CHAPTER III

Chapter III
Overview of the Automobile Industry

The purpose of this chapter is to present to the reader the history of automobile, historical industry development and the automobile industry in Asia. The chapter includes a short background of the automobile industry in India, followed by a description of the Indian automobile market environment. Furthermore, the chapter intends to present the automobile industry in Iran and ends with the study of the role of consumer satisfaction in this industry.

3.1 *Introduction*

The decade of 1985-1995 was an important watershed in the history of the international automobile industry. World demand for automobiles had stagnated. Declining international competitiveness had thrown North American and European automobile manufacturers into labor turmoil. Overcapacity threatened home markets which had already achieved predictable and mature growth rates, resulting in a glut of excess manufacturing capacity, now estimated at about 40 unneeded assembly plants world-wide. Japanese-U.S. and Japanese-European Union trade relations were increasingly strained, as Japanese automobile manufacturers penetrated western markets, while carefully protecting their home turf. While these problems festered, the Asian auto market was exploding. Economic growth rates were high throughout the region; a middle class with a significant disposable income was emerging; and few people owned cars. But European and American firms faced formidable Japanese competition; Japanese manufacturers had built an important presence in Asia through decades of market penetration in sales and the location of manufacturing facilities. Indeed, by 1996, Japanese firms dominated the Asian market, with significant and growing European penetration of these markets, especially in China and Taiwan. The automobile history dates back to the late 18th century. Nicolas Joseph Cugnot, a French engineer is credited with inventing the first self-propelled automobile. Cugnot's vehicle used steam power for locomotion. The vehicle found military application in the French army. Cugnot's automobile was never commercially sold. In the beginning automobile industry was dominated by steam-powered vehicles. The vehicles were expensive and difficult to maintain. The incidence of frequent boiler explosions also kept potential purchasers away. Commercial history of automobiles

started with the invention of gasoline powered internal combustion engines. The German inventor, Karl Benz constructed his first gasoline powered vehicle in 1885 at Mannheim, Germany. Commercial production of Benz cars started in 1888. Panhard et Levassor of France was the first company to exclusively build and sell motor cars from 1889.

The early 1900s saw many automobile manufacturing companies coming into existence in a number of European countries and the United States. The first mass produced automobile in the United States was the curved-dash Oldsmobile. It was a three-horsepower machine and sold 5,000 units by 1904. The economics of the US car market was disrupted by the arrival of Henry Ford and his Model T car. The Model T was the world's first mass produced vehicle- a million units were sold by 1920- a space of 10 years. The History of the automobile actually began about 4,000 years ago when the first wheel was used for transportation in India. Several Italians recorded designs for wind-driven cars. The first was Guido da Vigevano in 1335. It was a windmill-type drive to gears and thus to wheels. Vaturio designed a similar car that was also never built. Later Leonardo da Vinci designed clockwork-driven tricycle with tiller steering and a differential mechanism between the rear wheels.

In the early 15th century, the Portuguese arrived in China and the interaction of the two cultures led to a variety of new technologies, including the creation of a wheel that turned under its own power. By the 1600s, small steam-powered engine models were developed, but it was another century before a full-sized engine-powered automobile was created. A Catholic priest named Father Ferdinan Verbiest is credited to have built a steam-powered car for the Chinese Emperor Chien Lung in about 1678. There is no information about the automobile, only the event. Since James Watt didn't invent the steam engine until 1705, we can guess that this was possibly a model automobile powered by a mechanism like Hero's steam engine-a spinning wheel with jets on the periphery. Although by the mid-15th century the idea of a self-propelled automobile had been put into practice with the development of experimental car powered by means of springs, clockworks, and the wind, Nicolas-Joseph Cugnot of France is considered to have built the first true automobile in 1769. Designed by Cugnot and constructed by M. Brezin, it is also the first automobile to move under its own power for which there is a record. Cugnot's three-wheeled steam-powered automobile carried four persons and was meant to move artillery pieces. It had a top

speed of a little more than 3.2 km/h (2 mph) and had to stop every 20 minutes to build up a fresh head of steam.

