

RESEARCH PROJECT

ON

**A STUDY ON SUPPLY CHAIN ISSUES IN INDIA WITH REFERENCE
TO HYUNDAI MOTORS**

**FOR THE PARTIAL FULFILMENT OF THE REQUIREMENT
FOR THE AWARD OF**

BACHELOR OF BUSINESS ADMINISTRATION

UNDER THE GUIDANCE OF:

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BBA 6th Sem

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SCHOOL OF BUSINESS, GALGOTIAS UNIVERSITY

Certificate from Faculty Guide

This is to certify that the project report *“A STUDY ON SUPPLY CHAIN ISSUES IN INDIA WITH REFERENCE TO HYUNDAI MOTORS”* has been prepared by **Mr. Arshad khan** under my supervision and guidance. The project report is submitted towards the partial fulfillment of 3 year, full time Bachelor of Business Administration.

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DECLARATION

I, **Arshad khan** student of Masters of Business Administration from Galgotia University Uttar Pradesh hereby declare that I have completed Dissertation on “**A STUDY ON SUPPLY CHAIN ISSUES IN INDIA WITH REFERENCE TO HYUNDAI MOTORS**” as part of the course requirement.

I further declare that the information presented in this project is true and original to the best of my knowledge.

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INTRODUCTION

To study the various operation techniques followed by leading automobile manufacturing industries in India. Also, a comparative study on the supply chain effectiveness of these selected Indian automobile-manufacturing companies with respect to HYUNDAI MOTORS.

Today every organization is facing a fierce competition in the market, because of short product cycle, rapidly changing technology and economic conditions. Virtually each major automobile company in the country is trying to make its presence felt in the new net-centric economy. The dealers are also focusing on getting to know their customer better, some on making their supply chain neat and transparent and some on creating electronic presence. Also trying to figure out new ways of increasing the organization operations effectiveness so as to get and edge over the competitors in the market. This can be obtained from information sharing, cooperation, risk and reward sharing among supply chain partners. In this scenario only those organizations can survive who can compete on the basis of cost and quality. All these can be explained with effective operations technique and supply chain management. Also there are various tools, which are adopted by the automobile manufacturing companies nowadays, which enable them to reduce their cost and enhance their productivity along with increasing the revenues. These tools are really effective as they are adopted by most of the automobile manufacturing industries.



OBJECTIVE OF STUDY

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Today every organization is facing a fierce competition in the market, because of short product cycle, rapidly changing technology and economic conditions. Virtually each major automobile company in the country is trying to make its presence felt in the new net-centric economy. The dealers are also focusing on getting to know their customer better, some on making their supply chain neat and transparent and some on creating electronic presence. Also trying to figure out new ways of increasing the organization operations effectiveness so as to get an edge over the competitors in the market. This can be obtained from information sharing, cooperation, risk and reward sharing among supply chain partners. In this scenario only those organizations can survive who can compete on the basis of cost and quality. All these can be explained with effective operations technique and supply chain management. Also there are various tools, which are adopted by the automobile manufacturing companies nowadays, which enable them to reduce their cost and enhance their productivity along with increasing the revenues. These tools are really effective as they are adopted by most of the automobile manufacturing industries. How supply chain can create a competitive edge for any organization. Also this study addresses what are the issues in Indian Supply Chain in Indian Automobile Industry.



LITERATURE REVIEW

COMPANY PROFILE

The **Hyundai Motor Company**, a division of the Hyundai Kia Automotive Group, is South Korea's largest and the world's fifth largest automaker in terms of units sold per year. Headquartered in Seoul, Hyundai operates the world's largest integrated automobile manufacturing facility in Ulsan, which is capable of producing 1.6 million units annually. The Hyundai logo, a slanted, stylized 'H', is said to be symbolic of two people (the company and customer) shaking hands. *Hyundai* means "modernity" in Korean.

HISTORY

Chung Ju-Yung founded the Hyundai Engineering and Construction Company in 1947. Hyundai Motor Company was later established in 1967. The company's first model, the Cortina, was released in cooperation with Ford Motor Company in 1968. In 1975, the Pony, the first Korean car, was released, with styling by Giorgio Giugiaro of ItalDesign and powertrain technology provided by Japan's Mitsubishi Motors. Exports began in the following year to Ecuador and soon thereafter to the Benelux countries. In 1991, the company succeeded in developing its first proprietary gasoline engine, the four-cylinder Alpha, and transmission, thus paving the way for technological independence.

In 1986, Hyundai began to sell cars in the United States, and the Excel was nominated "Best Product #10" by *Fortune magazine*, largely because of its affordability. The company began to produce models with its own technology in 1988, beginning with the midsize Sonata.

In 1996, **Hyundai Motors India Limited** was established with a production plant in



Irrungattukatoi near Chennai, India.

In 1998, Hyundai began to overhaul its image in an attempt to establish itself as a world-class brand. Chung Ju Yung transferred leadership of Hyundai Motor to his son, Chung Mong Koo, in 1999. Hyundai's parent company, Hyundai Motor Group, invested heavily in the quality, design, manufacturing, and long-term research of its vehicles. It added a 10-year or 100,000-mile (160,000 km) warranty to cars sold in the United States and launched an aggressive marketing campaign.

In 2004, Hyundai was ranked second in "initial quality" in a survey/study by J.D. Power and Associates. Hyundai is now one of the top 100 most valuable brands worldwide. Since 2002, Hyundai has also been one of the worldwide official sponsors of the FIFA World Cup.

In 2006, the South Korean government initiated an investigation of Chung Mong Koo's practices as head of Hyundai, suspecting him of corruption. On April 28, 2006, Chung was arrested, and charged for embezzlement of 100 billion won (US\$106 million), with Hyundai Vice Chairman and CEO, Kim Dong-jin taking over as head of the company.

SOME FACTS

In 1998, after a shake-up in the Korean auto industry caused by overambitious expansion and the Asian financial crisis, Hyundai acquired rival Kia Motors.

In 2000, the company established a strategic alliance with DaimlerChrysler and severed its partnership with the Hyundai Group.

In 2001, the Daimler-Hyundai Truck Corporation was formed.

In 2004, however, DaimlerChrysler divested its interest in the company by selling its 10.5 percent stake for \$900 million.

Hyundai has invested in manufacturing plants in the North America, China, Pakistan,



India, and Turkey as well as research and development centers in Europe, North America, and Japan.

In 2004, Hyundai Motor Company had \$57.2 billion in sales in South Korea making it the country's second largest corporation, or chaebol. Worldwide sales in 2005 reached 2,533,695 units, an 11 percent increase over the previous year. Hyundai has set as its 2006 target worldwide sales of 2.7 million units (excluding exports of CKD kits).

Hyundai motor vehicles are sold in 193 countries through some 5,000 dealerships and showrooms. After a recent survey of global automotive sales by Automotive News, Hyundai is now the tenth largest automaker in the world in 2007.

Hyundai Motor Company's brand power continues to rise as it was ranked 72nd in the 2007 Best Global Brands by Interbrand and BusinessWeek survey. brand value estimated at \$4.5 billion. Public perception of the Hyundai brand has been transformed as a result of dramatic improvements in the quality of Hyundai vehicles.

Very often, there is an analogy drawn between the state of the great Indian roads and the pace of economic development in the country. Needless to say, it's not a very pleasing comparison. So the average Indian customer who rides the roads of India is naturally extremely cautious when it comes to investing in a vehicle. Only those rough and tough enough to survive the potholes and nightmarish surfaces can pass muster. In such a scenario, a foreign company launching a car in the Indian market was bound to be looked upon with skepticism and suspicion, more so, if it had South Korean origins. South Korean companies were perceived not to be quality oriented. The failure of Korean companies like Lucky Gold star (later to be re-launched as LG, which is another marketing success) and the bad word of mouth for Daewoo led to this perception.



INDIAN AUTOMOBILE INDUSTRY

The automotive industry has played a vital role in the development of national economies. Manufacture of cars, trucks and motorised two-wheelers requires all kinds of inputs, from steel, glass, plastics and rubber to electronic components. Making these inputs can create huge employment, and so can the provision of after-sales services like repairs and maintenance and petrol pumps.

An economist would put it like this: the automotive industry has strong backward and forward linkages with many key sectors of the economy. Hence this industry exerts a powerful 'multiplier effect' and can be an important driver of economic growth.

The indirect employment created by the automotive industry is a multiple of the direct employment created within the industry. In the US, for example, if you add the number of indirect jobs created in supplier industries to the direct employment numbers, the total works out to 2.6 times the direct jobs in the auto industry. In other words, the 'employment multiplier' is 2.6.

Add to that the jobs created in industries the demand for whose products rises because of spending by those employed in the auto and auto-related industries – and you can see that the overall employment impact is huge. The employment multiplier including the just described 'expenditure-induced effect' is 5.

In other words, if 1 million people are employed in making cars and other vehicles, the total employment that is created (including those 1 million) is 5 million. This was the



finding of a 2003 study prepared by the Centre for Automotive Research of the University of Michigan at Ann Arbor for the Alliance of Automobile Manufacturers.

In India, unfortunately, a wonky view of the role of the car held this industry down for decades. The government, and most politicians, looked upon cars as “luxury goods”, which did not fit into the economic development model that was adopted for over three decades. That, of course, did not stop *them* from using cars!

The government also imposed increasingly heavy taxes on cars since they were considered luxuries. Thus the government priced them out of the reach of even middle class Indians, and *made* them a luxury that few could afford.

Quite different, you might say, from Henry Ford’s dream of having every American family own a car, for which he introduced many innovations, including the assembly line and mass production, to reduce the costs of making a car and therefore its price.

The good news is that in 1991, when the country launched a comprehensive economic reform programme, the fortunes of the automotive industry lit up. Today India is one of the biggest and fastest growing automotive markets in the world.

