile industry in particular. In 1991, government of India embarked on ambitious structural adjustment program aimed at the economic liberalization based on the pillars of Delicensing, Decontrol, Deregulation and Devaluation. After liberalization Indian government announced new automobile policy in June 1993 contained measures such as de-licensing, automatic approval of foreign holding of 51% in Indian companies, abolition of phased manufacturing program, reduction of excise duty and import duties and commitment to indigenization schedule.\(^{20}\)

Automobile is one of the most important industries for Indian economy. Being the leader in product and process technologies in the manufacturing sector, it has been recognized as one of the drivers of economic growth.\(^{21}\) During the last decade, well directed efforts have been made to provide a new look to the automobile industry for realizing the sector's full potential for the economy. Steps like abolition of licensing, removal of quantitative restrictions and initiatives to bring the policy framework in consonance with WTO requirements have set the industry in a progressive track. Removal of the restrictive environment has helped restructuring, and enabled industry to absorb new technologies, aligning itself with the global development and also to realize its potential in the country. The liberalization policies have led to continuous increase in competition which has ultimately resulted in modernization in line with the global standards as well as in substantial cut in prices. Aggressive marketing by the auto finance companies have also played a significant role in boosting automobile demand, especially from the population in the middle income group. The impact of India’s initiatives in economic liberalization and


globalization is most apparent in the automobile sector. Automobile industry is a key driver of economic growth contributing around four to five percent to the Indian GDP. Introduction of reforms and entry of international companies has intensified competition in the Indian automobile sector. This has resulted in the transformation of a seller’s market (created mainly due to the Indian government’s protectionist policies) into a buyers market. The changing structure of this industry has posed many challenges and opportunities to the market participants.

2.3.1 Unique characteristics of Indian automobile industry

Indian automobile industry has some unique characteristics that differentiate it from global industry. Some of them are as under:

(a) Higher average life span of vehicles

Until 1999, Indian automobile market was characterized by weak air pollution regulations. In addition, low labour cost of maintenance and the psyche of Indian consumer to delay the discarding of the old vehicle reduced the scrap rate. All these factors resulted in prolonged operational existence of vehicle on Indian roads. The benefit of this practice is the comparatively higher revenues for automobile component suppliers, due to increased demand in the aftermarket. But this scenario was changed after recent pronouncement of Government to prohibit polluting vehicles in the National Capital Region (NCR) to force the old polluting vehicles off road. This pronouncement reduced the average life span of vehicles on road and the overall impact would be reduced per vehicle parts consumption.

(b) Structure of passenger vehicle market

In India, personal transport vehicles have a specific structure with respect to volumes of the vehicles. The structure of Indian vehicles (personal transport) market in terms of volume sales is shown in figure 2.1.
Two wheelers generate the highest volumes and are more popular due to the factors like mass middle class market, poor road conditions, convenience travelling etc. Therefore, these could be classified as entry-level vehicles. Within two wheeler segments, progressively mopeds are likely to be replaced by motorcycles. With the growth in the family income in last few years, people are trying to upgrade their personnel transport as shown in figure 2.1. It is expected that a significant shift would take place from two wheelers to four wheelers. Lucrative finance schemes have made the purchase of mid-sized cars really affordable. The present owners of the small car are likely to graduate to mid-size cars mainly due to declining importance of small car as status symbol and the marginal increment in repayment instalment in the finance options.

(c) Competitive scenario

The industry witnessed radical changes and entered a competitive phase with de-licensing and liberalization. A strong growth in volumes and the entry of international car giants into India were two major developments taken place especially in the car segment. The attraction for foreign companies was the largely untapped Indian market. However, these companies over-estimated
the market in the short term and set up larger than required capacities. This resulted in price wars and thereby affected the expected margins.

(d) Change in operating style

Initially, Indian automobile manufacturers were lacking in technological innovation. So for that, they tied up with foreign players. By this, most of the foreign companies entered in India using the joint venture/collaboration route. While many of these conglomerates have turned out to be mutually beneficial, few tie-ups weren’t as successful. For example, Mahindra & Mahindra pulled out of car joint venture with Ford. Piaggio of Italy resorted to break its partnership with LML and set up its independent facility in India. General Motors bought over the stake of Hindustan Motors in its Indian car venture. Mercedes Benz has decided to operate independently after suffering severe losses with Indian partner Telco. Main reason for these breaks up was that the Indian players were trying to maintain their hold on the Indian market, not giving in to multinationals. But the very fact of Indian company’s reliance on foreign partners for technology is likely to drive the trend of collaborations followed by consolidations.

2.3.2 Emerging market trends in Indian automobile industry / Current scenario

The automobile industry is considered as the barometer of Indian economy. For an automobile the aspirations of Indian consumer are rising with the growing demand. The cumulative effect of growing customer demand, increased competition, technology upgradations along with different facilities are likely to be observed in the following trends:

- All players in the industry understood the importance of technology and technological innovation and also concerned for the same.
• International companies like Hyundai, Honda, and Daewoo are gaining market share.
• With the entry of new models, medium sized cars segment is further divided into low prestige and high prestige cars. Customers are upgrading from entry level small cars to sophisticated small cars and from sophisticated small cars to prestige car segment.
• Strict pollution norms are likely to force vehicle manufacturers to adopt latest technology in maintaining emission standards. This is likely to curtail the average life span of vehicle on road while the maintenance cost and the genuine parts consumption per vehicle is expected to increase.
• Due to free imports local industry is expected to face increased competition from international automobile players.
• With the increasing number of vehicle population the two wheeler owners will have viable option of used cars. The vehicle with higher resale value and good service network is likely to dominate the market.
• Competition in the small car segment increases as more as more companies focusing on the middle class if India. Tata introduced Neno in small cars segment. Even Bajaj and other companies are also thinking to introduce cars in competitions with Neno.

All these trends, derived out of present dynamics of the Indian automobile vehicle market, are indicators of internationalization of the industry. India has become focus of international growth seeking companies as not only a cost competitive sourcing base but also a growing high potential market. It may be expected that in the near future the competition will be prominent in all the functions of business and only the companies with global standards are likely to survive. Indian manufacturers are gearing up for the challenge but surely the current scenario is apparently in favour of international players. The early movers are likely to secure a position to command the global competition.
2.4 Two-wheeler Industry

2.4.1 Introduction

The dynamics of the motorized two-wheeler industry in India make fascinating reading. Two wheelers are the entry level personal transport vehicles for a very large percentage of India’s population. From a semi luxury product for the urban middle class in the eighties and earlier, the two-wheeler has now become not only the favourite mode of personal transport but also the most coveted personal household durable possession among nearly all consumer classes.

The world’s largest market for two wheelers is china followed by India. These countries are also hosts to world class plants along with the obviously powerful and influential Japanese manufacturers and brand names such as Honda, Suzuki, Yamaha and so on. It is also seen that the advent of national brands like Bajaj and TVS, which are also likely to go global, setting up marketing and manufacturing arrangements in the other populous markets of Asia. The game is going to hot up by the year and will remain extremely price competitive while remaining performance and reputation driven.

