AUTOMOBILE INDUSTRY

The Indian automobile industry started off by assembling vehicles in the per-Independence era. The dawn of independence ushered in a nationalistic favour in the light of which all assemblers were extradited and only manufacturers with firm manufacturing programmes were permitted to operate. The early stages of the Indian automobile industry saw only seven major manufacturers operating, which has then a sectoral pattern with two/three players each in passenger cars. Commercial vehicles, and one in the multi-utility vehicle sector. This structure suited Indian socio-economic conditions for a short term.

The planners then were charting a socialistic approach to industrialise Indian with focus on public enterprise rather than private entrepreneurship. The Government then was concentrating more on agricultural revolution and core infrastructure industries like steel, power etc. but had largely ignored the automobile industry. This was so due to the misconceived idea of automobiles, barring trucks and buses being a luxury rather than a tool for propelling all round economic growth as was experienced in the West and in Japan. A factor which was evident in the auto sector's substantial contribution to the GDP(Gross Domestic Product) of those countries.

The cumulative effect of licensing Raj restrictions on expansion and modernisation, lack of technological upgradation led to
virtual stagnation in the quality and quantity of vehicles produced in the country. While in other developing countries like South Korea, Taiwan. The governments were charting a futuristic policy approach for developing the automobile industry to reach global levels. India was far behind.

In India, before Liberalisation of policy, very few cars were seen mainly Ambassador, Fiat etc. In the late sixties and early seventy only above mentioned two type of cars were manufactured in India.

The first phase of liberalisation saw the entry of Suzuki in the passenger car sector and four other Japanese auto makers in the light commercial vehicle sector. The passenger car venture with Suzuki benefited apart from governmental largesse by harnessing the market which hitherto had stagnated with technologically outdated models. There was a pent up demand for a modernistic car in the lower segment at reasonable price. But the TVs in the LCV Segment never took off, partly on account of the appreciating yen and mainly due to capacity constraints.

All the four LCV ventures were licensed for a volume of 10,000 numbers each. The lower volumes inhibited the localisation programme of the manufacturers, since a reasonable volume was necessary for the auto component manufacturers to invest in new components with modern technology and processes.
This factor did not upset the Maruti-Suzuki venture as it enjoyed a monopolistic stature in the lower passenger car segment which ensured a steady growth in volumes thereby encouraging investment and participation in the localisation programme by the auto component manufacturers.

The policy approach to infuse competition was evident in the LCV segment but was absent though perplexing in the passenger car sector. In the year 1986 at the time of the first auto Expo there were very high expectations of opening up of the passenger car sector. Many manufacturers had lined up collaborations with leading auto makers but their expectations came to nought as the government shelved the much talked about auto policy and did not allow collaborations.

The second phase of liberalisation in the 90's saw the opening up of the Indian passenger car industry in 1993 and witnessed a virtual procession of global majors vying for a foothold in the Indian market.

The step to open our doors to foreign entrants to attract investment and technology is undoubtedly a healthy sign but there is a need to introspect whether the decision to let in too many players is right. Are we ignoring the LCV experience of the 80's.

Today all the new entrants in the car sector are vying for the mid-size market. Where again one would face volume constraints leading
to higher costs. Low profitability or even losses and retardation in indigenisation programmes. There is every likelihood of winding up certain projects.

The passenger car industry is not only highly technological and capital intensive but volume sensitive as well. This sector can be categorised in four segments:

**Table No. 1**

<table>
<thead>
<tr>
<th>THE SEGMENTS</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP To 800 cc</td>
<td>Rs. 2-3 LAKH</td>
</tr>
<tr>
<td>800cc To 1200 cc</td>
<td>Rs. 3-5 LAKH</td>
</tr>
<tr>
<td>1200 cc To 1800 cc</td>
<td>Rs. 5-8 LAKH</td>
</tr>
<tr>
<td>1800 cc To ABOVE</td>
<td>Rs. 8 LAKH &amp; ABOVE</td>
</tr>
</tbody>
</table>

The cars with engine capacity up to 1,200cc could be considered as small cars segment, 1,200cc to 1,800cc as mid-size car segment and above 1,800cc as big car segment. In the Indian scenario the volumes in the small car segment are attainable because these cars with a price range of around Rs. 3 lakhs would be affordable to the bargaining.