In the year ended 31 March 2007, the Indian automotive industry grew at nearly 21 per cent. In just five years from 2001-02 passenger vehicle (car, utility, SUV) sales more than doubled to 1.38 million. In 1991 the number was a pathetic _____. Sales of all types of vehicles (including commercial vehicles and 2- and 3-wheelers) nearly doubled during this 5-year period to over 10.11 million.

The over three-times rise in commercial vehicles (trucks and buses) is an indicator of the boost from the overall growth of the Indian economy. In other words, the automotive industry has received an impetus from the buoyant economy, just as it is contributing its substantial bit to the growth of the economy. The favourable factors include increasing purchasing power, new product launches, coupled with attractive finance schemes from automobile manufacturers and financial institutions.



The growth is visible in rural as well as urban areas. According to a survey conducted by the National Sample Survey Organisation, the number of rural households owning cars or utility vehicles has shot up four times between 1993-94 and 2004-05, and motorcycle or scooter owners have grown from 11.6 per cent to 26.0 per cent. In this period, the number of urban households owning cars or utility vehicles has multiplied from 1.2 per cent to 4.6 per cent, and motorcycle or scooter owners have increased from 11.6 per cent to 26.0 per cent.

Today India is the second largest two-wheeler market, the fourth largest commercial vehicle market and the 11th largest passenger car market in the world. By the year 2016 it is expected to become the seventh largest passenger car market.

Indian passenger vehicle sales are projected to grow around 15 per cent annually to reach 2.1 million by 2010, according to Frost & Sullivan. According to consulting firm Keystone, a subsidiary of LaSalle Consulting Associates, India will become the world's third largest automobile market by 2030, behind only China and the US.

Little wonder, then, that every significant car and truck maker in the world is making a beeline for India, with ambitious investment and expansion plans. After playing around in the mid-size and big car end of a the small car-dominated auto market, Toyota, Ford, Honda, Mitsubishi and General Motors have decided to launch their own small cars in the next three years. That's where the volumes are.

Not to be outdone, new entrants Volkswagen, Renault and Chery Automobiles, China's biggest carmaker, have announced their plans to launch small cars in the Indian market. BMW will also introduce a small car; you can be sure that while it may be small in size, not by its price tag.

In India The small car segment is currently (September 2007) dominated by Suzuki subsidiary Maruti; Hyundai and Tata Motors are the other strong players in this segment.

A surprising (but perhaps not such a surprising?) new trend is India's emerging as an



automotive vehicle and component exporter. According to the Society of Indian Automobile Manufacturers, automotive vehicle exports grew 25.4 per cent in 2006-07. Passenger vehicle exports rose 13 per cent, two wheelers at 20.65 per cent, commercial vehicles 22.57 per cent, and three wheelers 87.16 per cent. India is becoming a manufacturing base for car exports.

India exported 198,478 cars - about 13 per cent of the number produced. By 2010, the country is slated to export a million cars, or a third of the projected production of 3 million cars.

PROBLEM STATEMENT

Consider how a material might flow from a company's supplier through the companies operation, and the to its customers. An increasingly popular perspective today is to view the flow of materials from suppliers all the way to the consumers as a system to be managed. This perspective is commonly referred to as **supply chain management**.

In the broader sense it refers to the way that materials flow through different organizations; Starting with basic raw materials and ending up with products delivered to the ultimate consumer. Eg consider the steel used in automobile bodies, mining company first only the iron ore from the dirt. The iron ore is then sent to a steel mill, where it is processed with other materials to form large steel ingots. These are again sold to another steel company, where they are heated rolled into long thin sheets and annealed. These rolls are then sent to automotive manufacturers that are either specialized in making doors, and inner and outer body parts of the cars. The automobile is then sold to some car dealership that performs some final preparation work, such as adding pinstripes to the sides etc. finally the ultimate consumer purchases the vehicle or car from the dealer who is the last link in the supply chain.

One of the key drivers of industrial development lies in the integration of local firms into global supply chains. The most highly developed supply chain is that of the car industry,



and over the past decade, Chinese and Indian companies have begun to play a major role in its extension. Central to this development has been the arrival in both countries of a wave of international car makers, often operating as joint ventures with local partners. As this new generation of car makers develop the domestic supply chain in sourcing their own needs, they interact with local suppliers (some of whom are themselves multinational joint ventures). The transfer of production know-how that results drives advances in productivity, but more importantly it drives advances in product quality, without which exporting prospects remain poor, however low their prices.

BACKGROUND

The 1990s saw a remarkable transformation of the car industry in both India and China. At the beginning of the decade, there had been only a very limited involvement of multinational firms, and total production volumes in both countries remained modest. In 1991, India produced about 209,000 cars, while China produced about 81,000. Foreign involvement in China, up to that date, had been very limited: an early joint venture by Chrysler to produce jeeps (“Beijing Jeep”) had been marked by continuing difficulties. In India, however, a link up with Suzuki, forming the Suzuki-Maruti company (now Maruti Udyog) led to early success. The once dominant Hindustan Motors, whose ‘Ambassador’ model (essentially the 1960s vintage Morris Oxford) had been India’s biggest selling car for decades, lost market share at a dramatic rate to the new Suzuki-Maruti model, which went on to capture 70% of passenger car sales by the early 1990s.

The Suzuki-Maruti plant, located outside Delhi, developed a network of suppliers during the early 1990s. Some of these were joint ventures, in which Suzuki-Maruti held a substantial stake, while others were independent domestic firms. In both cases, Suzuki-



Maruti worked with suppliers to establish international best practice, and to achieve high levels of productivity and quality. From the early '90s onwards, a wave of multinational firms entered both markets. In both countries, these entrants were required to achieve a high level of domestic content within a specified period (typically, 70% within 3 years). For at least some of the new 9 entrants, this was seen as an unreasonable target, as domestic suppliers could not meet the price and quality requirements of the car makers. Achieving the 70% target required the car makers to switch rapidly from a reliance on imported components to sourcing from local vendors; and this in turn gave the car makers a strong incentive to work closely with (first-tier) suppliers, to ensure that quality standards were met, within an acceptable price. By the end of the decade, car production had increased by a factor of two and a half in India (from 209 thousand units in 1991 to 564 thousand in 2001), and by a factor of almost nine in China (from 81 thousand in 1991 to over 703 thousand in 2001). Over the same period, the supply chain had undergone a major transformation. The new generation of multinationals worked closely with local suppliers to achieve high standards of productivity and quality. Meanwhile, domestic car makers in both countries faced intense competition for market share, and their response was to upgrade productivity and quality levels in their own plants, and to look for higher quality levels from their (first-tier) suppliers.

The component supply chain developed rapidly in both countries over the decade, with the value of component production almost doubling from 1997 to 2001 in both countries. By 2001, China's component output, and exports, exceeded India's by a factor of about . India's top 10 component exporters, however, had total export sales of about two-thirds the level of their Chinese counterparts . Of these top 10 Indian exporters, six were multinational joint ventures while three form part of a single domestic group (the T.V.S. group), . Of China's top ten component exporters, four have one or more multinational joint venture partners, while six are domestic firms.

SCM PERSPECTIVES



THE DEPTH AND STABILITY OF THE CHAIN

Here we aim to examine the degree to which efforts made in both countries to develop local suppliers in tandem with the arrival and expansion of the new wave of multinational car makers have succeeded. The aim underlying the domestic content rules imposed on the new arrivals was to bring about the development of a population of high quality domestically-based suppliers; to what extent has this succeeded, and will these suppliers retain their role in the wake of WTO entry .

THE QUALITY OF THE CHAIN

The question here is, to what degree has international best practice been transferred to the domestically-based suppliers (whether these are independent domestic firms or joint ventures with multinational component producers)? We address this issue, which forms our main focus, from two angles, looking first at a comparison of supplier quality experienced by twinned pairs of buyers in India and China, and then turning, in the next section, to a detailed examination of two particular components (seats and exhausts) that lend themselves to cross-plant and crosscountry benchmarking in respect of both productivity and quality.

THE DEPTH OF THE CHAIN

The degree of development of the supply chain may be gauged by examining the extent to which car makers choose to buy in components, rather than manufacture in-house. To investigate this, we visited nine Chinese and six Indian car makers, and recorded the inhouse versus buy-in decision for all major components, assemblies and sub-assemblies. It is worth noting that the decision to manufacture in-house, or to buy in, is a subtle one. When the car industry first developed in the early years of the 20th century, almost all components were bought in. By the middle of the twentieth century, in-house production was the norm for major components. Over the past few decades, the pattern has moved heavily towards buying-in. The issue of interest here is the degree to which car makers have access to adequate local sources of supply. If the supply chain is well



developed, then we expect to see a pattern in which only a couple of key components (the cylinder head and block) are almost always made in-house; a central group of key components, assemblies or sub-assemblies may be outsourced or made in-house; while a final group of less central components are normally outsourced. The table omits a large number of items that are virtually always outsourced.

TABLE : Categories of Component

| GROUP 1(NORMALLY MADE IN HOUSE) | GROUP 3(NORMALLY OUTSOURCED) |
|--|---|
| Cylinder Head Cylinder Block | Pistons Timing belts Clutch Exhaust systems Bumpers Seats Braking parts |
| GROUP 2(OFTEN OUTSOURCED) | |
| Engine mounting Bumpers Crankshaft Seats Camshaft and valve Door panels | |

The pattern for India and China is as follows:



- The Cylinder head and block are made in house by eight of the nine Chinese firms, but three of the six Indian firms outsource them.

- For the second group (see Table 2.4), there is an even balance between in-house production and outsourcing in both countries. The fraction of in-house production in China is 49% (i.e. of the 10 components across 9 producers, there are 44 instances where the component is bought-in against 46 where it is made in-house). The corresponding figure for India is 55%. This suggests a very similar pattern of outsourcing in both countries. A detailed examination of the pattern shows no anomalies: for each of these components, and for both countries, between one-third and two-thirds of the firms are outsourcing the component. In a large proportion of cases, the supplier is a joint venture with a multinational component supplier, or an affiliate of the (foreign) car makers. For China, 45% of the outsourcing instances in 17 Group 2 for which the relevant information was available came from a joint venture or affiliate of the car maker; the corresponding figure for India is 55%.