2.4.2 Invention and growth of two-wheelers

The invention of the first two-wheeler is a much-debated issue. "Who invented the first motorcycle?" may seem like a simple question, but the answer is quite complicated. Two-wheelers owe their descent to the "safety" bicycle, i.e., bicycles with front and rear wheels of the same size, with a pedal crank mechanism to drive the rear wheel. Those bicycles, in turn descended from high-wheel bicycles. The high-wheelers descended from an early type of pushbike, without pedals, propelled by the rider’s feet pushing against the ground\(^22\). These appeared around 1800, used iron-banded wagon wheels, and

\(^22\) http://auto.indiamart.com/two-wheelers/invention-2w.html accessed on 07/01/2008.
were called "bone-crushers," both for their jarring ride, and their tendency to toss their riders.

The Britannica Encyclopaedia\(^{23}\) describes a two-wheeler as a bicycle propelled by an internal-combustion engine (or, less often, by an electric engine). Edward Butler, an Englishman, built the first motor tricycle in 1884. The first gasoline-engine motorcycle to appear publicly was built by Gottlieb Daimler, of Bad Cannstatt, Germany, in 1885. The first practical engines and motorcycles were designed by the French and Belgians, followed by British, German, Italian, and American makers.

The popularity of the vehicle grew, especially after 1910. During World War I, the motorcycle was used by all branches of the armed forces in Europe, principally for dispatching. After the war, it enjoyed a sport vogue until the Great Depression began in 1929. After World War II a revival of interest in motorcycles lasted into the late 20\(^{th}\) century, with the vehicle being used for high-speed touring and sport competitions. The practice of attaching auxiliary engines to bicycles in Western Europe and parts of the United States led to the development during the 1950s of a new type of light motorcycle, the moped. Originating in Germany as a 50-cubic-centimetre machine with simple controls and low initial cost, it was largely free of licensing and insurance regulations except in Great Britain.

The more sophisticated motor scooter originated in Italy soon after World War II, led by manufacture of a 125-cubic-centimetre model. Despite strong competition from West Germany, France, Austria, and Britain, the Italian scooters maintained the lead in the diminishing market. The scooter has small wheels from 20 to 36 cm (8 to 14 inches) in diameter, and the rider sits inside the frame. Power units were placed low and close to the rear wheel, which

was driven by bevel gearing or chain. Capacities vary from 50 to 225 cubic cm, and four-speed gearing is common\textsuperscript{24}.

### 2.4.3 World market

The global market for two wheelers has shown tremendous growth over the past decade. Looked at more closely, however, the geographic spread of this growth has been very uneven. Asia has accounted for the vast majority of growth. China and India alone account for over half the world’s two wheeler sales. Other large markets in the region are Japan, Indonesia, Vietnam and Taiwan. Latin America is another important region and sales there have more than doubled over the past ten years especially in Brazil.

The players in the world two-wheeler market could at one time be categorized simply into two groups: the three global Japanese giants (Honda, Suzuki and Yamaha) and local niche players. However, as the industry globalizes further, a further category is emerging, namely other Asian (mostly Indian and Chinese player) and European players who are seeking to expand their own identities worldwide.

### 2.5 Two-wheeler Industry in India

As mentioned earlier in this chapter, two-wheeler is considered as lifeline for Indian private transport. Two-wheelers are the entry level personal transport vehicles for a very large percentage of India’s population. Now a day, having a two-wheeler is the prime necessity for general public in India. Two wheelers’ low price and operating costs, relative to cars, make it ideal buy for majority of Indians. For two-wheelers, India is one of the largest markets for two-wheelers in the world.

\textsuperscript{24} http://auto.indiamart.com/two-wheelers/origin-2w.html accessed on 07/01/2008.
2.5.1 History

In India, two-wheeler industry made a small beginning in the early 50’s when Automobile Products of India (API) started manufacturing scooters in the country. In 1948, Bajaj Auto began trading in imported Vespa scooters and three-wheelers. Until 1958, API and Enfield were the sole producers of two wheelers. After 12 years, in 1960, Bajaj set up a shop to manufacture two-wheelers in technical collaboration with Piaggio of Italy. The agreement expired in 1971. In the initial stages, the scooter segment was dominated by API; it was later overtaken by Bajaj Auto. Under the regulated regime, foreign companies were not allowed to operate in India. It was a complete seller market with the waiting period for getting a scooter from Bajaj Auto being as high as 12 years\(^\text{25}\).

The motorcycles segment was also the same, with only three manufacturers viz Enfield, Ideal Jawa and Escorts. While Enfield bullet was a four-stroke bike, Jawa and the Rajdoot were two-stroke bikes. The motorcycle segment was initially dominated by Enfield 350cc bikes and Escorts 175cc bike.

In late 50’s, entry of firms, capacity expansion, choice of products including capacity mix and technology, all critical areas of functioning of an industry, were effectively controlled by the State machinery. The lapses in the system had invited fresh policy options that came into action in late sixties. Amongst these policies, Monopolies and Restrictive Trade Practices (MRTP) and Foreign Exchange Regulation Act (FERA) were aimed at regulating monopoly and foreign investment respectively. This controlling mechanism over the industry resulted in: (a) several firms operating below minimum scale of efficiency; (b) under-utilization of capacity; and (c) usage of outdated technology. Recognition of the damaging effects of licensing and fettering

policies led to initiation of reforms, which ultimately took a more prominent shape with the introduction of the New Economic Policy in 1985\textsuperscript{26}.

The two-wheeler market was opened to foreign competition in the mid-80s. And the then market leaders - Escorts and Enfield - were caught unaware by the onslaught of the 100cc bikes of the four Indo-Japanese joint ventures. With the availability of fuel efficient low power bikes, demand swelled, resulting in Hero Honda –which produces four stroke motorcycles (100cc category), gaining a top slot. The first Japanese motorcycles were introduced in the early eighties. TVS-Suzuki and Hero-Honda brought in the first two-stroke and four-stroke engine motorcycles respectively. These two players initially started with assembly of CKD kits, and later on progressed to indigenous manufacturing. The industry had a smooth ride in the 50s, 60s and 70s when the Government prohibited new entries and strictly controlled capacity expansion. The industry saw a sudden growth in the 80s. The industry witnessed a steady growth of 14\% leading to a peak volume of 1.9mn vehicles in 1990\textsuperscript{27}.

The entry of Kinetic Honda in mid-eighties with a variometric scooter helped in providing ease of use to the scooter owners. This helped in inducing youngsters and working women, towards buying scooters, who were earlier inclined towards moped purchases. In the 90s, this trend was reversed with the introduction of scooterettes. In line with this, the scooter segment has consistently lost its part of the market share in the two-wheeler market. In 1990, the entire automobile industry saw a drastic fall in demand. However, the major set of reforms was launched in the year 1991 in response to the major macroeconomic crisis faced by the economy. The industrial policies shifted from a regime of regulation and tight control to a more liberalized and

\textsuperscript{26}Federation of automobile dealers associations (FADA), taken from http://www.fadaweb.com/ accessed on 08/01/2008.

competitive era. Two major results of policy changes during these years in
two-wheeler industry were that the, weaker players died out giving way to the
new entrants and superior products and a sizeable increase in number of
brands entered the market that compelled the firms to compete on the basis of
product attributes. This resulted in a decline of 15% sales in 1991 and 8% in
1992, resulting in a production loss of 0.4 million vehicles. Barring Hero
Honda, all the major producers suffered from recession in 1993-94. Hero
Honda showed a marginal decline in 1992. The reasons for recession in the
sector were the incessant rise in fuel prices, high input costs and reduced
purchasing power due to significant rise in general price level and credit
 crunch in consumer financing. Factors like increased production in 1992, due
to new entrants coupled with the recession in the industry resulted in company
either reporting losses or a fall in profits. Finally, the two-wheeler industry in
the country has been able to witness a proliferation of brands with introduction
of new technology as well as increase in number of players. However, with
various policy measures undertaken in order to increase the competition,
though the degree of concentration has been lessened over time, deregulation
of the industry has not really resulted in higher level of competition\textsuperscript{28}.