Indian urban middle class there by having volume advantage, where as that would not be case with the mid-size and big car segments.
In light of the LCV experience of the 80's and the need to develop a technologically progressive and modernistic passenger car industry. It would have been ideal to have had two/three entrants in each of the above segments particularly in the small and mid-size segments. The upper segment, namely the big-car could well be left for imports. That is to say we could even avoid producing expensive cars.

The demand for cars at present is approximately 4,00,000 per annum of which 80 percent is for small cars. The mid-size segment i.e. above 1,200cc engine capacity which is approximately 60,000 at present, may not go beyond 1,00,000-1,25,000 by the year 2,000 for which more than seven/eight manufacturers will be battling it out. This would mean a volume of not more than 20,000-25,000 per producer, which is not at all an attractive volume for making profits or for undertaking faster indigenisation or for continuous technology upgradation.

As regards the small car segment if one assumes that the estimated overall car demand by 2,000 is 7,50,000 units then at a market share of 70-75 percent, the small car would enjoy a volume of over half millions units.

The decision by all the new entrants to operate in the mid-size segment at least initially may have been due to a lack of transparent and stable policy. This was evident from the confusion with regard to
definition of CKD/SKD (Complit Knocks Down/Semi knocks Down) packs requirement of mous, frequent and irrational changes in excise policies based on end use design, passenger carrying capacity gross vehicle weight fuel or a combination of these.

Five years ago no one would have believed that the Indian market would absorb an annual production of over 4,00,000 cars and some 1,30,000 off-rovers and light vans. Five years from now, no one will believe that there had once been long waiting lists and black marketing of cars. The market driven economy is now upon us. India is becoming like advanced countries with an abundance of TVs, washing machines, refrigerators and cars, consumers can now get the models of their choice at rock bottom prices with credit and special offers and better service support.

The second hand prices have also slashed. When second hand cars are available for the price of a scooter, every middle class family will like to have one and better income families will soon have two or more. The 4 million cars on the Indian roads to day will not be enough for India's 18 million richer urban households to say nothing of the many millions of the rural affluent.

Today India has over 4 million cars or one car for every 200 people. Roughly one car for every 40 households or one car for every 13 urban households. About 1.5 million cars are more than 10 years old, one
million are 5 to 10 years old and 1.5 million are less than 5 years old. Many cars are owned by companies or used as taxis. So perhaps not more than 3 million are privately owned.

When low resale prices now enable cars to reach lower income strata. The car will rapidly become an integral part of every middle income home and the more affluent will aspire to cars that reflect their life styles.

Wherever a Scooter, motorcycle, car, truck or tractor goes it changes more than the life styles of the owners. It transforms the aspirations and technical aptitudes of the entire community.

The Indian consumer has attracted the attention of three Western and Australian consumer product manufactures, who feel their products are viable for the Indian Market However they may have to do some concept selling first.

**Oka Motor Company Limited**

For this a $15 million manufacturer of commercial vehicles, tying up with Hindustan Motors (HM) seemed advantageous which OKA Holds the design and technology advantage. HM holds the manufacturing and marketing strengths in India.

The first of the OKA series to roll out in the Indian market from July 1997 has been a rural transport vehicle (RTV) weighing 1.5 tonnes with a three tonnes to four tonnes capacity. This is intended to be a
multi use vehicle that can carry people and goods. As this is the first time the rural market is being tapped for this kind of vehicle. There is no competition as yet in India. A secret suspension design will ensure that the vehicle has a ruggedness of the kind India has never seen before says the Perth-based OKA Chief-Executive Director. The only difference in the India version will be the two wheel drive, as opposed to the four wheel drive of the original model. "This is what we will launch first and may later follow up with the four-wheel version".