Evans was the first American who obtained a patent for "a self-propelled carriage." He, in fact, attempted to create a two-in-one combination of a steam wagon and a flat-bottomed boat, which didn't receive any attention in those days. During the 1830's, the steam car had made great advances. But stiff competition from railway companies and crude legislations in Britain forced the poor steam automobile gradually out of use on roads. The early steam-powered automobiles were so heavy that they were only practical on a perfectly flat surface as strong as iron. A road thus made out of iron rails became the norm for the next hundred and twenty-five years. The automobiles got bigger and heavier and more powerful and as such they were eventually capable of pulling a train of many cars filled with freight and passengers. Carl Benz and Gotttlieb Daimler, both Germans, share the credit of changing the transport habits of the world, for their efforts laid the foundation of the great motor industry as we know it today. First, Carl Benz invented the petrol engine in 1885 and a year later Daimler made a car driven by motor of his own design and the rest is history.

Daimler's engine proved to be a great success mainly because of its less weight that could deliver 1000 rpm and needed only very small and light vehicles to carry them. France too had joined the motoring scenario by 1890 when two Frenchmen Panhard and Levassor began producing automobiles powered by Daimler engine, and Daimler himself, possessed by the automobile spirit, went on adding new features to his engine. He built the first V-Twin engine with a glowing platinum tube to explode the cylinder gas-the very earliest form of sparking plug. The engines were positioned under the seat in most of the Daimler as well as Benz cars. However, the French duo of Panhard and Levassor made a revolutionary contribution when they mounted the engine in the front of the car under a 'bonnet'. Charles Duryea built a car carriage in America with petrol engine in 1892, followed by Elwood Haynes in 1894, thus paving the way for motor car s in that country. For many years after the introduction of automobiles, three kinds of power sources were in common use: steam engines, gasoline or petrol engines, and electrical motors. In 1900, over 2,300 automobiles were registered in New York, Boston, Massachusetts, and Chicago. Of these, 1,170 were steam cars, 800 were electric cars, and only 400 were gasoline cars.

In ten years from the invention of the petrol engine, the motor car had evolved itself into amazing designs and shapes. By 1898, there were 50 automobile-manufacturing companies in the United States, a number that rose to 241 by 1908. In that year, Henry Ford revolutionized the manufacture of automobiles with his assembly-line style of production and brought out the Model T, a car that was inexpensive, versatile, and easy to maintain. The introduction of the Model T transformed the automobile from a plaything of the rich to an item that even people of modest income could afford; by the late 1920s the car was commonplace in modern industrial nations.

Herbert Austin and William Morris, two different car makers, introduced mass production methods of assembly in the UK, thus paving the way for a revolution in the automobile industry. Austin Seven was the world's first practical four-seater 'baby car ' which brought the pleasures of motoring to many thousands of people who could not buy a larger, more expensive car. Even the 'bull-nose' Morris with front mounted engine became the well-loved model and one of the most popular cars in the 1920s. Automobile manufacturers in the 1930s and 1940s refined and improved on the principles of Ford and other pioneers. Cars were generally large, and many were still extremely expensive and luxurious; many of the most collectible car s date from this time. The increased affluence of the United States after World War II led to the development of large, petrol-consuming car s, while most companies in Europe made smaller, more fuel-efficient cars. Since the mid-1970s, the rising cost of fuel has increased the demand for these smaller cars, many of which have been produced in Japan as well as in Europe and the United States. The History of motor cars has surely been a well-traversed one. The automobile, as it progressed, was a product of many hands, of revolutionary concepts, and of simple, almost unnoticed upgrading. In the end, the one who received the most for these challenges and changes was the motorist, whose interest, money, and enthusiasm have forced the auto-moguls to upgrade, perfect, and add to previous achievements in order to stay in the competition.