Various factors contributed towards the success of Indian two-wheeler
industry. These included the restrictive policy followed by the Government
towards the passenger car industry, rising demand for personal transport,
inefficiency in the public transportation system etc. The demand for two
wheelers in India is dependent upon factors such as availability of finance,
increase in income levels, and restricted growth in public transportation and
movement in petrol prices. Except petrol prices, all other factors are positively
correlated with the demand for two wheelers. The increase in petrol prices on
the contrary, adversely affects the demand for two wheelers, due to increase

\textsuperscript{28} Federation of automobile dealers associations (FADA), taken from http://www.fadaweb.com/
accessed on 08/01/2008.
in the running cost of a vehicle. The lower end of the market looks for durability, value for money and higher resale value.

Two-wheeler segment is one of the most important components of the automobile sector. According to the figures published by SIAM, the share of two-wheelers in automobile sector in terms of units sold was about 76.49 percent during 2008-09\textsuperscript{29}. This high figure itself is suggestive of the importance of the sector.

2.5.2 Growth phases

From the history discussed above, two-wheeler industry passed through several phases. A quick look at the post independence era reveals that the two-wheeler industry has witnessed following distinct phases of growth:

**Phase 1**

The Indian two wheeler structures were quite monopolistic during the first 37 years since independence, when volumes grew at a slow pace. Bajaj auto had an undisputed leadership over the market. Consumers had to literally wait for years before acquiring a Bajaj vehicle.

**Phase 2**

The second phase began in the mid eighties when the sector was partially deregulated. This phase saw Japanese companies tying up with domestic players and newer models were introduced in specific segments. Even though the demand was apparently strong for scooters, most of the Japanese ventures opted to produce motorcycles except for Kinetic Honda, which chose to manufacture scooters. The annual growth rate for the two-wheeler industry during this phase was in two digits. The composition of the two-wheeler industry has witnessed sea changes in the post-reform period. In 1991, the

\textsuperscript{29} Society of Indian Automobile Manufacturers, 2009.
share of scooters was about 50 per cent of the total two-wheeler demand in the Indian market. Motorcycle and moped had been experiencing almost equal level of shares in the total number of two-wheelers. This phase extended till the early nineties, and there was a recession during the last part of this phase, i.e. 1992-93.

**Phase 3**

This phase began in 1994 when sales started picking up. The market was experiencing steep increase in the demand. In 1995, the industry produced about one million scooters, 6 lakh motorcycles and 5 lakh mopeds. Annual growth in this phase was in double digits for all categories of two-wheelers. During this phase competition increased and the focus started shifting to customer satisfaction. Almost all companies were going in for capacity expansion.

**Phase 4**

This phase started from 2000 onwards. This was the era of motorcycle. During this phase focus of two wheeler industry shifted from scooters to motorcycles. Bajaj, one of the major manufacturers of scooters, also diverted from scooters to motorcycles. The companies like Bajaj and Hero Honda focused on the niche market like economic segment, power driven segment etc. now a day, two-wheeler industry is considered as the backbone of the automobile industry.

**2.5.3 Growth of two-wheeler industry: Forecast by NCAER**

In the growth phase four discussed above, lot many activities had taken place. In 2003-04, the share of motorcycles increased to 78 per cent of the total two-wheelers while the shares of scooters and mopeds declined to the level of 16

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and 6 per cent respectively. This section is basically related with the forecast done by National Council of Applied Economic Research for the two wheeler industry. National Council of Applied Economic Research (NCAER) had forecast two-wheeler demand during the period 2002-03 through 2011-12. The forecasts had been made using econometric technique along with inputs obtained from a primary survey conducted at 14 prime cities in the country. Estimations were based on Panel Regression, which takes into account both time series and cross section variation in data. A panel data of 16 major states over a period of 5 years ending 1999 was used for the estimation of parameters. The models considered a large number of macro-economic, demographic and socio-economic variables to arrive at the best estimations for different two-wheeler segments.

**Table 2.1: Demand Forecast for Motorcycles and Scooters for 2011-12**

<table>
<thead>
<tr>
<th>Two-Wheeler Segment</th>
<th>Regions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>South</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>2835 (12.9)</td>
</tr>
<tr>
<td>Scooter</td>
<td>203 (2.6)</td>
</tr>
</tbody>
</table>

**Note:** Compound Annual Rate of Growth during 2002-03 and 2011-12 is presented in parenthesis

**Source:** *Indian Automobile Industry: Optimism in the Air, Industry Insight, NCAER 2002*

The projections have been made at all India and regional levels. Different scenarios have been presented based on different assumptions regarding the demand drivers of the two-wheeler industry. The most likely scenario assumed
annual growth rate of Gross Domestic Product (GDP) to be 5.5 per cent during 2002-03 and was anticipated to increase gradually to 6.5 per cent during 2011-12. The all-India and region-wise projected growth trends for the motorcycles and scooters are presented in Table 2.1. The demand for mopeds is not presented in this analysis due to its already shrinking status compared to motorcycles and scooters. It is important to remember that the above-mentioned forecast presents a long-term growth for a period of 10 years. The high growth rate in motorcycle segment at present will stabilize after a certain point beyond which a condition of equilibrium will set the growth path. Another important thing to keep in mind while interpreting these growth rates is that the forecast could consider the trend till 1999 and the model could not capture the recent developments that have taken place in last few years. However, this will not alter the regional distribution to a significant extent.

Table 2.1 suggests two important dimensions for the two-wheeler industry. The region-wise numbers of motorcycle and scooter suggest the future market for these segments. At the all India level, the demand for motorcycles will be almost 10 times of that of the scooters. The same in the western region will be almost 20 times. It is also evident from the table that motorcycle will find its major market in the western region of the country, which will account for more than 40 per cent of its total demand. The south and the north-central region will follow this. The demand for scooters will be the maximum in the northern region, which will account for more than 50 per cent of the demand for scooters in 2011-12.

The present economic situation of the country makes the scenario brighter for short-term demand. Real GDP growth was at a high level of 7.4 per cent during the first quarter of 2004. Both industry and the service sectors have shown high growth during this period at the rates of 8.0 and 9.5 per cent respectively.
Taking into account all these factors along with other leading indicators including government spending, foreign investment, inflation and export growth, NCAER has projected an average growth of GDP at 6.7 percent during the tenth five-year plan. Its mid-term forecast suggests an expected growth of 7.4 percent in GDP during 2004-05 to 2008-09. Very recently, IMF has portrayed a sustained global recovery in World Economic Outlook. A significant shift has also been observed in Indian households from the lower income group to the middle income group in recent years. The finance companies are also more aggressive in their marketing compared to previous years. Combining all these factors, one may visualize a higher growth rate in two-wheeler demand presented in Table 2.1, particularly for the motorcycle segment.