Interestingly the new offering will be totally indigenised. Two litre diesel Isuzu engines, manufactured at Indore will be used. A Manufacturing plant is to be set up by HM, followed by a second one to manufacture knock down version kits.

As for pricing "it will be below Rs.3 lakh mark, yet we expect the vehicle to be in a niche in India. But HM research reveals that the market is viable".

OKA Chief Executive Director Mr. Selvendra adds that "this will be one of the Indian products to go overseas eventually. We expect within five years, that 75 percent of the output will go out. We see India as a future power house of vehicle export".

Currently OKA has a royalty arrangement with HM. Domestic marketing will be handled by the latter while OKA will be responsible for exports. Discussions are on for the design and
manufacture of a multi-purpose vehicle (MPV) for the urban Indian market, encompassing the urban taxi and van modules, to be targeted at urban institutional buyers such as hotels and tourist operators. "The MPV is currently, rocking the market. Other vehicles under consideration are security and frozen chain van and recreational vehicles with space variations for affluent families.

When the liberalisation process begun in 1991, one had never thought that the sector that would really set the ball rolling would be automobiles, with not so affluent on economy. India does not have the tradition of not scrapping older cars. This did not make the Indian auto market particularly, attractive to major foreign players. At least that is what many pundits thought. Foreign majors, however, thought otherwise. General Motors, Peugeot, Ford, Mercedes-Benz and Daewoo are here to stay. Honda, Mitsubishi and Hyundai and others are on their way. The industry has seen Rs. 8,000 crore flow in the last couple of years and if the projection holds true the figure is set to rise to Rs. 28,000 crore at the end of the next five years with a total vehicle production capacity of seven million. More than 60 Percent of this investment is from foreign partners.

There are two basic features that distinguish the history of Indian auto industry in the last couple of years.
First:- The international players are looking at India not just as a market but as a possible sourcing base for both vehicles and components to meet their global needs.

Second:- The link with the international market will also ensure that the technology and products brought in for the Indian market are truly world-class. Moreover, the manufacturers' eagerness to put their act together have seen the launch of a clutch of vehicles in the Indian market; Daewoo's, Cielo, Peugeot's 309 and the upper crust Mercedes 220E are already on the road and the Opel Astra is ready to burn the tracks. The Uno is rolling off the ramp and the Ford Escort is just a couple of months away.

Automobile has traditionally been an indicative industry as far as forecasting economic trends are concerned. And if the new entrants deliver what they have promised then the economy and the industry is in for great times. A lot of credit on this front is due to the policy makers. Almost all clearances are linked to a Director general of foreign trade (DGFT) directive ensuring the ventures earn enough foreign exchange to at least cover their import cost.

This has prompted the auto majors to think in different ways, while Hyundai has promised to make India a major manufacturing base. Ford, too, is looking to set up its first car manufacturing facility in Asia in India after losing out in China. Dawoo has taken a different route but an
interesting one. Apart from its car manufacturing facility, it is simultaneously in setting up a plant to manufactures 3 lakh engines and gear boxes. The components will be pooled into Daewoo's global needs system and used to meet the requirements of its various plants spread across the world, especially in South Asia and West Asia. The earning Projection is a rosy $ 700 million much of it in stark contrast to Suzuki's plans through Maruti. The 50:50 joint venture had international ambitions but unable to make a mark in the export market.

The spin off benefit is also being passed to a developed domestic segment: component manufacturers. Over the last few years, with the help of financial institutions like the JCICI, (Japanese Collaboration for Indian Consortium of Industry) the component manufacturers had come together to explore market. Now foreign manufacturers, like Ford and GM, are getting together their own team of component manufacturers for their Indian operations and their international needs.