American automobile manufacturers, however, had failed to crack the Japanese and European stronghold on the Asian market. The market’s close geographical proximity to Japan, the relative unsuitability of American products in Asia (larger car sizes, greater fuel inefficiencies, and higher average retail prices), the need to focus on protecting its share of the North American market from Japanese and

European penetration, and rampant protectionism in most Asian countries worked together to weaken the American position. Even in terms of traditional firm competencies, US firms were at a disadvantage. Their strengths in consumer driven production, purchase financing, product marketing and product servicing were thwarted by the Asian markets' structural characteristics. Production, both in terms of levels and of variety of products, was often state-determined. Financing tools were heavily influenced by host state credit decisions. Dealer networks were strictly controlled, and service networks could not be easily created. Overall, the 1985-1997 Asian market experience for the American automobile manufacturers was one of disappointment. Ironically, then, it was the Asian financial crisis that provided the opening in Asia for American auto firms. At first glance, this is surprising because at the height of the crisis, sales fell by over 50% in Thailand, Indonesia, the Philippines, Malaysia and China, and though less dramatic, sales also fell in Korea and Japan. More importantly, however, the crisis put a break on rapid expansion of the automobile sector. Nonetheless, it provided producers with the political bargaining power to push for economic liberalization throughout the region. As we will demonstrate below, American firms were able to use their considerable bargaining expertise in multilateral institutions to press for acceleration and a deepening of the liberalization process.

3.2 ***Historical Industry Development***

The first motor car on the streets of India was seen in 1898. Mumbai had its first taxicabs in the early 1900. Then for the next fifty years, cars were imported to satisfy domestic demand. Between 1910 and 20's the automobile industry made a humble beginning by setting up assembly plants in Mumbai, Calcutta and Chennai. The import/assembly of vehicles grew consistently after the 1920's, crossing the 30,000 mark in 1930. In 1946, Premier Automobile Ltd (PAL) earned the distinction of manufacturing the first car in the country by assembling 'Dodge DeSoto' and 'Plymouth' cars at its Kurla plant. Hindustan Motors (HM), which started as a manufacturer of auto components graduated to manufacture cars in 1949.

In 1952, the GOI set up a tariff commission to devise regulations to develop an indigenous automobile industry in the country. After the commission submitted its recommendations, the GOI asked assembly plants, which did not have plans to set up manufacturing facilities, to shut operations. As a result General Motors, Ford and

other assemblers closed operations in the country. The year was 1954 and this decision of the government marked a turning point in the history of the Indian car industry. The GOI also had a say in what type of vehicle each manufacturer should make. Therefore, each product was safely cocooned in its own segment with no fears of any impending competition. Also, no new entrant was allowed even though they had plans of a full-fledged manufacturing program. The restrictive set of policies was chiefly aimed at building an indigenous auto industry. However, the restrictions on foreign collaborations led to limitations on import of technology through technical agreements.

The other control imposed on carmakers related to production capacity and distribution. The GOI control even extended to fixation of prices for cars and dealer commissions. This triggered the start of a protracted legal battle in 1969 between some carmakers and GOI. Simply put, the three decades following the establishment of the passenger car industry in India and leading up to the early 1980s, proved to be the 'dark ages' for the consumer, as his choice throughout this period was limited to two models viz Ambassador and Padmini. It was only in 1985, after the entry of Maruti Udyog, that the car makers were given a free hand to fix the prices of cars, thus, effectively abolishing all controls relating to the pricing of the end product. In the early 80's, a series of liberal policy changes were announced marking another turning point for the automobile industry. The GOI entered the car business, with a 74% stake in Maruti Udyog Ltd (MUL), the joint venture with Suzuki Motors Ltd of Japan. In 1985, the GOI announced its famous broadbanding policy which gave new licenses to broad groups of automotive products like two and four-wheeled vehicles. Though a liberal move, the licensing system was still very much intact.

MUL introduced 'Maruti 800' in 1983 providing a complete facelift to the Indian car industry. The car was launched as a "peoples car" with a price tag of Rs40,000. This changed the industry's profile dramatically. Maruti 800 was well accepted by middle income families in the country and its sales increased from 1,200 units in FY84 to more than 200,000 units in FY99. However in FY2000, this figure came down to 189,184 units, due to rising competition from Hyundai's 'Santro', Telco's Indica and Daewoo's 'Matiz'. MUL extended its product range to include vans, multi-utility vehicles (MUVs) and mid-sized cars. The company has single handedly driven the sales of cars in the country from 45,000 in FY84 to 409,951 cars by