There is a large untapped market in semi-urban and rural areas of the country. Any strategic planning for the two-wheeler industry needs to identify these markets with the help of available statistical techniques. Potential markets can be identified as well as prioritized using these techniques with the help of secondary data on socio-economic parameters. For the two-wheeler industry, it is also important to identify the target groups for various categories of motorcycles and scooters.

With the formal introduction of second hand car market by the reputed car manufacturers and easy loan availability for new as well as used cars, the two-wheeler industry needs to upgrade its market information system to capture the new market and to maintain its already existing markets. Availability of easy credit for two-wheelers in rural and smaller urban areas also requires more focused attention. It is also imperative to initiate measures to make the presence of Indian two-wheeler industry felt in the global market. Adequate incentives for promoting exports and setting up of institutional mechanism such as Automobile Export Promotion Council would be of great help for further surge in demand for the Indian two-wheeler industry.
2.5.4 Drivers of growth

A large number of factors are at play driving the industry sales up. Two of them were changing customer preferences and new product launches. Customer preference started changing from the early 1990s as the winds of liberalization swept the country. Several manufacturers tasted success on account of their ability to make new products. Identify target market segments and create products for them the evolution of ungeared scooters, launch of premium scooter models, Japanese motorcycles. All found favour with customers and translated into growth for manufacturers. The success can be attributed to the effect of a large pent up demand for new products, as the Indian consumer had very few choices earlier. Other drivers of growth are listed as under:

➢ Easy finance options

One of the important drivers of growth is easily available finance for purchasing a two wheeler. Several public and private sector banks have jumped into the fray, making finance schemes available even in smaller towns and rural areas. Nearly 45 per cent of two wheeler sales are probably financed through such schemes. Now a day, majority of the banks are providing finance for purchasing a two wheeler. Financing schemes have appreciably contributed to the growth in two wheelers.

➢ Shorter replacement cycles

Due to the faster changes in technology, style and consumer preferences the life of the two wheelers is reduced. The estimated two wheeler population in India is about 40 million. The normal life of a two wheeler is nearly 15 years. With increased consumer spending, spurred by consumer finance schemes, and a dramatic increase in the number of product variants, the replacement cycle is becoming shorter.
➢ **Absence of good public transportation**

Two wheelers are the most effective safety valve that relieves the pressure in personal transportation. Public transportation continues to be difficult in India with most local transport authorities running into losses despite increasing fares. Two wheelers offer a convenient alternative. The poor public transport system in urban and rural areas has boosted the demand for two wheelers.

➢ **Rising purchasing power**

In the initial years, the Indian consumer was eager to buy, but he did not have a choice. In the post liberalization period, the purchasing power of the Indian middle class witnessed a phenomenal increase. The willingness to acquire many durable also increased. The advent of television led to project lifestyles, and motivated even the hitherto frugal masses to possess a two-wheeler, a consumer’s first avenue to possess some automated transportation. That is why two wheelers account for the majority of the vehicles playing on Indian roads.

➢ **Steady fuel prices**

The fuel price in India has been steady in last few years even though the high inflation. Public transports become expensive in some urban areas as compared to private transport on a two-wheeler. So, for riders, fuel price is not a problem. With the introduction of alternative fuels like CNG, LPG etc., running cost of private vehicles has further reduced. Some users argued that using a two-wheeler actually turns out to be more economical than public transport in the metropolitan cities.

➢ **Direct taxes**

Increase in direct taxes acts as a deterrent to the demand for two wheelers. Decreasing these will further increase the demand of two wheelers.
Proliferation of brands and models

The two-wheeler industry now provides the consumer with more choice by way of models and brands. Every model is making a conscious effort to attract the consumer by a combination of features. For example, features like fuel efficiency, ergonomics, speed, power and style are now highlighted to get the attention of customers.

Affordable mobility

The low per capita income in India will continue to drive demand for two wheelers. While the cost of a two wheeler represents about 4-5 months’ salary of the average middle class individual. The cheapest passenger car represents nearly 4 years salary. Besides, the fuel efficiency of two wheelers is nearly 5 times that of a car. With the growth of the economy and increase in purchasing power, demand for two wheelers is bound to grow.

Along with this the consistent fall in interest rates, rising double income families and urbanization seems to be poised for robust growth of the industry in the coming years. Motorcycles will however remain the key drivers of growth, until the manufacturers create an even more customer friendly category.

2.5.5 Classification of two-wheelers

All the two-wheelers currently available in the market fall in one of these categories:

- Mopeds –

These are the most basic, cheapest and simplest two-wheelers available in the country. Mopeds are gearless and having large wheel size. It includes

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Luna, TVS 50, Hero Majestic, and Toro Jazz etc. All of them gives mileage between 50 to 70 kmpl and cost nearly Rs. 20,000/-.

They are recommended for children in the age group 16-18 who are just moving up from the bicycle. These are also recommended for people in their 60s and above, who do not travel more than 2-3 km per trip. These are light in weight, have a cruising speed of 40-50 kmph, easy to ride and have no gears.

- **Step thru’s** –

Step thru’s are similar to mopeds but with gears. It include Hero Honda Street, Kinetic K-4 100, Bajaj -80, Hero Puch etc. these are similar to mopeds but with gear. Two-wheelers in this category range in price from Rs. 15,000 upward to Rs. 40,000 and more. Though the two-wheelers in this category are essentially intended for city-riding, one can if necessary, go on longer out of city trips provided the roads are good and the rider is physically fit. As to the fuel mileage, Step-thru’s gives nearly 55 to 70 kmpl, in normal city riding. All these two-wheelers give excellent value for money, except that none of them have a lockable dickey for carrying things.

- **Scooterettes** --

Scooterettes are gearless and having small wheel size. These vehicles provide the facility of spare wheel as scooter. TVS Scooty, Honda Activa, Hero Winner, Bajaj Sunny Zip and Bajaj SPIRIT fall in this category. All the two-wheelers in this category are of size between 50 to 100 cc. All these two-wheelers have excellent, large, invisible, lockable dickey space under the seat, except Bajaj Sunny Zip.

- **Scooters** –

Scooters are two-wheeler with gears and small wheel size with a spare wheel facility. They are considered as a family vehicle and were more popular in 80s and 90s. Regular scooters such as Bajaj Classic SL, Honda Eterno and other
models fall in this category. Scooters are equally suitable for city traffic and long rides. Fuel average is in the 40-60 kmpl range and prices vary from Rs. 25,000 to Rs. 50,000.

Motorcycles –

Motorcycles have large wheels and foot operated gears. Hero Honda Splendor, Bajaj Pulsar, Yamaha FZ, TVS- SUZUKI and other models fall in this category. Some motorcycles have two-stroke engine where as majority of them have four-stroke engine. Their mileage ranges from 45 to 115 KMPL. Prices vary from about Rs. 35,000 to Rs. 95,000. Motorcycle is the first choice of collegian and young generation people.