Most of the ventures, except for the Hyundai are through the JV route with the Indian and the international partners holding 50 percent of the equity. Mahindra and Mahindra has tied up with Ford to bring in Fiesta and Escort; DCM with Dacwoo for Cielo, Premier with Peugeot for the 309 and a technical tie up with Fiat for the UNO, TELCO with
Mercedes Benz for the E 220 and GM with Hindustan Motors for Opel Astra.

The Hyundai Corporation of Korea is setting up a 100 percent subsidiary in TamilNadu to launch its Accent and Sonata with a proposed investment of around $ 500 million.

In the two-wheeler category, various joint ventures have been tied up: Escorts with Yamaha, BMW with the Hero group, LML Ltd. with Piaggio of Italy and Hero Honda Motors. In the commercial vehicle category, Hinduastan Motors have tied up with Oka, Volvo is planning its own subsidiary and Ashok Leyland has linkages with Iveco.

A compact car market is also evident from the fact that several makers have luxurious ambitions. They will of course, export substantially. At present only two manufactures Mercedes-Benz and Rover Sipani-have plans to make luxury saloons. The Telco Benz collaboration will manufacture 20,000 cars and 50,000 engines a year in India. Other players such as BMW, Nissan, Volvo and Renault are planning to enter the Indian market in future to sell half of their production abroad.

With a launch happening every second day, the upwardly mobile Indian of the mid-nineties can change from an Esteem to Peugeot to an Astra to a Cielo in a matter of days. And if he can afford the cost, a mere can add glory to his garage.
India is one of those developing countries of the world where in the general mindset amongst the greater chunk of population is that to afford a car is to flaunt one's money power and status in the society. It has barely been regarded as a necessity of life, as is the case with most of the developed countries. Against such a background the automobile industry in the country has been manufacturing cars, focusing its attention mainly on the higher strata of the society.

The automobile industry in the country has been dominated by a few major players namely, Hindustan Motors, Premier Automobiles Ltd., Maruti Udyog Ltd., TELCO (Tata Electric and Locomotive Company Ltd.) and DCM Daewoo. During the 60's and 70's the cars manufactured by Hindustan Motors and Premier Automobile ruled the Indian roads. But the transformation came with the entrance of Maruti Udyog Ltd. in the car sector in the early 80's. The models prepared by this company captured the imagination of the consumers class for its small size and sleek looks. Right in the first year of its operation, it captured 17 percent of the market.

With the onset of liberalization in the country and with the fever-setting pace with which the Multinational companies are stepping into the Indian corridors, the car industry is also witnessing a revolution of sorts, with major tie-up with foreign counterparts. The various companies have tied up their belts to face challenges from their respective
competitors. Among the tie-ups made by these companies with the foreign counterparts the major are Maruti with Suzuki of Japan, Telco with Mercedes Benz of Germany, DCM with Daewoo Corp of Korea, Mahindra & Mahindra with Ford of U.S.A., Hindustan Motors with General Motors of U.S.A. & Premiers Automobile with Peugeot of France. In association with these foreign counterparts the companies are bringing new models in the market for example Maruti itself has brought out ranges like Maruti 1000, Maruti Esteem, Zen etc. Telco has brought out Tata Sierra, Tata Estate; DCM Daewoo has brought out Cielo; Premier Automobiles has brought out Peugeot 309 and Hindustan Motors has brought out Opel Astra.

With so many ranges coming out in the market, the Indian consumers who till yesterday, considered owning a car to be a matter realised only in dreams, might well be on his way to transform his dream in to reality. And with the Indian economy looking bright. The auto industry will only take strides on the positive side.

After a humble profile beginning in 1942, the Automobile industry has never looked back. Though the car industry has witnessed a very slow rate of progress in the pre-liberalization period, it has been more or less study with no competitors from outside the country. The few major companies of the car industry did not feel the pangs to unravel the needs and choices of the untapped market. But the transformation really
came with the unshackling of the licensee-Raj era and the opening up of doors to the foreigners.