FY2000, cornering around 79.6% market share. With increasing competition from new entrants, this market share has plummeted to almost 62% in FY2000. The de-licensing of auto industry in 1993 opened the gates to a virtual flood of international auto makers into the country with an idea to tap the large population base of 950mn people. Also the lifting of quantitative restrictions on imports by the recent policy is expected to add up to the flurry of foreign cars in to the country. Many companies have entered the car manufacturing sector, to tap the middle and premium end of the car industry. The new entrants are Daewoo (Matiz), Telco (Indica) and Hyundai (Santro) in the upper end of the economy car market. GM, Ford, Peugeot, Mitsubishi, Honda and Fiat have entered the mid-sized car segment and Mercedes-Benz is in the premium end of the market. Car manufacturers like Malaysia based Proton are also in line to hit the Indian ramp.

3.3 ***The Automobile Industry in Asia***

Although sectoral statistics rarely speak for themselves, the growth potential of the Asian markets for automobiles could hardly have been lost on any of the interested parties, whether they were international automobile manufacturers, host national governments, or trade unions in the advanced industrial markets. In the 1980s, auto registration skyrocketed and Asia's share of the global auto production tripled. As the 1990s opened, forecasts for increased sales were bright, and, after an initial slump, sales continued to increase even after the financial crisis. As Vaughn Koshkarian, the president of Ford China, optimistically stated at the onset of the 1997 financial crisis, "by 2010 China will have four vehicles per 100 people and a market volume of between 5 and 6 million vehicles, the fourth largest market in the world after North America, Europe and Japan. [Additionally,] by 2010, after substantial consolidation, this automotive industry will have a highly educated, skilled and industrious workforce. In essence, China will have everything necessary to become a primary, manufacturing nation in Asia." Robert Buscelhofer, a member of the VW's car management board, underlined this prediction: "in the next five years, the world's total car market will increase by about five million cars to about 42 million cars. Almost two million of them will originate in the Asia-Pacific market, a third in China and two-thirds in the remaining emerging markets." Within this context, Auto firms recognized first-to-market benefits both in terms of brand awareness and loyalty and in terms of capturing the greatest proportion of market share and establishing a

distribution, service and production network. But the Asian market continues to be a difficult one to penetrate: high growth rates, low labor rates and a rapidly growing and consuming middle class came with a high level of state intervention, trade protectionism and a rigid institutional structure. State intervention takes a number of forms, but its most important parameters are two: 1. the host state's need to support the growth of the localization of content, in order to increase the positive net externalities for increasing automobile production, and 2. the host state's desire to increase the rationalization of the automobile industry's components and parts suppliers. In both cases, the host state is aiming to increase the local value-added production of automobile and to facilitate corollary industry growth. As Abdulsomad has shown, in the Asian area, no industry has become as politicized as the automobile industry, which is now regarded as vital to their national economic development strategies. What follows is a list of country-specific reviews of automobile industry state intervention practices.

3.4 ***The Automobile Industry of India***

The history of the automobile industry in India actually began about 4,000 years ago when the first wheel was used for transportation. In the early 15th century, the Portuguese arrived in China and the interaction of the two cultures led to a variety of new technologies, including the creation of a wheel that turned under its own power. By the 1600s, small steam-powered engine models were developed, but it was another century before a full-sized engine-powered automobile was created. The dream carriage that moved on its own was realized only in the 18th century when the first car rolled on the streets. Steam, petroleum gas, electricity and petrol started to be used in these cars. The automobile, as it progressed, was a product of many hands, of revolutionary concepts, and of simple, almost unnoticed upgrading. India's transport network is developing at a fast pace and the automobile industry is growing too. The automobile industry also provides employment to a large section of the population. Thus the role of the automobile industry cannot be overlooked in the Indian Economy. All kinds of vehicles are produced by the automobile industry. It includes the manufacture of trucks, buses, passenger cars, defense vehicles, two-wheelers, etc. The industry can be broadly divided into the car manufacturing, two-wheeler manufacturing and heavy vehicle-manufacturing units. The major car manufacturers in India are Hindustan Motors, Maruti Udyog, Fiat India Private Ltd., Ford India Ltd.,

General Motors India Pvt. Ltd., Honda Siel Cars India Ltd., Hyundai Motors India Ltd., Skoda India Private Ltd., Toyota Kirloskar Motor Ltd., to name just a few.