2.5.6 Current scenario

The dynamics of the Indian two-wheeler industry has changed significantly over the last ten years. Everyone knows the continuation of shift in demand towards motorcycles from geared scooters. This change is due to combination of various factors. The main factor is affordability. This comes in two forms. In 1996, the top selling models were Hero Honda’s ‘CD 100’ and ‘Splendor’, ‘Kawasaki Bajaj’ and TVS’s Max-100 R with an average entry-level model starting with prices above Rs 36,000 per unit. But with the advent of competition, price declined with entry of Bajaj’s ‘Boxer’ then available at less than Rs 35,000 per unit. Eventually, the price difference between a ‘boxy’ geared scooter and a ‘sleek-cum-trendier’ motorcycle narrowed. This also aided the shift in demand.

As far as the motorcycle segment is concerned, Hero Honda and Bajaj Auto seem to be well poised to capitalize on the growth opportunity purely due to a wider distribution network and an impressive new model launch. Hero Honda’s legacy of a solid after sales service and brand equity will continue to drive volume growth. TVS is also growing but at some lower rate. Apart from
domestic markets, these three players are also targeting South East Asian markets for future growth. Kawasaki, for instance, has plans to utilize Bajaj’s manufacturing facility in Pune as a global outsourcing base for select markets. This will keep volumes ticking for Bajaj.

Chart 2.1 shows the category-wise market share of the Indian automobile industry. From this chart it is clear that Two-wheelers have the highest market share as 76.49%. It is followed by passenger vehicles having the market share nearly 16%. Commercial vehicles and three wheelers having the market share of 3.95% and 3.60% respectively.

Chart 2.1

Chart 2.2: Trend in two-wheelers volumes by category

The composition of the two-wheeler industry moreover has undergone dramatic transformation in the post-liberalization period after the 1990s. Chart 2.2 represents market trend in the two-wheelers volume by categories. This chart includes three categories of two-wheelers as motorcycles, scooters and mopeds & others. From the chart, it is clear that motorcycles contains highest share followed by scooters and mopeds. A volume of motorcycles was highest in the year 2007-08, and after that slight downward trend was there.

2.5.7 Market share of key players

In the two wheeler segment, a large number of players are competing with each other for larger and larger market share. In this industry, there are three main players as Hero-Honda, Bajaj Auto and TVS Motors. Hero Honda is the market leader but having cut-throat competition with Bajaj Auto. There was a
time when Hero Honda was a minor player in the motorcycle segment, which was totally dominated by Yamaha with its RX-100. Situation changed dramatically when the pollution norms meant, motorcycle had to go Four-stroke and petrol started to get expensive. Hero Honda started emerging as the dominating force with its extremely efficient engines.

Table 2.2 and chart 2.3 shows the market share of the leading companies in Indian two-wheeler segment in 2007-08. It can be seen that Hero-Honda was

Table 2.2: Market share of key players in 2007-08

<table>
<thead>
<tr>
<th>Company</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hero Honda Motors</td>
<td>49.55%</td>
</tr>
<tr>
<td>Bajaj Auto Ltd.</td>
<td>31.75%</td>
</tr>
<tr>
<td>TVS Motors Co.</td>
<td>12.89%</td>
</tr>
<tr>
<td>HMSIL</td>
<td>2.50%</td>
</tr>
<tr>
<td>Others</td>
<td>3.31%</td>
</tr>
</tbody>
</table>

(Source: Business World, 10th August, 2009.)

Chart 2.3:

(Source: Business World, 10th August, 2009.)
the market leader with a market share of 49.55% in the industry. Bajaj and TVS secured second and third positions with market share of 31.75% and 12.89% respectively. Other remaining companies like HMSIL, Yamaha, Kinetic, Royal Enfield etc. having the market share of only 5.81 percent. Honda Motors is present in India as Honda Motorcycles and Scooters India Limited (HMSIL), a 100 per cent subsidiary, in addition to its joint venture, Hero Honda. Another international player, Suzuki, has recently entered the Indian market through its direct subsidiary. The Indian players were also started operating in other countries of the world\textsuperscript{32}.

2.5.8 Government’s role in the industry

Traditionally, the government considered the automobile industry as a luxury segment. But realizing the growing importance of two wheelers with the increasing necessity of personal transportation for the middle class in the 1980s, priority was given to the sector in form of a favourable foreign policy. This facilitated the entry of Japanese two wheeler majors via technical and financial participation with Indian players. The government had a moderate intervention in the operations of the two wheeler industry. Excise duty structure, emission control, rider safety etc., were all policy decisions. Rider safety norms were controlled by state government notifications and varied from state to state. The price of the two wheelers also varied across the country due to variation in registration charges, state taxes and octroi levied by states.

2.5.9 Major Players of Indian two-wheeler industry

The Indian two-wheeler contributes the largest volumes amongst all the segments in automobile industry. There are lots of companies in this Industry, but major players are briefly summarized as under:

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\textsuperscript{32} Business World, 10\textsuperscript{th} August, 2009
Hero Honda Motors Ltd.

Hero Honda Motors is a joint venture between the Hero Group, India and the Honda Motor Company of Japan. Hero is the largest bicycle manufacturing company and Honda is one of the main players in the motorcycle manufacturing. On January 19th, 1984, Hero Honda Motor Limited (HHML) was incorporated. Today it is the leader in Indian two-wheeler market with maximum sales. HHML has grown at a very fast pace. In the short period of 11 years it has moved from being at rank 87 (in 1991) to rank 4 (in 2002) among the list of top 100 Indian Companies. The mantra behind the success of HHML is that it keeps on reinventing itself as per the need and specifications of the consumers. This is the reason that it is the leader amongst the two-wheeler manufacturers in India. The manufacturing units are located at Dharuhera and Gurgaon. Both are in Haryana. Hero-Honda has increased its capacity by establishing plant in Haridwar.

Advertising has been one of the key tools of Hero Honda’s marketing strategy. The company concentrated on product development and constant product improvement by adapting technology to suit Indian conditions. Technology was constantly upgraded so that the company maintained its competitive edge. Initially its plus point was fuel efficiency. The vehicle delivered 80kmpl against 40 kmpl of a scooter. Over a period of time Hero-Honda added style vehicles like splendor, Sleek and CBZ in addition to utility vehicles. It also targeted the rural market with vehicles like ‘CD 100 ss’ which was highly successful. Hero-Honda introduced vehicles in the 100cc, 125cc, 150cc, 200cc and 250cc ranges, to meet the customer requirement. But its

mainstay had been the 100cc range\textsuperscript{34}. The HHML’s current available models are:-

- CBZ Extreme
- CBZ* Electric Start
- CD Deluxe
- Glamour Electric start
- Glamour Kick Start
- Karizma
- Karizma ZMR
- Passion Plus
- Passion Plus Pro
- Splendor Plus
- Splendor NXG
- Super Splendor ES
- Super Splendor KS
- Hunk
- Pleasure

\textbf{Bajaj Auto Ltd.}

In 1945, Bajaj Auto came into existence as M/S Bachraj Trading Corporation Pvt. Ltd. It began selling imported two- and three-wheeled vehicles in 1948. In

1959, Bajaj Auto obtained license for the manufacturing of two and three wheelers. In 1972, Bajaj introduced "Chetak" the famous scooter brand for which Bajaj is known. In 1985, the manufacturing unit at Waluj, Aurangabad was inaugurated by the President then Shri Giani Zail Singh. In 1986 after the technical tie-up with Kawasaki Heavy Industries of Japan, motorcycles were introduced by it. Bajaj Auto has been an integral part of the automobile industry of India. Looking at the changing customer preferences, Bajaj shifted its focus from scooter to motorcycle segment. The company continuously makes efforts to introduce new products or modify the existing ones. It adopts Total Productive Maintenance as a means of creating a safe and participative work environment in which all employees target the elimination of losses in order to continuously enhance the capacity and reliability of its processes leading to organizational profitability. Today, it has become India’s second largest two-wheeler and three-wheeler manufacturer and world’s third largest in terms of volumes. It has three plants all of which are located in Maharashtra. They are at akurdi, Waluj and Chakan\textsuperscript{35}. Bajaj Auto’s current available models are:-

- Avenger
- Boxer CT 100
- Discover Electric Start
- Discover 135 DTS-i
- Platina 125
- Pulsar 150 DTSi
- Pulsar 180 DTSi
- Pulsar 220 DTSi
- XCD 125 and 135
- Bajaj kristal
- Bajaj blade

\textsuperscript{35} http://www.bajajauto.com accessed on 04/01/2008.
TVS Motor Company Ltd.