Today in the 11,000 crore automobile industry the car sector has a formidable presence. In the post liberalization period the competitive state of the car market has also witnessed a revolutionary change. With major tie-ups with the foreign counterparts. Most of the Indian car companies have tied-up their belts to face the music. Against such a backdrop it would be worthwhile to have a profile of the competitive state of the car market.

**MODERNISATION OF MODERN TRANSPORT**

The source of transportation is a necessary organ for the modern life. Mankind got many benefits from advance developed source of transportation. There is a revolutionary changes in people's economic life, and it also effected but more support of transportation is, in economic region, social and political conditions.

After the development of trains, modern industries has risen in India and before it there is no way to imagine it. The first cotton industry was established in 1815 and first jute mill was established in 1854. In 1853 train was started first time in India.

Utility of natural sources are possible with the help of transportation. Without the help of train or any transportation it is not
possible to get wood (timber), Rocks, Medicines & natural resources. Therefore it is to be said that transportation is power of world.

Vehicle is media of transportation Bull cart, Rickshaw, Horse cart, Bicycle are examples of vehicle. And word 'Motor' means to produce speed, velocity in vehicle. And this motor-vehicle is used for transportation like Car, Truck, Tractor, Bus etc, Auto Rickshaw Scooter etc. are moving with the help of fuel and electricity. Therefore we can say vehicles are moving with the help of power machine. And these vehicles are manufactured in Automobile industries. So we can say motor vehicle industries are related with the industry where motors are manufactured.

Basically, Motor industry launched in India in 1950. Indian motor vehicle industries are full with latest technology. These automobile industries are the gift of 20th century. In India first motor car was imported in 1897. In 1897-98 the roads of Mumbai and Calcutta were full with just 5 or 6 motor cars but after 30 years of it, there was non achievement to collect the bodies of Motor-vehicle. In this century M/s Macanji & Co., General Motors & Ford Motors have tried in this way and made first car in 1928.

H.M. was the first firm established in India in 1942 at Calcutta. PAL was established in 1944 at Mumbai. In starting first organisation (H.M.) were collecting the parts of motor-vehicle and other units were imported for the cars.
Indian Govt. has realised, to make a successful automobile industry, thereby needed to prevent parts association of industries. In 1949 Indian Govt. has decided to withdraw their help to industries who were collecting the parts of motor vehicle.

In India basically automobile industry was started in 1950. Although Govt. has declared that who imported motor and parts and if they have not their own manufacturing unit, they will not be able for foreign exchanges to import cars & trucks after January 1951. But this act was not followed till end of 1953 but after April 1950 import duty applied for parts and the decision of conservation of industry were safe for next decision.

In March 1952, this issue was handed over to Tarkar Commission who has submitted their reports in 1953 to the Govt. & described the possibilities of motor industries in India. This Commission has described, Indian motor industry could be beneficial, if limited vehicle would be made as per demand.

Commission consultant, German specialist Mr.V.R. Vorving has suggested, automobile industry could be developed in 10 years and he suggested only five big scale industries can do it well.

In 1955, Tarkar Commission again appointed to fulfill the demand of country's motor industries. As per report in 1956, it was suggested to get more production for commercial vehicle as compared to
passenger vehicle. And for development it was also suggested that old units must enlarged as compared to new units and achieve maximum production for diesel vehicle.

Indian Govt. has made a Commission under L.K. Jha to suggest following things :-

(1) Summery of development of motor industries.

(2) To minimize the prices of different vehicles.

Commission has submitted their reports in Jan 1960 and they appreciate decision of conservation. The decision of self confidence in vehicle industry was necessary for national economical development.

There is need to select good cars, Commission has suggested. In the present foreign currency crises, if country would not have their own manufacturing units so consumers would have great loss. Commission has also suggested, Govt. must withdraw their price control from commercial vehicle. And after distributing of import license Govt. must have lessen the prices upto Rs. 200 from cars and Jeeps.