Automobile Industry in India has witnessed a tremendous growth in recent years and is all set to carry on the momentum in the foreseeable future. Indian automobile industry has come a long way since the first car ran on the streets of Bombay in 1898. Today, the automobile sector in India is one of the key sectors of the economy in terms of the employment. Directly and indirectly it employs more than 10 million people and if we add the number of people employed in the auto-component and auto ancillary industry then the number goes even higher. The automobile industry comprises of heavy vehicles (trucks, buses, tempos, tractors); passenger cars; and two-wheelers. The heavy vehicles section is dominated by Tata-Telco, Ashok Leyland, Eicher Motors, Mahindra and Mahindra, and Bajaj. The major car manufacturers in India are Hindustan Motors, Maruti Udyog, Fiat India Private Ltd., Ford India Ltd., General Motors India Pvt. Ltd., Honda Siel Cars India Ltd., Hyundai Motors India Ltd., and Skoda India Private Ltd., Toyota Motors, Tata Motors etc. The dominant players in the two-wheeler sector are Hero Honda, Bajaj, TVS, Honda Motorcycle & Scooter India (Pvt.) Ltd., Yamaha etc. In the initial years after independence Indian automobile industry was plagued by unfavourable government policies. All it had to offer in the passenger car segment was a 1940s Morris model called the Ambassador and a 1960s Suzuki-derived model called the Maruti 800. The automobile sector in India underwent a metamorphosis as a result of the liberalization policies initiated in the 1991. Measures such as relaxation of foreign exchange and equity regulations, reduction of tariffs on imports, and refining the banking policies played a vital role in turning around the Indian automobile industry. Until the mid 1990s, the Indian auto sector consisted of just a handful of local companies. However, after the sector opened to foreign direct investment in 1996, global majors moved in. Automobile industry in India also received an unintended boost from stringent government auto emission regulations over the past few years. This ensured that vehicles produced in India conformed to the standards of the developed world. Indian automobile industry has matured in the last few years and offers differentiated products for different segments of the society. It is currently making inroads into the rural middle class market after its inroads into the urban markets and rural rich. In recent years the Indian automobile sector has witnessed a slew of investments. India is

on every major global automobile player's radar. Indian automobile industry is also fast becoming an outsourcing hub for automobile companies worldwide, as indicated by the zooming automobile exports from the country. Today, Hyundai, Honda, Toyota, GM, Ford and Mitsubishi have set up their manufacturing bases in India. Due to rapid economic growth and higher disposable income it is believed that the success story of the Indian automobile industry is not going to end soon.

3.4.1 *Automobile Market in India*

Over the last few decades, the car market in India has been in a burgeoning stage with all types of cars flooding the market in order to meet the demands of Indian customers who are increasingly exposed to state-of-the-world automobiles and want the best when it comes to purchasing a car. It is expected that by 2030, the Indian car market will be the 3rd largest car market across the globe. Small cars seem to be ruling the roost in the Indian automobile market with over 7.5 lakh small cars being sold in India in 2006-07. The main encouraging factors for the success story of the car market in India are the increase in the opportunity for new investments, the rise in the GDP rate, the growing per capita income, massive population, and high ownership capacity. The liberalization policies followed by the Indian government have been inviting foreign investors and manufacturers to participate in the car market in India. The recent trend within the new generation to get work in the software based sector has led to the rise in the income level and change in the lifestyle which has further led to the increase in the demand for different varieties of cars among them. Moreover, there are many financing companies providing easy car loans at reasonable interest rates and affordable installments. The car Market in India is crowded with all varieties of car models like the small cars, mid-size cars, luxury cars, super luxury cars, and sports utility vehicles. Initially the most popular car model dominating the car market in India was the Ambassador, which however today gave way to numerous new models like Maruti, Fiat, Hyundai, BMW, and many others. Moreover, there are many other models of cars in the pipeline to be launched in the car market in India. Some of the leading brands dominating the car market in India at present are Hindustan Motors, Reva Electric Car Co., Fiat India Private Ltd., Daimler Chrysler India Private Ltd, Ford India Ltd., Honda Siel Cars India Ltd., General Motors India, Hyundai Motors India Ltd., Skoda Auto India Private Ltd., and Toyota Kirloskar Motor Ltd. Since the demand for foreign cars are increasing with time, big brands like

Mercedes Benz, Aston Martin, Ferrari, and Rolls-Royce have long since made a foray into the Indian car market.