TVS Motor Company is the flagship company of the TVS Group. The TVS group was established in 1911 by Sri T.V. Sundaram Iyenger. TVS group commands a strong presence in manufacturing of two-wheelers, auto components and computer peripherals. TVS Motor Company's first launch was 50 cc Moped TVS 50 in August 1980. It is the first Indian company to introduce 100 cc Indo-Japanese Motorcycles in India in 1984. It was also the first Indian company to launch indigenous scooterette in India in 1994. It has grown rapidly since it's beginning to become one of the prominent two-wheeler manufacturers in India. Today TVS is a well-known brand in the field of bike manufacturing. Company practices Total Quality management at all the levels supported by the five pillars of TQM. The main objective of the company is to design, develop and produce affordable vehicles. The manufacturing units of TVS Motor are located at Hosur and Mysore\textsuperscript{36}. The TVS's current available models are:-

- Scooty Pep and pep+
- Star
- Star City
- Star Sport
- Apache RTR 160 and 180
- Apache RTR Fi
- Streak
- Flame
- Flame DLX

\textsuperscript{36} http://www.tvsmotor.in accessed on 04/01/2008.
Honda Motors Co. Ltd. is a renowned Japanese engine manufacturer and engineering corporation. Although Honda is known all over for its motorcycles and automobiles, it also manufactures products such as scooters, trucks, aeronautical, robots, electric generators, jets, jet engines, water crafts, ATV beside others. The best-known Honda luxurious cars are acknowledged as Acura in North America and China. Recently, Honda came up with mountain bikes called Honda RN-01 G-cross that happens to be the first bike equipped with an in-built gear changing system. Honda is the world’s largest engine-maker with its annual production reaching about 14 million internal combustion engines. In many categories, Honda has been the first company to break in, like for instance, Honda invented Japan’s first car- Legend in 1987, Japan’s first motorcycle- Gold Wing in 2006 that is facilitated with an airbag and also the first average size pick-up truck equipped with an independent rear suspension- Ridgeline in 2006. The production unit is situated at Manesar, in Gurgaon district of haryana. The Power of Dreams is the motto of Honda. True to its slogan, Honda definitely turns dreams into reality\textsuperscript{37}. The HONDA’s current available models are:-

- Honda Activa
- Honda CB 1000R
- Honda dio
- Honda Eterno
- Honda Shine
- Honda Unicorn
- Honda CBF stunner

\textsuperscript{37} http://www.honda2wheelersindia.com/ accessed on 04/01/2008.
- Honda Aviator
- Honda CBR 1000RR

➢ **Yamaha Motors**

Yamaha's association with India began in 1985 for the first time when it provided technical assistance to the Escorts Group in manufacturing of motorcycles. In November 1995 Yamaha Motor Corporation entered into a joint venture with the Escorts group. Initially both players had equal equity holding. In June 2000, the equity holdings were revised and Yamaha Motor Corporation acquired 74% of the share. In August 2001 Yamaha Motor India Pvt. Ltd. (YMI) was incorporated as a 100% subsidiary of Yamaha Motors Corporation. The fact that YMI keeps the requirements of Indian customers, namely, good mileage, comfort, durability, style and affordability has made it popular. YMI's manufacturing facilities comprises of two state-of-the-art plants at Faridabad (Haryana) and Surajpur (Uttar Pradesh). The infrastructure at both the plants supports production of motorcycles for the domestic as well as overseas market\(^{38}\). The YAMAHA's current available models are:-

- Crux S
- Enticer
- Fazer LX
- RX 135
- RX-Z
- Yamaha FZ
- Yamaha YZF R1

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Royal Enfield made its debut in India in 1949 with the launch of 350 cc Bullet that was marketed by the Madras Motors. It all began when the Indian Army placed an order with the Enfield Motors for these motorcycles, the UK factory was unable to meet the demand, and therefore Madras Motors in India was given the order to assemble these. The Indian Army insisted that they would do business only if the bikes were produced indigenously. Thus, the manufacturing of various parts also began in the Madras Motors along with assembling. In 1955 the Enfield India Company was formed. Initially the frames were manufactured that was followed by the manufacturing of the engines. Subsequently, the UK factory closed in 1970 but the Indian Plant continued to manufacture the Bullet models. In 1994, March Eicher Group acquired Enfield India Company and its name was changed to Royal Enfield Motors Ltd. The manufacturing of Royal Enfield is located at Tiruvottiyur in Chennai. Royal Enfield current available models are:

- Bullet 350
- Bullet 500
- Bullet Electra
- Bullet Electra 5S
- Machismo
- Machismo A350
- Machismo Standard
- Tarus Diesel
- Thunderbird Twinspark

➢ Kinetic Motors

Kinetic Engineering is the flagship company of the Kinetic Group of companies. Kinetic Engineering was incorporated in 1970 for the purpose of manufacturing of two wheelers by Jayhind Industries. Kinetic has become synonymous with pioneering activities of the Indian automobile industry. It pioneered the concept personalized transportation in India with the launch of Kinetic Luna in 1972. Since then, the brand Kinetic Luna has become generic with mopeds. Kinetic also takes the credit of revolutionizing the scooter industry in India. Through various collaborations with foreign companies, Kinetic Engineering has grown. Kinetic group entered into collaboration with Honda Motor Company, Japan to set up Kinetic Honda Motor Company Limited in 1984. It was the first to introduce a gearless scooter with advanced features like TLAD suspension, auto choke, auto fuel cork, etc., thus offering convenience and comfort to the earlier hassled scooter customers. In 1998, Kinetic acquired major stakes in the Kinetic Honda Motor Ltd. and in 1999 it was rechristened as Kinetic Motor Co. Ltd. Kinetic now has the distinction of being India’s one of the two-wheeler company to offer a full range of vehicles
which range right from mopeds, step-thrus, scooterettes, scooter to motorcycle. KMC has three manufacturing units. They are located at Koregaon Bhima, Maharashtra, Ahmednagar, Maharashtra and Pithampura, Madhya Pradesh\textsuperscript{40}. Different models of Kinetic currently available are as under:

- Comet
- DX
- GF 125
- GF 125 (Disc)
- GF 170
- GF 170 (Disc)
- GF Laser
- K4-80
- King 100
- Style
- Blaze