- For components in the third group, outsourcing is almost universal in both countries. For these 13 components, the nine Chinese firms have a 90% incidence of outsourcing, while the Indian firms have an incidence of 83%. What these figures suggest is that car makers in both countries show a similar pattern of outsourcing, and this pattern is consistent with what we would expect to observe in an environment where there were no serious limits to the availability of suitable local suppliers.

SUPPLIER QUALITY

Assessing the quality levels achieved by firms in different parts of the supply chain (as conventionally measured by the fraction of parts found to be defective) by the buyer poses a number of difficulties:

- i. Some types of component pose greater problems than others in manufacturing, and so defect rates for best practice producers will vary widely from one component to another.



ii. Systematic differences in levels of quality may be expected as we move down the supply chain, from first-tier to second-tier suppliers, and so on.

In light of these difficulties, we attack the problem in two ways. In this section, we look at three twinned pairs of buyers, one in India and one in China, chosen for their close similarity in terms of the range of components they buy. We examine the distribution of quality across each buyer's suppliers. This method allows us to obtain a snapshot of the quality of the supply chain at three different points. The strength of this method lies in the breadth of coverage: we are looking here at a wide range of components supplied. In the next section, we adopt a complementary approach by looking at the picture from the supplier's side. We take two specific components (seats and exhausts) and look at half a dozen suppliers of each component in each country. This allows us to examine the range of performance across different suppliers of the same product. In this section, then, we adopt the first approach, viz. examining twinned pairs of buyer firms. The first pair of twinned firms are car makers. Each is a recently established multinational firm. Having been established less than a decade, each of these firms benefited from the early development of the local supply chain that took place up to the early 1990s in each country. Each firm has taken advantage of the option of inviting some of its home country suppliers to set up joint ventures with local firms in order to ensure supplier quality. The histograms in Figure 2.1 show the range of quality, as measured by defects found in incoming components – expressed in 'parts per million' defective. International best practice for car makers in the U.S., Japan and Europe currently aims to bring the large majority of suppliers under 100 ppm. The histograms for the Indian and Chinese companies are fairly similar.

Supply chain can form complex networks involving many companies and materials. A raw material can be used in many different finished products produced by numerous companies. Co-ordination of all companies involved in the supply chain, including effective communication is crucial in providing high quality finished products in a timely



manner and at the lowest cost possible for the company. From an operations management perspective for a particular company that is in middle of a supply chain, only a portion of supply chain is of particular interest. So for most of the companies the most relevant aspect of SCM involve all management functions related to the flow of materials from the companies direct suppliers to its direct customers; including purchasing, warehousing, inspection, production, materials handling, shipping and distribution.

There are about 6,350 small and large component manufacturers in India, out of which about 350 are in the organized sector and are registered with the Automotive Components Manufacturers Association. There is a sizeable replacement market for parts and components, but this market is heavily dominated by manufacturers who sell unbranded products at very low prices. The component manufacturers therefore have to rely on assemblers in the domestic market. The industry had a turnover of about \$2.7 billion in 1995-96. Although this is not impressive, industry sales have been growing at nearly 35% since 1992- 93, and turnover is projected to reach about \$6.4 billion by the year 2000. Exports are projected to reach \$565 million by the year 2000. Tooling costs for suppliers remain the same for 10,000 units or for 100,000 units. Till assemblers achieve volumes, it is not profitable for suppliers to accept orders. Assemblers are thus forced to import components. This pushes up costs and currently prices as well, which in turn affects sales and growth. Maruti developed a quality vendor base over a period of 10 years. However, new entrants can expect to develop a supplier base faster. The Indian auto component industry has had some success in developing parts and components including collapsible steering columns, brake linings, power steering, catalytic converters and central locking systems. Current technology upgradation is in plastics, trims, electronics, anti locking braking systems, and environment and safety related items and materials. International supplier firms are looking for Indian partners in a variety of areas. Thirteen new joint ventures were formed in 1995, and many more technical collaborations are being finalized. A large business delegation from CLEPA, the

Liaison Committee for the European Automotive Components and Equipment Industry,



visited India in February 1996. Further collaboration between Indian and European suppliers is likely to take place. Industry analysts expect that products made by new joint ventures will not only serve the Indian market, but would also be exported. Export focus is shifting from traditional markets in Asia, the Middle East and Africa to North America, Europe and Australia.



DISTRIBUTION CHANNEL

The distribution environment for automobiles in India is quite different from that of most advanced countries. Such differences exist in type and size of dealers, number of dealers, car supermarkets, vertical integration, functions of dealer, bookings, financing, manufacturer-dealer relationship, number of cars sold per dealer, margins, and market environment. Having operated for years in a supply-constrained industry, most car dealers in India would need to adjust to a situation where the customer has a wide choice. In the current auto marketing system, the dealer orders cars in advance in a 'push' system driven by the automakers' agendas, and in turn the dealer has to bend the customer's requirements to existing stock. The typical Indian auto dealer has traditionally confined his role to collecting payments from customers and supplying the car to the customer after he receives it from the factory. However, with wider consumer options, auto retailing in India is set to change. The new multinational companies are trying to revolutionize the concepts of car delivery and after-sales service in India, and are coming out with several innovative retailing ideas to win customers. Customers are demanding more voice in the options they want and the cars they buy. This in turn will force dealers to be more customer-oriented. The emerging system of 'customer pull' translates to empowering the customer and creating a genuine symbiosis between the customer, the dealer, and the automaker. Technology is playing a major, possibly revolutionary role in this new thinking and is increasingly expressing the voice of the consumer. Dealers would need to change to address the new market conditions. These factors would require even better coordination between the manufacturer and the dealer. With greater competition, the Indian car manufacturers and dealers are also likely to adopt advanced country practices, like large dealer groups, multiple outlets per dealer, company-owned dealers, higher sales per dealer, higher margin to dealers, changing role of the dealer as a retailer, etc.



METHODOLOGY

HYUNDAI-INDIA

In the late 1990s, car manufacturers like Ford, General Motors, and Fiat were faring miserably in the Indian market. Maruti had a market share of a whopping 79 per cent in the passenger car segment. Daewoo and Telco were creating hype over the impending launches of their cars Matiz and Indica, respectively. In such a scenario, the top management of Hyundai Motor India Ltd, which has South Korean origins, had a tough decision to make. It was a big gamble to go ahead with the launch of the small car –Santro. The Hyundai management stuck to a simple strategy – launch a quality product in the most promising segment with the latest technology and price it aggressively. In the pre-launch period in late 1997, the company commissioned market research project to understand the Indian consumer psyche and specify a benchmark for the pricing policy. The results of this survey and the actions taken thereafter had a bearing upon the success of the product later on. The Indian consumers showed an immense dislike to the shape of Santro. One consumer even likened it to a “funeral hearse”. A second important result was that Hyundai is an unknown brand with almost zero brand equity amongst Indian consumers. The company immediately undertook the initiative of reshaping and customizing the car for the Indian customer. The tall rear end was reduced and made more aesthetically appealing. The Santro was all set for the Indian launch. Hyundai was still confused over the launch whether to go for it not. But at last they decided to continue with the launch as per the schedule. But they know they will require good supply chain strategy in India to defend the launch.



MARKETING GENIUS

Here came the most important aspect of the launch – the marketing strategy. This was a factor that could make or mar the success of the Santro. Hyundai tied up with the advertising agency Saatchi and Saatchi, who hit upon a novel strategy. Bollywood star Shah Rukh Khan was roped in to be the brand ambassador. A three-pronged strategy was designed to attract the consumer:

- Educate Indian Consumers about Hyundai
- Create hype and expectations about the Santro
- Explain the virtues of the Santro

The TV & Press Campaign broke in June 1998. The initial TV spots and the press campaign showed Shah Rukh Khan being approached by a Hyundai official to advertise the Santro. Shah Rukh was not convinced about Hyundai and he was shown to ask all questions a normal Indian consumer is expected to ask. What is Hyundai? Why should I advertise for the Santro? Will it match customer service expectations? What about dealer networks? How can an international car meet the requirements of Indian roads? As the campaign went through all of these questions, the Hyundai official answered Shah Rukh Khan. By the time the car was actually launched, Shah Rukh Khan proclaims, “he is convinced”. He declares that he is now ready to advertise the Santro since he is certain that the Santro is the car for India. This high profile campaign backed by some very innovative media buying, which went for maximum coverage with the minimum budget, broke all grounds in terms of creating consumer expectations and hype in the market. Along with the Advertising Campaign, the Sales Team worked burning midnight oil in creating the dealer network across the length and breadth of the country. The wide dealer network would prove to be invaluable in ensuring that the Santro would be available to anyone who wants to buy it. An important pre-requisite for the dealer network was a fully functional workshop area with imported international standard equipment and engineers trained in Hyundai’s parent training centre in South Korea and localised training provided in the Chennai Plant. The 360° campaign with SHAH RUKH KHAN worked as a wonder for HYUNDAI. It created a huge success in the Indian market



and for the first ever it was seen that Maruti was going to lose their market share.

September 23, 1998 saw the launch of the Santro. There was an unprecedented rush for bookings in spite of the fact that Hyundai was accepting bookings only against full payment for the car and booking was open only for a few days. Hyundai closed the calendar year 1998 with sales of 8,447. The next year (October 1998-August 1999) saw Hyundai consolidating its market share, as these figures of monthly sales show: Thus, the cumulative sales during October 1998- August 1999 were 42,283 units. This accounted for 30 per cent of the market share in the small car segment and 10 per cent of the overall auto industry. Within a year of its launch, the Santro had dislodged the Maruti Zen as the no.1 car in its category and slipped in behind Maruti Suzuki as the no.2 car manufacturer in India. The launch of the Daewoo Matiz and the TATA Indica failed to dampen the demand for the Santro. Ever since the historic launch of the Santro, Hyundai has consistently taken the no.1 spot in all the segments of the passenger car industry in which it had launched a product. Santro stands tall undisputedly market leader in the compact car segment. The tool behind the successful launch – the marketing campaign – won numerous awards for its innovative concept, previously unheard of in India. This was a case of celebrity endorsement with the celebrity actually not advertising the product but playing the role of a common Indian consumer. Thus, the launch of the Santro stands as an excellent exercise in understanding consumer needs and lucrative portrayal of a product to capitalise on its design.