In India, the process of economic reforms started in 1983, which was followed by fierce liberalization in 1991. The Indian market was opened up for foreign firms and Indian organizations were allowed to compete in the overseas markets with local and multinational organizations. In the wake of globalization of trade, commerce and industry, and liberalization of economies of the various countries of the world, it has become mandatory for all the players to have a sound technology base, without which accomplishing operational and strategic goals would become not only uneconomical but almost impossible. The increasingly demanding global business environment calls for a separate management function which looks after corporate interests on the technology front. Many strategic alliances came into existence across a variety of industries to make Indian firms compete not only in domestic but also in international market.

The Investment Information and Credit Rating Agency of India (ICRA, 2003) studies the competitiveness of the Indian auto industry, by global comparisons of macro environment, policies and cost structure. This has a detailed account on the evolution of the global auto industry. The United States was the first major player from 1900 to 1960, after which Japan took its place as the cost-efficient leader. Cost efficiency being the only real means in as mature an industry as automobiles to retain or improve market share, global auto manufacturers have been sourcing from the developing countries. India and China have emerged as favorite destinations for the first-tier OEMs since late 1980s.There are only a few dominant Indian OEMs, while the number of OEMs is very large in China (122 car manufacturers and 120 motorcycle manufacturers).

According to this study, the major advantage of the Indian economy is educated and skilled workforce with knowledge of English. Disadvantages include poor infrastructure, complicated tax structure, inflexible labour laws, inter-state policy differences and inconsistencies. The drivers of Chinese economic growth are FDI, labour productivity growth, which was 1.5 times higher than that in India in the last decade, and domestic demand. Fiscal pressure is mounting on the Chinese government, while India is in a better state. Based on comparisons of cost composition to pinpoint the areas in which the Indian auto industry is at a

disadvantage, this study recommends a VAT regime, speedy procedures, imports duty cuts on raw materials, common testing and design facility, labour reforms, upgradation of design and engineering capabilities and brand building.

ICRA (2004a) analyses the implications of the India-ASEAN5 Free Trade Agreements for the Indian automotive industry. ASEAN economies are globally more integrated than India. The current size of Indian and ASEAN market for automobiles is more or less the same but the Indian market has a larger growth potential than the ASEAN market due to the low level of penetration. The labor cost is low in India but the stringent labour regulations erode this advantage. The level of infrastructure is better in India than Indonesia and the Philippines but worse than that in other ASEAN countries. The financial and banking sector is better in India than in the ASEAN countries. The study notes that there is a huge excess capacity in ASEAN countries, in comparison with that in India, which will help them to tackle the excess demand that may arise in future. The study finds a 20-30 per cent cost disadvantage for Indian companies on account of taxation and infrastructure and 5-20 per cent labour cost advantage over comparable ASEAN-member-based companies. Similar findings are noted in a study by the Automotive Component Manufacturers Association of India (ACMA, 2004), particularly in comparison with Thailand.

ICRA (2004b) analyses the impact of Preferential Trade Agreement (PTA) with MERCOSUR6 on the automobile sector in India. This study finds a significant threat of imports in sub-compact and compact cars and certain auto-components. There is huge excess capacity and intense competition in MERCOSUR countries, propelling them to look for export opportunities. This is true especially of Brazil, which has a well developed auto-component sector with huge economies of scale. Further, weak currency in all MERCOSUR countries provides a natural tariff barrier. In addition, MERCOSUR countries have an equitable arrangement within themselves to have a balanced trade, with fair level of exports and imports. The Indian auto industry could gain from this PTA with MERCOSUR only if it is assured of the balanced trade, as MERCOSUR countries practice among them.