2.5.10 Porters five forces model for two-wheeler industry

Five force analysis is a key analytical tool for diagnosing the competitive environment. The state of competition in an industry depends on five basic forces as rivalry among existing firms, threats of substitute products, threats of new entrants, bargaining power of suppliers and bargaining power of customers. These five forces are diagrammatically shown in the figure 2.2. The collective strength of these forces determines the ultimate profit potential of an industry. Knowledge of the underlying sources of competitive pressure provides the groundwork for a strategic agenda of action. These forces highlight the critical strengths and weaknesses of the company, animate the positioning of the company in its industry, clarify the areas where strategic

\textsuperscript{40} http://www.kineticindia.com accessed on 04/01/2008.
change may yield greatest payoff, highlight the places where industry trends promise to hold the greatest significance as either opportunities or threats. These forces for Indian two wheeler industry are explained in brief as under:

**Figure 2.2: Porter’s five force model**

- **Rivalry among existing firms – High**

The strongest of five competitive forces is usually the jockeying for position and buyer favour that goes on among rival sellers of a product or service. The two-wheeler industry is categorized by intense competition mainly between the three majors – Bajaj Auto, Hero Honda & TVS Motors. Yamaha also started manufacturing four stroke motorcycles to grab higher market share. There are also some small players who are gaining market share such as LML, Kinetic, Royal Enfield etc. each player introduces a large range of two-wheelers in the Indian market. The industry is constantly witnessing price-cuts, freebies & new product launches. So the rivalry among the existing players is very high. Few
more reasons for high rivalry among existing firms are (i) lower switching cost of customers, (ii) some of the players are of nearly equal size, (iii) as Indians are fond of festivals, so all two-wheeler companies offer different schemes to attract customers during festivals.

➢ Threat of Substitute Product – Low

The two-wheeler industry faces direct competition from the automobile sector. With the increase in disposable income & increase in bank finance people prefer to have cars rather than two wheelers. Thus the demand for cars affects the demand for two-wheelers. Even the introduction of small car like Tata Nano, also adversely affect the two wheeler industry. But one main advantage with two-wheeler is less traffic problems basically in urban areas as compared to those with car. Other substitute like public transport is very poor in India. So overall, the threat of the substitute products can be considered as low.

➢ Threat of new entrants – Low

The barriers to entry & exit are low. Now a day the two wheeler industry is in its maturity stage. All the existing players are well set. For the new entrant the investment required to compete with these giants would be significant. Thus it is very difficult for newcomers to enter this sector. The industry attractiveness is low not due to profit margin but due to intense & well established competitors. Even though this force is low, it can not be ignored. All the four wheeler players have the ability to enter into the two-wheeler sector because they have already established distribution network and working know how of automobiles. Also, the Chinese bikes are one of the most powerful threats for the Indian market as they have lowest labour cost, and cheaper product.

➢ Bargaining power of suppliers – Low

Suppliers can exert a competitive force in the industry as they can raise prices, reduce quality, and curtail the range of free services that they provide. Few
years back, the two-wheeler industry relied on few selected vendors only. But today the scenario is totally changed. Recently so many players have entered into the business of automobile parts manufacture in India. Also majority of the players in the industry are large customers for the supplier, and no one want to lose such a large customer. Thus the bargaining power of supplies is low.

➢ **Bargaining power of buyers –High**

The bargaining power of the buyers is high. There are a variety of products available to customers to choose from. The customer is treated “as a king”. The marketers have segmented the market into three categories namely entry level, executive & premium category. It has been observed that companies which have ignored the customers have suffered – Bajaj Auto, which once operated without a marketing department, but instead had a dispatch department. However the rules of the game have changed. The customer should be the focus of all activities. All activities, like production & marketing should be done by keeping the consumers in mind.

**2.5.11 Importance of customer satisfaction in two-wheelers**

Now a day, customer plays an important role in all the industries. The automobile industry has witnessed an unprecedented growth in last 20 years. The Indian market opened up to the global. A country of a billion people woke up to the world outside. The Indian customer is now exposed to automobiles with new models and variants of top quality standards and upgraded technology. Their innovative designs and dynamic performance make driving an enjoyable experience. The market changed from a sellers’ to a buyers’ market. The customer welcomed this change and enjoyed the choice made available to him by the competition. These three Cs- change, choice and competition – revolutionized the profile of the customer, gave him the focus where everyone in the industry is emphasizing on his need, want and demand. For both manufacturers and dealers, the customer is the only source of sale,
profit and growth. Therefore it is not wrong to say the customer is the business. The share of the customer is now more important than the share of the market.

A customer wants a total solution to his transport needs in the form of high value product and high value services with both functional and emotional benefits and with integrated services and facilities, both tangible and intangible, all packed to give him a wonderful sales experience. Earlier, the customer was satisfied by just the product, but now the customer is looking for a total hassle free sales experience and driving pleasure. The perception of feel of the customer is as important as the product and the services offered to him.

The customer is not just looking for highly technical product and superior support services but also a relationship resulting from a multiplicity of company activities that combine to forge a strong bond with the customer one that is emotional as well as rational.

Customer satisfaction is no longer enough to survive in today’s competitive market place. Those in the auto trade are looking for customers’ delight and further to that adding little extra that makes the customer to think wow that has great or wow that is what I call service.

Customer satisfaction is a journey rather than a destination. This means an ongoing process to meet the customers’ need and behaviours in order to develop stronger relationships with them. Good customer relationships are the heart and sour of business success. And all the people in auto industry are focusing on processes engineered to build relationship with the customer by knowing his product preferences, budget and shopping habits and also understanding the customers’ profitability.
Getting a customer is not difficult, but what is difficult is retaining him, and the key to this is maximizing the value of customer relationship. All the manufacturers are competing to give the best of the products at the best of the products at the best price. The dealer has to add new dimensions to the product by offering superior quality services and a long term relationship bondage with the customer.

In the current automobile scenario the dealer is the single point of contact for all customers, whether it is selling or servicing. So to reach out to any customer, the manufacturer has to focus on this channel. The dealer and the manufacturer are in business together to meet the needs of the customers profitably. They both can only achieve this profitability if they are able to create superior customer values required in the process of acquiring and retaining customers. Dealer is the active stakeholder in the distribution channel of the manufacturer.

With the advancement of technology the customer expects the product to have innovative features, latest designs, dynamic performance and superior after sales service package. So from all this it can be concluded that to satisfy or to delight the customer is now the prime requirement for successful performance in the industry. Customer wants the integrated service of sale, service, spares, finance, insurance, claim settlement, body shop and machine shop all under one roof.

2.5.12 Major purchase criteria

There are mostly two reasons of buying a two-wheeler - need and desire. There is no such thing as a perfect bike, or the best bike in the world. Every mechanical device such as a two-wheeler is intended for a specific application, and this has to be defined by customer.
The first step is to define customer need. From the practical point of view most people look for a workhorse that can take them to work everyday, run errands, do odd jobs, not cost too much, nor guzzle up too much petrol, be easy to put on stand and get off stand, be fairly reliable, and easily repairable with easy availability of spare parts\(^4^{1}\).

Customer’s budgetary constraints are also an important decider on the kind of bike a customer will eventually buy. Some possible criteria for purchasing a motorcycle are as under:

**Mileage** – Running cost of two-wheeler play a major role as purchase criteria. After 2000, all the players in the industry focus on this factor as an important purchase criteria.