With Maruti losing its share in Indian market and no new variant was creating hype Hyundai entered into the market with SANTRO in 1998. And created huge campaign with SRK and gained huge success. The brand created its equity after that and it can be seen from the market share of Hyundai Motors till 2007-08 how it has created success in the Indian market which was not so easy.



HYUNDAI-MARKET SHARE

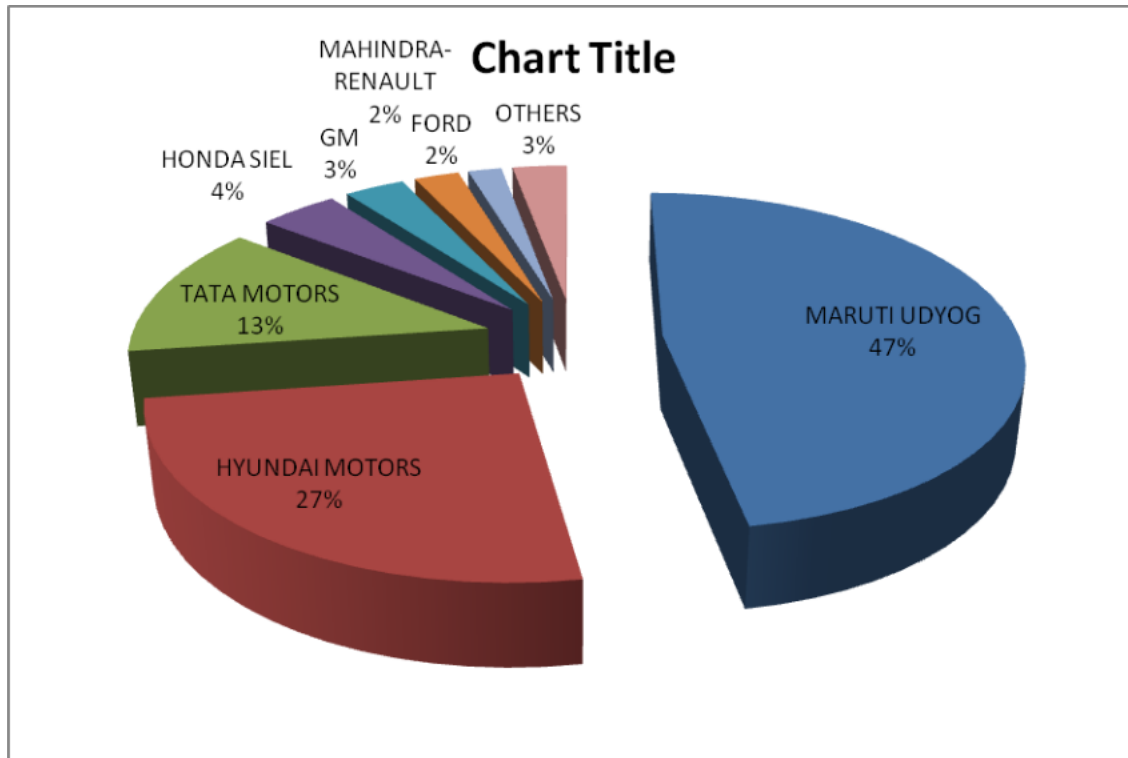


FIG 10: Market Share Of HYUNDAI(2007-08)

RESULTS AND DISCUSSIONS

SOME KEY FACTS AND FIGURES

Automobile, put the horses on rest and changed the way of living for mankind, is a wheeled passenger vehicle that carries its own motor. The term 'automobile' is derived from Greek and Latin words. 'Auto' in Greek means 'self' and 'mobiles' in Latin means 'movable.' The phrase refers the fact that it 'moves by itself.' Automobile used to be also addressed as 'motorwagen' or 'horseless carriage'. The first automobile rolled in India in 1897 in Bombay (now Mumbai). Soon number of cars increased on the roads and it became the status symbol until Maruti entered the market in 1980s with cars at economical price and high fuel efficiency. Maruti800 ousted the outdated model of Hindustan Motors' Ambassador. Today, the Indian automobile industry has matured greatly. It has become one of the largest industries in India, witnessing impressive growth during the last two decades. Worldwide, the industry is getting recognition and vehicles as well as components are making good progress in the export market.



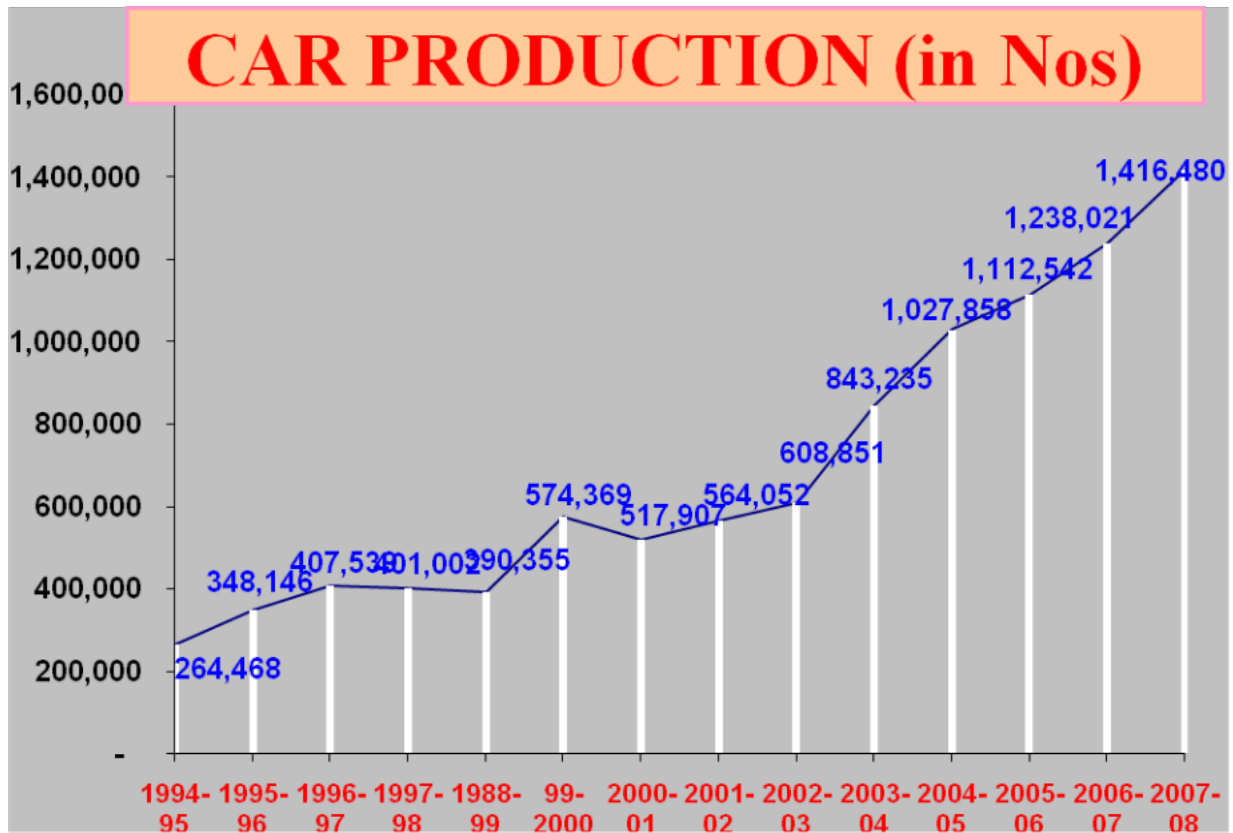


FIG 5: CAR PRODUCTION(in nos.)