ICRA (2005) studies the possible impact of FTA with South Africa on the Indian automobile industry. The study finds that there are a few policies in South Africa that indirectly subsidies the auto industry, unlike India, in terms of financial grants. Hence it is suggested that India could minimize losses only if it goes for

inclusion of certain auto components, which involve huge logistic costs of imports, creating a natural protection (for example, stampings, glass, seats, plastics and tyres) and those in which India enjoys economies of scale and is cost-competitive (e.g. castings and forgings) in this FTA. If South Africa is ready to discontinue the schemes such as Motor Industry Development Programme (MIDP), India could include all automotive components in this FTA. There should be a minimum local content of 60 per cent and the agreement should not be trade balancing as India will not gain much in that case.

3.5 ***Overview of the Automobile Industry of Iran***

The first car imported into Iran was Ford that Mozaffaredin Shah, the king of Qajar, had purchased from Belgium. This car which puffed much smoke was renowned as "smoky chariot". Following urbanization process since 1920, the importing trend of cars increased. Most automobiles of that time were brought from the USA and England. The first car manufactured in Iran was called "Paykan". It was produced in "Iran National Industrial Corporation" licensed by British Talbot Company and opened to market in 1967. Later on, Iran National Company, on a gradual basis, assumed the manufacture of other vehicles like pick up, minibus and passenger bus. In the same year, two models of American "Rambler" cars locally called "Aria" and "Shahin" were produced by Pars Khodro. However, one year later, in 1968, a model of French Citroen named "Dyane" offered by SAIPA Company came into the national market. In 1972, Pars Khodro transformed into "Iran General Motors" and started manufacturing two models of Chevrolet(Opel) 2500 cc and 2800 cc as well as three other cars licensed by American General Motors, namely; "Buick"," Cadillac" and "Chevrolet Nova". The production of these cars continued until 1981. In SAIPA Company the production of "Citroen Dyane" stopped in 1980. However, the manufacture of "Renault5" that had already been launched in 1975 went ahead. Later the productions of innovative cars such as "Pride", "Peugeot 405 and 206", "Nissan Patrol" and "Mazda 323" started and some have continued till today.

Iran Khodro (or Iran Khodro Industrial Group) is a major Iranian industrial manufacturer; *khodro* means "automobile" in Persian The company manufactures cars for both the domestic and export markets. Founded in 1962 by two brothers, Ahmad and Mahmud Khayami, Iran Khodro was originally called "Iran National" before the 1979 Islamic Revolution. Iran Khodro produces Iran's first national car, the Samand,

which is based on the Peugeot 405 platform. The firm has a long-term relationship with PSA Peugeot Citroën, and assembles a number of Peugeot models under license from the French firm. It also makes trucks and buses under license from Mercedes-Benz. For more than 3 decades, Iran Khodro produced the Paykan, (a version, developed over its life, of the Rootes Group's Hillman Hunter). This car became an iconic figure in Iran and single-handedly pulled the Iranian automobile industry from the edges of bankruptcy in early 1990s.Paykan's production was discontinued in 2005, almost thirty years after the end of Hillman Hunter production in Britain. A pick-up version is still in production. Iran Khodro is the largest automotive producer in the Middle East, Central Asia and North Africa regions, with an annual production of around 1,000,000 various vehicles including cars, buses, trucks and pick-ups. This figure also places it as the 20th biggest automotive producer globally.

It was proposed by Manteghi (2005) that 'under the comprehensive 10-year strategy plan, Iran Khodro has placed its strategies around four fundamental issues based on profit, leading of the market, focusing on development and training of the manpower and organization. The main strategies of the company have been prepared as:

- ► Development of strategic relations with world leaders of the car market;
- ► Ability to compete with any new manufacturer in the region;
- ► Becoming the most suitable base of vehicle industry in the region for developing the investments′.

In this regard, long term plans of the product with a view to various sectors of the market have been prepared which include the plan for the development of new products and replacement of the present products. In the field of product technology, the company orientation is towards making products with more variety on a common platform. In order to provide financial resources needed for investment, a long term fiscal and investment plan by taking into consideration the existing limitations has been codified. In addition, Cost reduction program has been included as a basic and vital strategy. Quality strategy is one of the most significant strategies to organization. This strategy is for enhancing the quality of the products up to the standard level, which in turn meet the consumer's demands. This idea manifests itself within the pivotal strategy of "process enhancement for achieving pure manufacture and production". Above all, there are marketing and customer-orientation strategies, which focus on gaining more share in the market and export sector. Iran Khodro's big

family which has exceeded mass production and become an automaker by designing and producing national car furthermore plans to become a world-class automaker. With its personnel's effort and diligence, Iran Khodro continues its leadership in Iranian industry and achieves high vision of the group.