**Price** - price of the motorcycle ranges from Rs. 30000/- to Rs. 95000/-. Based on the price, motorcycle segment is divided into three categories as Economy segment, medium level segment and Premium segment. Each segment has different target people.

**Style** – Style and physical aesthetics of the motorcycle is very important. Some of the customers purchase motorcycle over scooter is due to the stylish view of motorcycle. This is the factor through which motorcycle is popular among collegians.

**Power & Pick-Up** – After the success of Bajaj Pulsar, this factor should not be under-estimated. All the industry players come up with the new and new models focusing on this factor.

**Safety** - Important aspects of safety comprise braking, road holding, balance, powerful headlights, loud horns, bright blinkers, tail-light and brake-light. Instantaneous locking of the wheels upon applying brakes is not good braking, and can result in a nasty fall especially on a wet road. The brakes must act

gradually rather than instantly. Other important requirement is headlights, to which there are two aspects, beam power and beam quality.

**Comfort** – Motorcycle driving should be comfortable and enjoyable. The four most important factors contributing to comfort are Seat - shape, width and cushioning; Suspension - hard or soft; Seating geometry and steering to seat distance.

**Other related factors** – Other factors that influence purchase includes Brand Image of the company; Warranty and finance facility given by the company; resale value, technology and durability of the motorcycle.

These all are some of the main purchase criteria considered by the customer while purchasing motorcycle.

### 2.5.13 Future outlook

One trend that is quite evident is that the two-wheeler market has skyrocketed in the last few years and it is believed that the total sales in this industry are set to cross the mark of 10 million by 2010. India has the youngest population with 70% under the age group of 35 years and another 140 million is likely to be added in this category in the next five years. The preferred choice of two-wheelers by this group is in favour of motorcycle and not scooters.

Electric two-wheelers are also introduced to compete with fuel operated two-wheelers. A recent A C Nielsen market survey puts the electric bike market in the country at around 5 lakh units\(^2\).

China is keen to enter the Indian two-wheeler market in three possible ways: I) Joint ventures with Indian companies, II) Exporting two-wheelers to India, and

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III) Selling two-wheeler parts and accessories to Indian companies. It may be possible that this will increase the competition in Indian two-wheeler industry.

The future trend is towards motorcycle as its demand increases day by day. Other two-wheelers like geared scooters and mopeds have shown a stagnant or a negative demand. From this, it can be said that motorcycle segment is set to attain all laurels in the two-wheeler industry, rightfully due to it, while other categories of two-wheelers are reduced to lesser significance.

2.6 Motorcycle Segment

2.6.1 Introduction

Motorcycle, the name is evolved from motorized cycle. A motorcycle has an engine, wheels and chain exposed. Moreover, it is chain driven. Two-stroke motorcycles are positioned as power bikes by making use of their high power delivery to cater the young generation. Four-stroke motorcycle is positioned as fuel-efficient and environment friendly vehicle\(^{43}\).

About the history of motorcycle in India, no authentic data is available. Some argued that motorcycles were introduced in India during British raj. Some said that it introduced in mid 50’s. According to some information, history of the motorcycles in India dates back to the year 1955, when the Government of India required strong, rough, and tough motorcycles for the Indian Army and the police force in the western part of the country which had a rough and craggy terrain. In 1956, when the U.S. President, Dwight Eisenhower, visited India along came his security cover, which included a convoy of bulletproof cars and 200 Harley Davidson motorcycles as outriders. At the conclusion of his visit to India, president donated these 200 mean machines to India. Out of

these motorcycles some of them found their way into auction houses while the remaining were modified\(^{44}\).

2.6.2 Dominance of motorcycle in Indian market

1999 onwards motorcycles had taken over from scooters and started dominating in two wheeler industry. For the first time in the Indian two wheeler history, the motorcycle segment had overtaken the scooter segment. This seems to have resulted from a change in life style patterns. Now, people have become more outgoing, brand conscious, environment friendly, and above all their spending power has increased.

Moreover, people are now realizing that bikes are as reliable as scooters, and clearly more fuel efficient especially with the modern technology being incorporated like four-stroke engines with electronic ignition system and the catalytic converter. Over the past decade, the whole consumer perception has been under a major change. Today parents are buying bikes for their children. Earlier scooters used to be the parents first and preferred choice. The reasons for the change are that motorcycles are considered more fuel efficient, stylish, lower maintenance cost and safer due to larger and broader wheels and wheelbase.

In the early 80’s scooters were predominantly ruling the roost, with a few bike like Enfield, java and Rajdoot on the road. The consumer had no choice and motorcycles were perceived as big, black and bulky things but they gave that Macho feel. Scooters were considered safe had luggage space, spare tyre and were affordable. Scooters were considered as a utility vehicle while motorcycles had a style image.

In the mid-80’s, things started changing and motorcycles were being seen as fuel efficient, easy to handle and stylish. The introduction of indo Japanese bikes in the Indian market changed the general perception of people with regard to motorcycles. What Maruti did to the Indian automobile scenario, Yamaha and Hero Honda did to the domestic biking world. These bikes were sleek, modern looking, easy to handle, reliable and equipped with latest technology. The bikes sporting a four stroke engine were more environment friendly and fuel efficient. It was for the first time the Indian market had witnessed a product, which more than met its expectations.

The bikes created history and rewrote the rules of motorcycling. From the heavy, bulky bikes for just the college kids, indo-Japanese bikes began to open up the market to various segments like the middle class family, the office executive, the professional, the trader, the farmer etc. Scooter sales were booming till 1992. From 1992 onwards, bikes started growing at a faster rate and in 2006 motorcycles stand at 78 per cent, scooters and mopeds share the remaining 22 per cent of the two wheeler industry market share\textsuperscript{46}. Motorcycles have beaten the crippling auto slump and raced ahead with record sales.

It is indeed surprising to note that nearly 50 percent of motorcycle sales come from the rural population. One can often see the milkman on the highways early in the morning on his motorcycle coming towards the city or the farmer touring his farm on his bike. For that matter, substantial sales also come from the age group of 35 years plus\textsuperscript{46}. Bajaj Auto, which had been a leader in the scooter segment, ever since the scooter concept came to India, also shifted its focus to motorcycles and announced a joint venture with Kawasaki. Now Bajaj had developed its own design without help from Kawasaki. The company sleek styled, smart and contemporary products.

\textsuperscript{45} SIAM, 2009

Initially, Hero Honda and Bajaj were the only producers of four-stroke motorcycles. Now, TVS Motor, Yamaha, Kinetic, LML along with Bajaj and Hero Honda are jostling for space in the four-stroke market. This has led to an increase in the number of models and a consequent reduction in product lifecycle. In the past couple of years, more than ten new four-stroke motorcycle models have hit the Indian roads\textsuperscript{47}.

By one of the segmentation, the two wheeler industry could be broadly divided into three segments scooters, motorcycles and mopeds. The shift in consumer preference in favour of motorcycles aided by their technological superiority, better load carrying capacity and fuel efficiency has seen the segment dominate the two wheeler industry.

\textsuperscript{47} B. Krishnakumar, “Two-wheelers: Bumps along the way”, \textit{Business Line}, accessed on 25/05/2003.