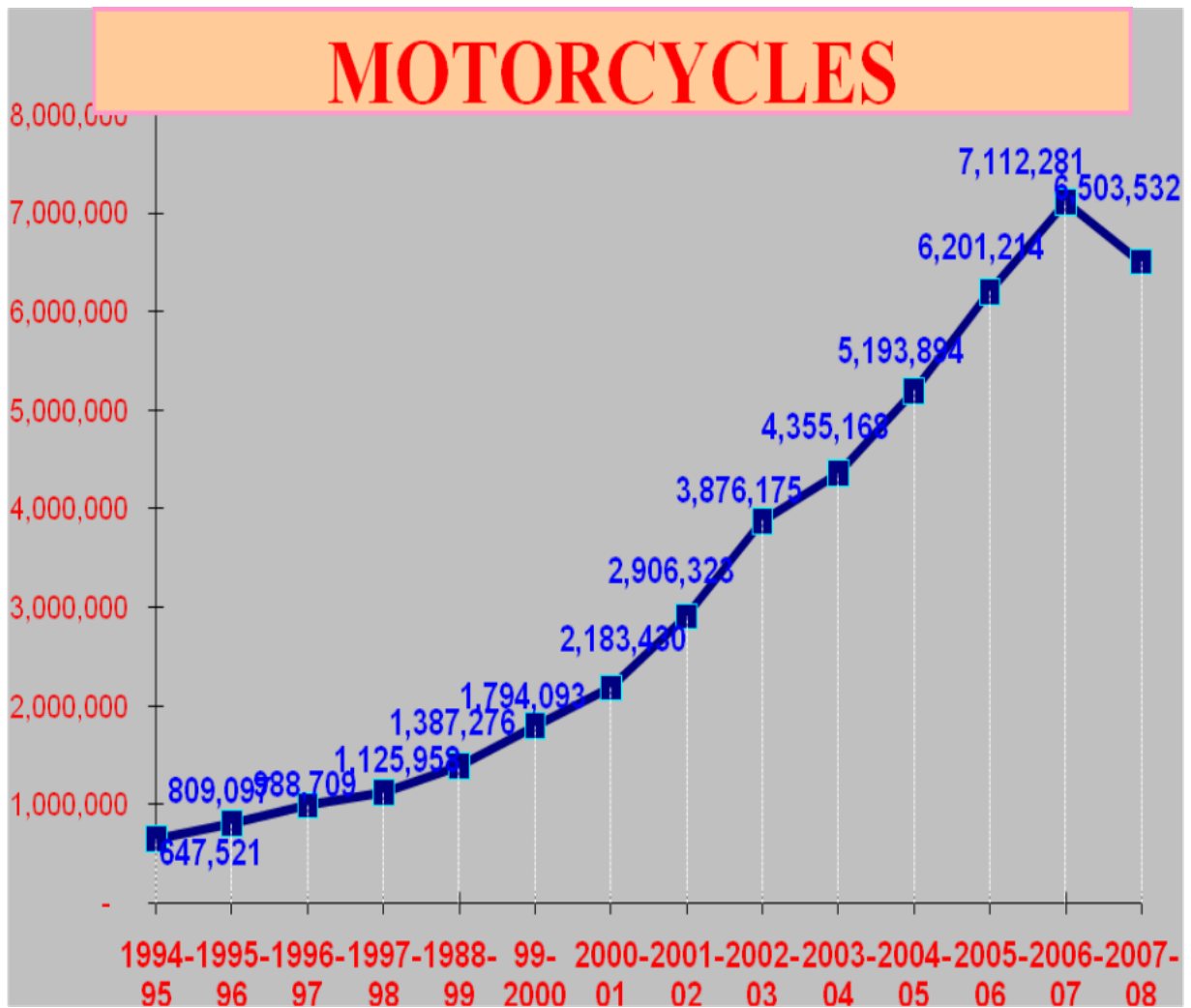


FIG 6: MOTORCYCLE PRODUCTION(In Nos.)

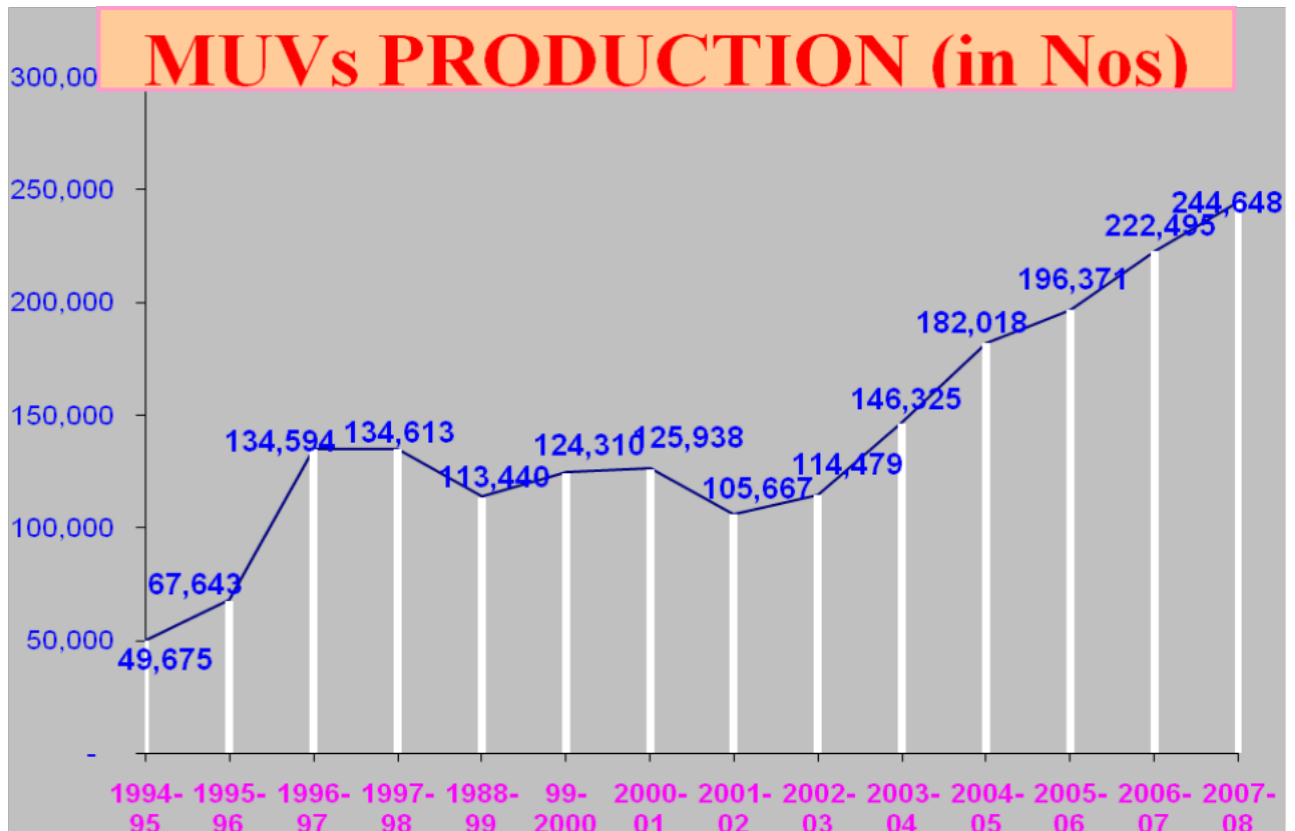


FIG 6: MUV'S PRODUCTION(in Nos.)

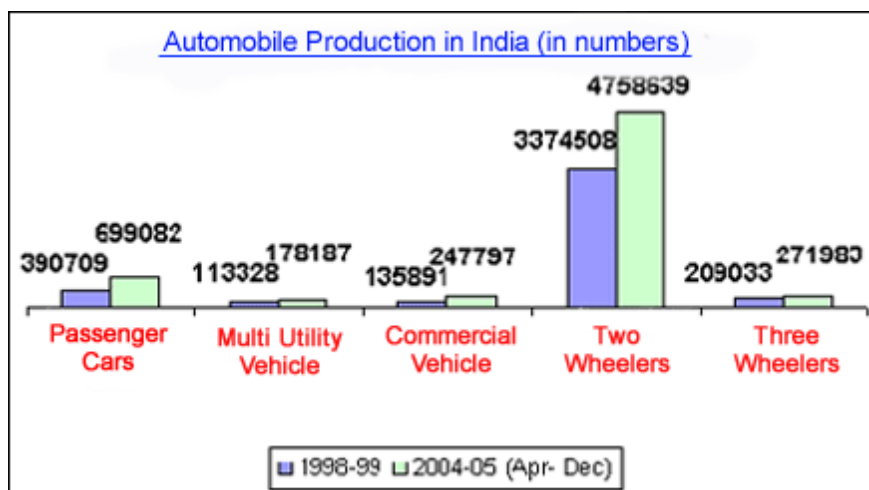


FIG 7: Automobile Production In India(in nos.)

Production of Four-Wheelers in 2005-06

The production of four-wheelers are given in numbers where the Japanese companies top.

- Japanies Companies - 670,379
- European Companies - 13,347
- Korean Companies - 57,633
- Indian Companies - 719,098

Production of Two-Wheelers in 2005-06

Even in two-wheelers, Japanese Companies are the highest producer.

- Japanies Companies - 3,860,915
- Indian Companies - 3,739,886

SEGMENT KNOW-HOW

Among the two-wheeler segment, motorcycles has the major share in the market. Hero Honda contributes 50% motorcycles to the market. In it Honda holds 46% share in scooter and TVS makes 82% of the mopeds in the country. 40% of the three-wheelers are used as goods transport purpose. Piaggio holds 40% of the market share. Among the passenger transport, Bajaj is the leader by making 68% of the three-wheelers. Cars dominate the passenger vehicle market by 79%. Maruti Suzuki has 52% share in



passenger cars and is a complete monopoly in multi purpose vehicles. In utility vehicles Mahindra holds 42% share. In commercial vehicle, Tata Motors dominates the market with more than 60% share. Tata Motors is also the world's fifth largest medium & heavy commercial vehicle manufacturer. The future of the automotive market is far from being saturated. It has tremendous scope for volume growth. The following figures illustrate this fact.

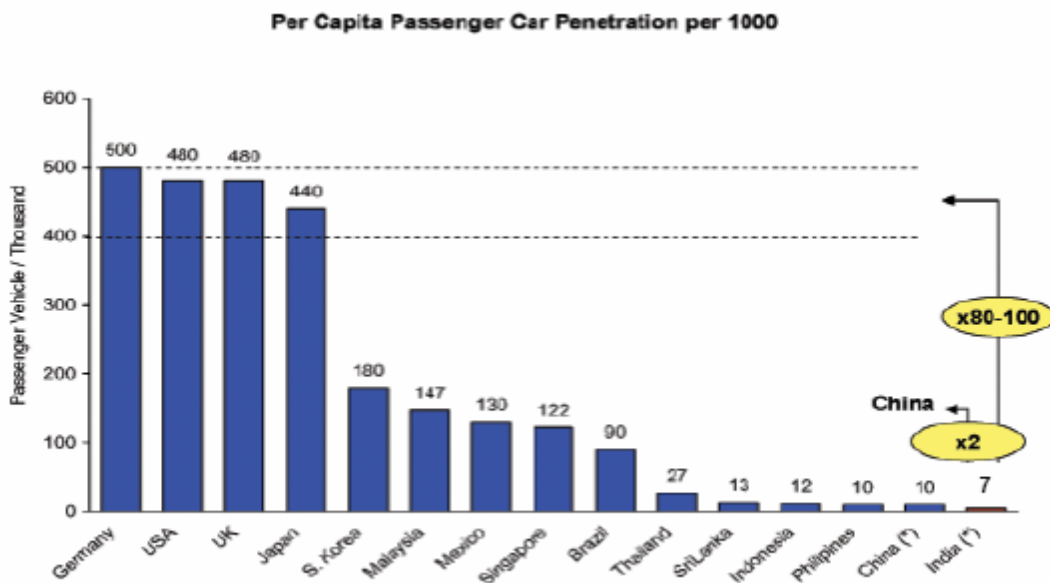


FIG 8: Per Capita Passenger Car Penetration per 1000

Increased access to credit and lower interest rates is boosting consumer spending patterns. The Government is aware of the increasing purchasing power of the Indian middle class and has reacted by supporting financial products that will in turn see an increase in spending patterns, thereby spurring sales and volume growth. India's ranking in the world motor vehicle production is not unimpressive. It is ranked 11th in the section of passenger cars production (2004) in top 12 countries and in the section of production of heavy trucks it is ranked 4th in top twelve countries (2004).