3.6 ***Conclusion***

Modern automobiles have to consider different customer-criteria that are important to choose a new car. First of all, a car must have an attractive design, for the customer to notice it and to desire it. The customer wants to experience driving pleasure, which is, for example dependent on acceleration (torque and output) as well as the handling of the vehicle. Safety (active and passive) also plays an increasing role when purchasing a vehicle. Additionally, a vehicle should have an aura of comfort as far as acoustics, smell and appearance are concerned. When new car models are released, customers always look for innovations and new functionality. However, all of these points have to remain within the customer's financial possibilities, i.e. financial aspects dictate the customer's behavior, especially in times of a weak economy. This means that the price of the vehicle, as well as fuel consumption and servicing costs will be of great interest to the customer. A car manufacturer's image is also heavily influenced by environmental aspects, which is why such efforts have been made to lower emissions (e.g. via direct-injection petrol and diesel engines). Lastly, the customer wants to enjoy his vehicle for as long as possible, which means that longevity is expected of the components and modules, as well as a good resale value. Simply stated, the causal order of the relationship between service quality and consumer satisfaction has been a matter of considerable debate within the marketing literature. Three major positions have been advanced. First, service quality has been identified as an antecedent to satisfaction. Within this causal ordering, satisfaction is described as a "post-consumption evaluation of perceived quality. Rust and Oliver (1994, p. 6) offer support for this position in their suggestion that quality is "one of the service dimensions factored into the consumer's satisfaction judgment" as do Parasuraman and Parasuraman who specifically suggest that service quality is an antecedent of customer satisfaction. However, some researchers argue that satisfaction is antecedent to service quality. Bitner (1990), borrowing from Oliver's (1980) conceptualization of the relationship between satisfaction, service quality, and consumer behavior toward the automobile industry, suggests that service encounter

satisfaction is an antecedent of service quality. Bolton and Bolton, using an algebraic representation of service quality, also provide support for this causal ordering. Finally, Bitner and Hubbert (1994) advocate the satisfaction service quality causal order based on the premise that service quality is akin to a global attitude and therefore encompasses the more transient satisfaction assessment. There are few industries as large, diverse and influential as the automotive industry. Arguably, the largest single manufacturing sector worldwide, the management practices, organizational forms, and particularly the response to environmental pressures adopted by this industry are important in their own right, but also in terms of influencing many other business sectors. The products of this industry touch our daily lives not only by providing personal mobility for millions, and also by bringing a wide array of challenges. The deterioration of local air quality in urban areas, along with global issues such as global warming, and the treatment of scrapped vehicles are just a few examples of such challenges. As our introductory paper to this Special Issue argues (Orsato and Wells), the resolution of environmental issues has to proceed alongside the many economic challenges currently facing the automotive industry: notably over-capacity; saturated and fragmenting markets; capital intensity; and persistent problems with achieving adequate profitability.

Many strategic alliances came into existence across a variety of industries to make Indian firms compete not only in domestic but also in international market. The industries which could attract direct foreign investments and maximum number of JVs include electronics, communication, information technology, and automobile. Several Indian organizations have acquired state-of-art technology from their foreign collaborators and JV partners. Though technology has been the basis for such emerging collaborations and JVs, the technology management function does not de-emphasize finance, marketing, personnel and other traditional functions of an organization. At the global level, there are perceived advantages of technological collaborations that are taking place all over the world. Developed and developing countries stand to gain from legislative and economic reforms. Technology transfer is now taking place in India with organizations from many developed countries like US, Japan, UK, Germany, etc. Our discussion of a global scenario does not mean that India is only at the receiving end and technology has to flow only in one direction. There can be a market for the technologies which India has developed in many core areas in recent years.