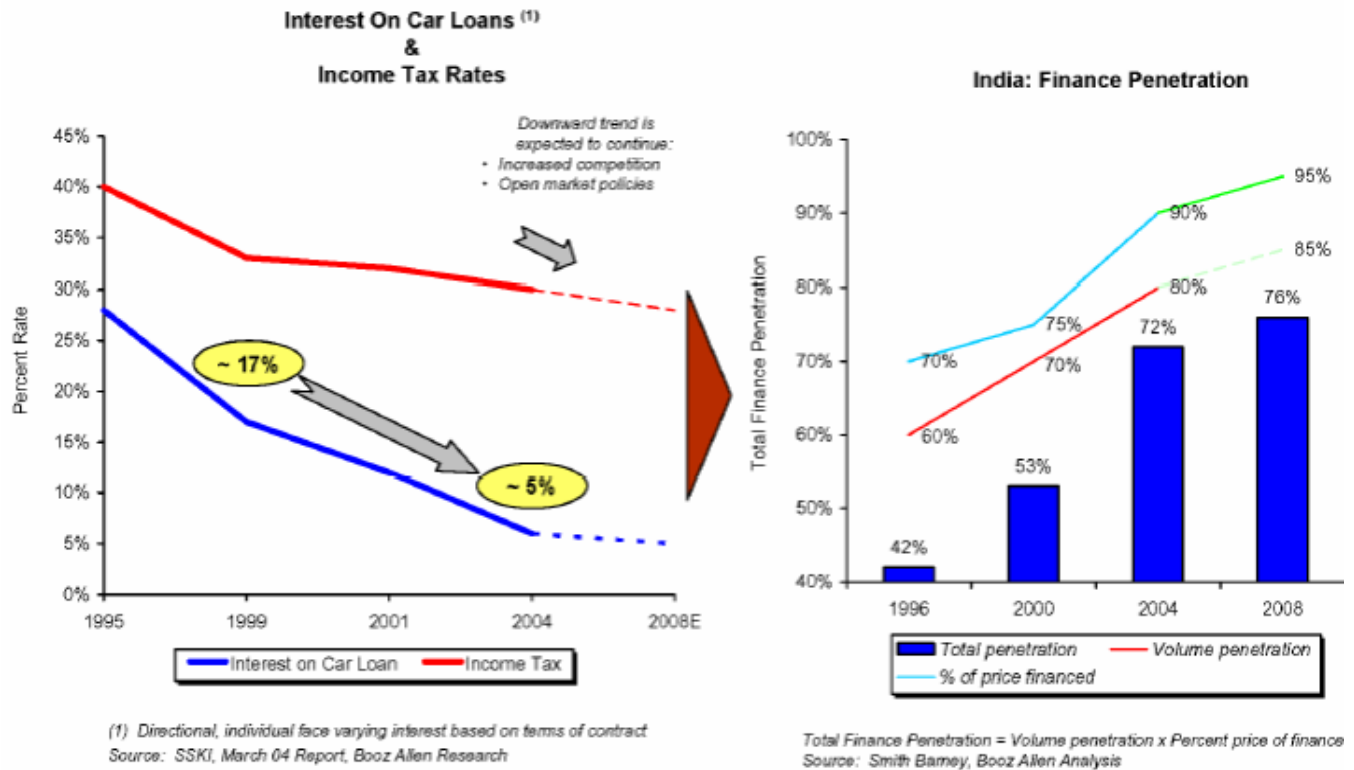


FIG 9 : Interest On Car Loans & Income Tax Rates And Finance Penetration

The auto components industry is increasing its exports and is turning out world class products. India is one of the key suppliers to Original Equipment manufacturers (OEMs) There are nearly 500 companies that have ISO 9000 Certification, about 250 companies with TS 16949 certification, 136 with QS 9000 certification, 140 with ISO 14000 certification, 32 with OHSAS 18001 certification. There are companies that have won the Deming Prize and the JIPM Award. Suppliers are also increasing embracing modern shop floor practices such as Kaizen, TQM, Six Sigma, Lean manufacturing, 5-S7- W etc.

THE INDIA ADVANTAGE:

India has the potential to become one of the top 5 automotive economies by 2025 based on its present growth potential. Steered here by the country's high engineering skills, established production lines, a thriving domestic automobile industry and competitive costs, global auto majors are rapidly ramping up the value of components they source from India. The industry is poised to jump from exports of US\$ 1.8 billion in 2004-05 to US\$ 5.9 billion in 2008-09. According to the Automotive Component Manufacturers Association of India, more than a third (36 per cent) of Indian auto component exports head for Europe, with North America a close second at 26 per cent. In 2006, components worth US\$ 2 billion were exported by Indian companies, 75 per cent of which were bought directly by car companies. The original equipment manufacturers (OEMs) include firms like General Motors, Ford Motor Company, Cummins International, Bosch, Volkswagen, BMW, MAN (trucks) and JCB (earthmoving equipment) amongst others. Over 20 OEMs have set up their International Purchase Offices (IPOs) in India to the components. This number is expected to double by the year 2010. India enjoys a cost advantage with regard to castings and forgings. The manufacturing costs in India are 25 to 30 percent lower than its western counterparts. India's competitive advantage does not come from costs alone, but from its full service supply capability.

CLIMBING UP THE VALUE CHAIN

The Indian automotive component industry has made a sustained shift to the global Tier 1 market for their products. In the 1990s, the Indian auto components market was dominated by supplies to the aftermarket, with only 35 per cent of exports being sourced by Tier 1 OEMs. In 2006, it is a very different story. Today, Indian automobile component manufacturers supply 75 per cent of their exports to Tier 1 OEMs and only 25 per cent to the aftermarket. Indian component suppliers have displayed a growing capability to cater to the engineering and production needs of some of the world's biggest auto companies. This is largely due to:

- Proficiency in understanding technical drawings and being well conversant in all



global automotive standards: American, Japanese, Korean and European

- Appropriate automation has led to economically attractive production costs
- Flexibility in small batch production
- Growing IT capability for design, development and simulation

Striking the growth chart, Indian companies are:

- increasing investments in production capacity
- establishing partnerships in India and abroad
- investing in or acquiring companies overseas
- establishing greenfield manufacturing footprints overseas

INVESTMENTS

Global auto majors and domestic giants are pulling out their purses and putting their money where the production lines are. Auto parts maker Robert Bosch of Germany will invest US\$ 201.4 million in its Indian subsidiaries over two years. Bulk of the investment will be in Motor Industries Co Ltd (Mico) -- the Bosch flagship in India. Japanese electronic major, Hitachi Ltd, is planning to start auto component manufacturing in India when its OEMs-Isuzu Motor and Nissan Motor--start manufacturing their cars in India. GKN Driveline, an arm of UK-based auto component company GKN, plans to open a new manufacturing facility in India. Dubai-based auto ancilliary major Parts International Company has plans to invest approximately US\$ 3.6 million in India over three years. This includes setting up a manufacturing facility meant to service exports to CIS and SAARC countries. Fiat India is taking baby steps in becoming a global sourcing hub for



components. Fiat has exported components worth US\$ 8.3 million last year to its operations in South Africa. General Motors has decided to increase sourcing of components from Indian suppliers and intends to ship parts worth US\$ 1 billion to its global production units by 2010.

BIG PLAYERS GO HIGH-TECH

The auto components industry in India is dominated by around 500 key players, which contribute more than 85 per cent of India's production. Some of the largest, like Motherson Sumi, Sona Koyo Steering Systems, Rico Auto Industries, Bharat Forge, Amtek and Mahindra & Mahindra are scaling up from producing individual components to making assemblies and systems, as automobile makers seek to manage fewer vendors and trim costs.

GOVERNMENT INITIATIVES

The Government of India allows automatic approval for foreign equity investment up to 100 per cent for the manufacture of auto components. Manufacturing and imports in this sector is free from licensing and approvals. There is no local content regulation in the auto industry. The engineering export promotion council under the aegis of Ministry of Commerce and Industry, Government of India, over the years has been engaged in promoting exports of engineering goods including auto parts. Among other initiatives that have been effected in 2006-07 are:

- Reduction in the duty of raw material to 5-7.5 per cent from the earlier 10 per cent.
- Setting up of the National Automotive Testing and R&D Infrastructure Project (NATRIP) at a total cost of US\$ 388.5 million for enabling the industry to usher in global standards of vehicular safety, emission and performance standards.
- Finalization of the Automotive Mission Plan (AMP) 2006-2016 for making India a



preferred destination for design and manufacture of automobile and automotive components.

SWOT ANALYSIS OF THE INDIAN AUTOMOBILE INDUSTRY

STRENGTHS

1. Cost effectiveness in terms of labour and raw materials
2. Established manufacturing base
3. Economies of scale due to domestic market
4. Potential to harness the global brand image of the domestic manufacturers
5. Global hub policy for small cars (hyundai, suzuki)
6. Customers with varied taste and readiness to experiment .

WEAKNESSES

1. Perception about quality and quality control measures
2. Infrastructure bottlenecks
3. Indian road conditions not favouring vehicles of higher engine capacity and other vehicles which are a great success in the other international markets
4. Very hard to change the perception of the people once set.

OPPORTUNITIES

1. Huge market potential of the indian cars in other markets (europe, america, africa)
2. More availability of choices if more foreign players come into the indian subcontinent
3. Potential to increase more market base for individual players in the auto market
4. Increase in the auto components industry if more participation is made available.

THREATS

1. Other competitive markets like china, malaysia which can make vehicles and



automobiles for cheaper prices and thus penetrate the Indian market and create huge opportunities for themselves.

With a population of one billion, India is one of the most attractive future markets for the auto industry. Nevertheless, due to the very low incomes of the population, the number of passenger cars sold in the country is only 600,000 units a year. Moreover, new vehicle sales in India are unlikely to exceed 2 million units a year by 2010, meaning that the market will be smaller than in France or the UK nowadays. The Indian market is also very protected from foreign participation. Like most Asian countries, the government has considered the automotive industry a key sector for the development of the country. Therefore, it enacted industrial policies that include high tariffs, severe restrictions to vehicle and components imports, as well as limits to foreign investment. Small size and strong protection have kept foreign OEMs at large, which have overlooked investment in the region. In the absence of strong foreign competitors, the local car manufacturer Maruti Udyog has dominated the Indian market in all segments. Sales in 1999 achieved the record level of 385,000, corresponding almost to a 60 percent market share (*The Hindu* 2000). At the very bottom end of the market, there is little alternative to Maruti, and the low cost Maruti 800 is ubiquitous on India's roads. However, in higher segments of the market, Maruti is now facing some competition from foreign carmakers. Some interest in the local market, more possibilities for the participation of foreigners in the economy, but the same restrictions to car imports, is summoning the world players into India. Ford entered the mid-range market with the Ikon model and quickly boosted sales from a paltry 180 for the month of April 1998 to 1,600 in April of this year. Like Ford, Honda has also made inroads in the mid-range market with its City, selling about 9,500 units in 2000. Mitsubishi, Hyundai, and Daewoo have also started to produce vehicles locally. Both firms have successfully positioned their models between the mid-range Ford Ikon and the bottom-end Maruti 800. As a result of these new investments, Maruti's market share has fallen to 56 percent in April 2000, down from 76 percent in the same month last year. In the same period, Hyundai raised its share to 14 percent from 8.3 percent, Telco to nearly 10 percent from 4



percent and Daewoo to 9.5 percent from 2.3 percent (*Financial Times* 14 June 2000, *The Indu* 2000). Nevertheless, the surge in investment has also led to a mounting problem of overcapacity. Estimates suggest that installed capacity may be about 3 times larger than that required (IndiaInfonline.com 2000), mostly due to too many assemblers, currently 24. This will lead to an inevitable shakeout in the industry, with mergers and acquisitions between automakers and the closure of some of the production units. But some automakers are countering the overcapacity problem by looking at India as a basis of regional sourcing, rather than a destination market. Daweoo is among the leaders in this strategy. Its car factory in Surajpur includes facilities to make 300,000 engines and transmissions each, as well as press and aluminum die-casting. More than half of the production is to be exported. Unfortunately, the example of Daweoo is still quite singular. The overall automotive components sector is highly fragmented and has important quality problems. Over 300 small and medium companies service directly the 24 companies assembling vehicles in the country, with as much as 5,000 other micro firms working for the first tier suppliers and for the replacement market. Mostly due to regulation, component import dependence is also small, with 87 percent of the domestic demand satisfied by local firms. Despite these levels of localization, the industry is quite small by international standards. Sales in 1999 were below US\$3 billion, with 10 percent of this value corresponding to exports (IndiaInfoline.com 2000). This volume of sales is roughly equivalent to the Portuguese autoparts industry, a country that assembles less than half the number of vehicles of India, but where the 150 local firms export 60 percent of the production (Veloso et al. 2000). Small capacity and a large model variety are particularly harmful for suppliers. Estimates suggest that Indian facilities producing at optimal scales may enjoy a cost advantage of 10 to 30 percent over competitors in other regions of Asia, largely due to cheap labor and lower overheads. Nevertheless, these cost advantages are mitigated by lack of volume and low productivity. A poor quality record, with client rejects in the order of 2900 parts per million (ppm), ten times the world class level of 240, is likewise a source of concern. Given this context, it is not surprising to find most foreign automakers to be unsatisfied with Indian component manufacturers, stating that they



would rather prefer free imports (IndiaInfoline.com 2000). Like the overall market, the supplier situation is rapidly evolving. Despite a slowdown in 1998 and 1999, the domestic production of components registered a compound growth rate (CAGR) of almost 20 percent between 1994 and 1999, and sales are expected to grow at least at the same speed in the next years and exports even faster. Like Daewoo, Visteon has announced that it will source components from India to its global operations. Other foreign companies are following. The leading local firms have established over 200 technical cooperation agreements with foreign firms to be able to reach international standards in cost and manufacturing. As a result of this effort, the industry aims to reach US\$1 billion in exports by 2002, a very ambitious objective (IndiaInfoline.com 2000). But the industry has little alternative. As the WTO guidelines enter into force in 2001 and imports are liberalized, local firms either begin to compete in equal footing with foreigners or face leaving the business.

ROLE OF SCM IN AUTOMOTIVE INDUSTRY

According to the Council of Logistics Management Supply Chain Management, “the process of planning, implementing and controlling efficient and cost effective flow of materials, in-process inventory, finished goods and related information from point-of-order to point-of-consumption, for the purpose of conforming to customer requirements as efficiently as possible”. The automobile industry has undergone significant structural and other changes in the last decade or so. In view of the present globalisation, implementation of lean production and the development of modularisation have changed the relationships between automobile assemblers (OEMs) and their suppliers, especially those in the first tier. Stiff competition among manufacturers will result in more mergers or acquisitions. The challenges automobile manufacturers and suppliers face include improving quality, meeting cost reduction targets and developing time to market. Diverse customer needs High cost due to huge R&D investment M&A, strategic alliances among manufactures Regulations for environment and safety .

FIERCE COMPETITION



All this is driving the organisations towards greater product differentiation using cutting edge R&D, innovative sales and marketing approaches, and increasing focus on boosting efficiencies in manufacturing and supply chain. Hence, in the age of e-business and global outsourcing, supply chain management (SCM) plays a crucial role in many of these areas. SCM is a best-in-class, high-performance solution which can be utilised by the world's leading automobile manufacturer, logistics and distribution companies, and retailers to blend the demand chain with the supply chain. SCM helps in demand forecasting; taking an order; giving an accurate promise date; sourcing and manufacturing the right goods; position inventory properly; pick, pack, and efficient transshipment; most importantly, SCM makes a world of difference to the manufacturers by maintaining a minimal finished goods inventory. Supply chain management flow is divided into:

- a) Product flow
- b) Information flow
- c) Finance flow

The product flow is nothing but movement of goods from supplier to customers and also in case of any customer returns or service requirements. The information flow covers updating the status of the delivery as well as sharing information between suppliers and manufacturers. The finance flow encompasses credit terms, payment schedules and consignment and title ownership arrangements.

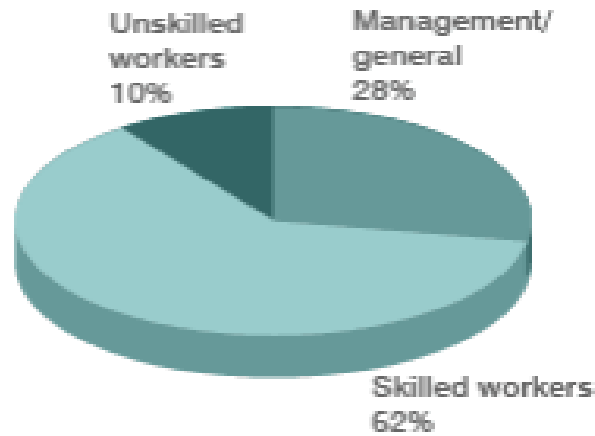
DRIVING FORCE FOR INDIAN MARKET

The Indian Auto component Industry has an estimated 560 companies operating in this area (FY 2006), giving direct employment to more than 300,000 persons, exporting goods worth US \$ 1.8 billion. Exports have improved from 16 % (FY2005) to 21.5 % (FY



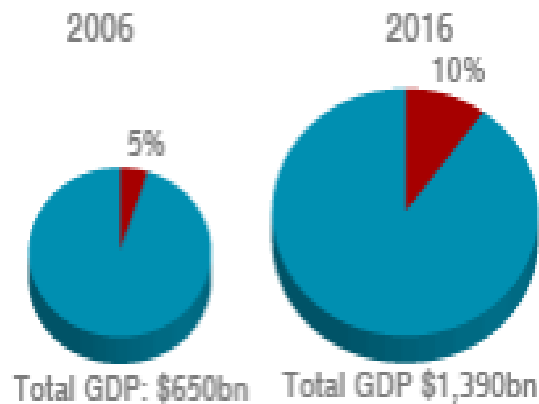
2006) of total auto component production. The Indian Auto component industry is largely dependent on OEM's, which contributes to 60 % of sales, 'after market' (Replacement market) 18.5 % and export 21.5%.

PROJECTED EMPLOYMENT IN INDIA'S AUTOMOTIVE INDUSTRY BY 2016 (DIRECT AND INDIRECT)



SOURCE: Automotive Mission Plan

FIG 1: Projected employment in Indian Automotive Industry,ACMA



SOURCE: Automotive Mission Plan

FIG 2: Contribution to the GDP

India's GDP is set to double over the next decade. In percentage terms, the automotive industry's contribution should also double. In dollar terms, the sector's contribution is set to quadruple to some \$145bn. The consequence is a remarkable transformation of

India's entire economic landscape.

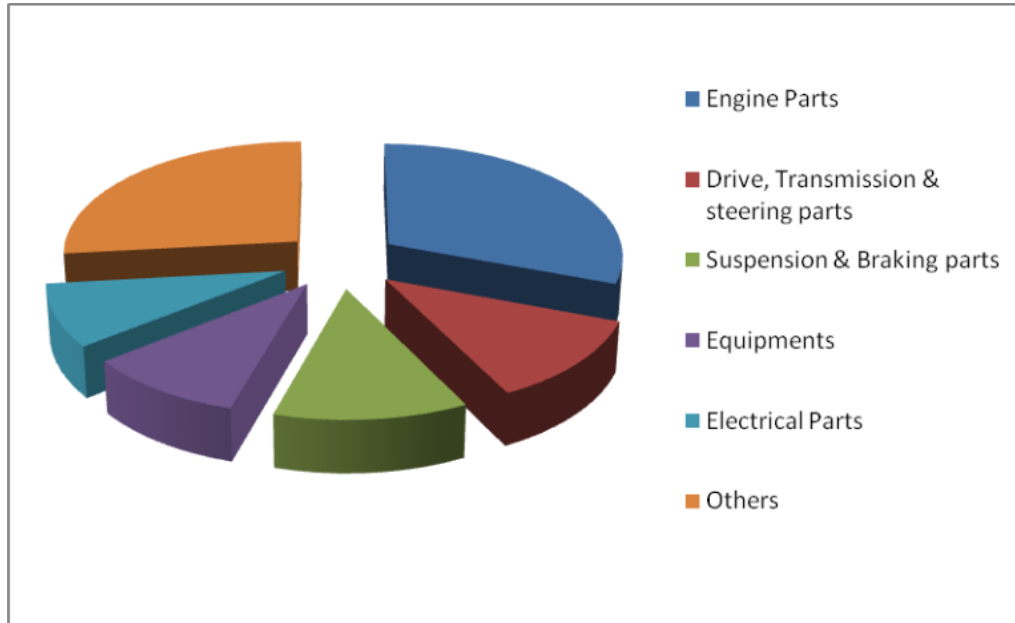


FIG 3: Auto Components as a percent value of a vehicle

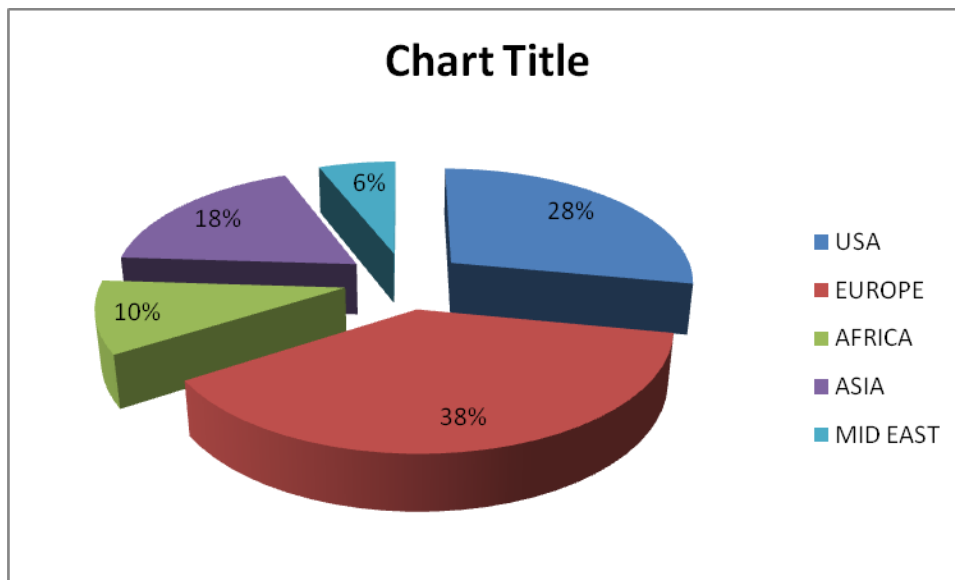


FIG 4: Composition of Exports as a percent- FY 2006

The Auto component Industry is graduating to world class. Opportunity and challenge,

both are by-products of globalization. Indian companies are facing the challenges by consistently trying to reach the world class standards.

- Availing global certification

Details of various certifications are listed below:

| NO. OF COMPANIES | CERTIFICATION/ AWARDS |
|------------------|-----------------------|
| 456 | ISO 9000 |
| 248 | TS 16949 |
| 136 | QS 9000 |
| 129 | ISO 14001 |
| 9 | DEMING AWARD |
| 4 | JIPMA AWARD |

AUTO POLICY:

Government of India, under the EXIM policy, has designated auto components as a “Thrust Sector”, allowing automatic approval of foreign equity participation up to 100 percent for manufacture of auto components.

Continued import tariff reduction:

| YEAR | TARIFF(%) |
|------|-----------|
| 2001 | 35 |
| 2002 | 30 |
| 2003 | 25 |
| 2004 | 20 |
| 2005 | 15 |
| 2006 | 2.5 |



With more business coming from USA and European Union♣ , exports are more remunerative to these countries, for which China and India are looked at as prospective destinations. Focus areas are R&D, Quality certifications, capacity expansion and Global marketing- Initial cost may be high, but would prove remunerative in the long run. With mounting pressure by OEM's to reduce prices, most of the auto component suppliers from North America are filing for Bankruptcy. Now is the phase of consolidation globally. Industry experts are of the view, that little over 100, Tier – I, suppliers would survive in the coming years with more than 50 percent outsourcing.

Global supplier presence in India:

- Delphi : Steering System and Wiring harness
- Bosch : Spark plugs, Fuel Injection equipments, Oil Filters
- Denso : Auto electric components, alternators, fuel pumps and Radiators
- Lear : Electronic and Auto electrical components.
- Johnson Controls: Seating Systems and Controls
- Visteon : Air conditioning, engine cooling systems.
- T RW : Engine valves and steering system, Braking system and auto electric components
- Siemens VDO: Automotive dashboard instruments and accessories.
- DANA : Clutch, Piston rings, axle housing.
- Z F : Hydraulic power steering gears, steering columns and shafts.
- G K N : Drive shaft assemblies, CV Joints, Sintered bearing parts, filters.

INDIAN AUTO COMPONENTS MARKET

Indian auto components industry is currently quite small compared to global standards with output of USD 4.1 Bio and investment of USD 2.1 Bio. in 2000. Compared to this, large multinational firms in the sector have turnovers in excess of USD 20 Bio individually. The other feature is the extreme fragmentation of the industry driven by our pre-liberalisation policy of supporting small industries and licensing capacities.

The level of fragmentation is indicated in the table below:



| TURNOVER(USD) | NO.OF COMPANIES |
|----------------|-----------------|
| <1 | 101 |
| 1-10 | 202 |
| 10-20 | 50 |
| 20-30 | 21 |
| >30 | 28 |

Given the poor picture presented above, why is it that there is strong interest in auto components sector today? .

There are three reasons responsible for this:

1. In the last decade, most of the leading Indian auto component companies were exposed to supplying to multinational auto manufacturers who have set shop in India like Ford, Hyundai, GM, etc. This raised the bar for quality and process orientation. As a result there was dramatic improvements in quality of products and in process parameters.
2. The last 5-6 years were plagued by over capacity as a result of large capacity additions during high growth 1995-97 period. This forced auto component companies to restructure and cut costs to survive this bad phase. This has improved their cost competitiveness.
3. This phase also ensured that the companies focus on exports in a consistent manner to ensure that the large gaps in capacity are bridged. Earlier, exports was always a capacity filler. However most large firms have changed the attitude and have started focussing the exports to insulate themselves from the volatile domestic market. Many of them have set significant targets to improve the share of exports from less than five percent of total sales in most cases to 25 – 50% of sales by the end of this decade, having realised their capability and the



opportunity.

SUGGESTIONS AND CONCLUSIONS

Indian automobile and auto components industry is on a roll and there is an immense scope for management for enhancing the supply chain of the sector. India has become a favourable destination for foreign companies to establish their facilities and form alliances with domestic companies. Low cost of manufacturing and conducive government support have been the major drivers for foreign companies investing in India. India's large young population, higher GDP growth, and most importantly per capita passenger car penetration is low at 8.5 car per thousand population, which creates great opportunity for industry players to offer an affordable four-wheeler alternative to the two-wheeler customers. According to Planning



Commission of India, Indian automobile industry is expected to grow at CAGR of 15% over the next five years. The Indian economy is now gaining momentum in the world of free trade and liberal movements of goods and services between countries. Therefore, efficiency in supply will be critical for India's automobile success.



RECOMMENDATIONS

The market is growing at about 25% for the last three years. In the highly price sensitive market, reduction of prices because of lower duties and taxes and progressive indigenization, and rising middle class incomes are likely to further increase industry growth rate. Penetration in rural and semi urban areas is extremely low and could provide fresh markets. New entrants will have to deal with uncertainty of demand, different and evolving customer needs, a relatively poor supplier base, a market crowded with competition and industry wide capacity shortages. However, if there is a shake out as many analysts expect, further opportunities for survivors will open up. Another implication is that India could emerge as a significant manufacturing base for exports. The supplier industry is also going through massive growth, although from a small initial base. Except for Telco, product development capabilities are very low among established indigenous assemblers and suppliers, and the industry has some way to go before it becomes world class.



Innovative methods of production to add value for Engine parts, Drive, Transmission & Steering parts, Suspension & braking parts which almost constitute 55 % of total value .

- Import technology, Collaborate with component suppliers to various high end component consumer learning curve.
- Look for possible supply of an assembly rather than components, where India has an edge over other countries.
- Auto Suppliers should be motivated from time to time.
- Governments long term policies- both Local and Exporting countries.



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