In 1960, again Pandey Commission was established to solve the problems of low priced car. Commission has submitted their report to Govt. in 1961. Commission has suggested possibilities of upto Rs. 5000 per car, if demand of cars in country is 50,000 per year.

Although automobile industry has been neglected from a long time but after that Govt. is interested in these automobile industries.
Automobile industry has grown very fast. In this century production of vehicle is very fast in. Home production unit as shown in this Table below.

**Table No. 2**

**Percentage of Production Of Motor Vehicle.**

<table>
<thead>
<tr>
<th>Years</th>
<th>Cars</th>
<th>Jeeps</th>
<th>Commercial Vehicle</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>02.2</td>
<td>-</td>
<td>01.9</td>
<td>04.1</td>
</tr>
<tr>
<td>1955</td>
<td>10.0</td>
<td>02.9</td>
<td>09.3</td>
<td>22.2</td>
</tr>
<tr>
<td>1960</td>
<td>19.1</td>
<td>05.5</td>
<td>26.6</td>
<td>51.2</td>
</tr>
<tr>
<td>1965</td>
<td>24.8</td>
<td>10.5</td>
<td>35.7</td>
<td>71.0</td>
</tr>
<tr>
<td>1966</td>
<td>27.6</td>
<td>09.8</td>
<td>33.6</td>
<td>71.6</td>
</tr>
<tr>
<td>1967</td>
<td>33.3</td>
<td>05.6</td>
<td>29.8</td>
<td>68.7</td>
</tr>
</tbody>
</table>

In 1958, production was very less because of minimum foreign currency and motor parts were increased in vehicles. Simply nobody knows there are 5,000 parts in motor vehicle and manufacturer are manufacturing only 60 percent of them & rest are brought from other engineering units.

In 1982, there were only two manufacturers, H.M. & PAL. Owner of H.M. in Birla group and owner of PAL is Mr. Hirachandra & Lalchandra.

Dream of Late Mr. Sanjay Gandhi's Maruti car was launched in India in 1984. Standard car of Madras was also launched but in the competitive market this car was flop. In 1981 total manufacturing capacity of this unit was only 4 cars. After that company was
manufacturing only commercial vehicles and that vehicle known as standard pick-up van.

H.M. and PAL was manufacturing Hindustan and Vadford trucks. But lastly few years back they have closed manufacturing of there models.

The aim of these manufacturers was to get maximum profit. They never think about facilities of consumers. There was demand of premier cars but they never used their license utility; they are manufacturing very less cars, to create a black demand for consumers. Therefore consumers have to wait for minimum five years.

The total capacity of these manufacturers are 51 target cars per year but in 1973 they manufactured 39,937 cars. In 1975, 23,075 cars; and in 1980, 30,538 cars were manufactured. In 1981 they made 42,106 cars.

In 1981, H.M. has made 23,195 & PAL has made 18,874 cars. Maruti car was dream of Late Mr. Sanjay Gandhi which is completed today. These companies will make small cars for country.

These companies have estimated expenses of Rs. 70 crore in 1983. H.M. & PAL cars are expensive, the average of these cars are 10 Km/pl although Maruti's average is 22 Km/pls.
PAL launched their car in Rs. 71,000 and H.M. launched their Ambassador in Rs. 74,000 and they are getting Rs. 5,000 to Rs. 7,000 margin per car.

Nationalized Maruti Industries LTD has collaboration with Japanese 'Suzuki' firm for 10 years.

It could be said form above that after few years. H.M. & PAL industries will collapsed because of their prices and efficiency. H.M. and PAL has revised their prices up to 60 percent from last 3 years.

**GLOBAL SCENARIO**

In most developed countries of Europe, North America and in Japan four wheelers are preferred over two wheelers as personal transportation vehicles. As a result, there has been a decline in production and sales of the two wheelers in these countries.

The bulk of the demand for two wheelers has now shifted to Asian countries like China and India which are the largest two wheeler markets in terms of sales. The main two-wheeler markets in 1995 were as follows.

Globally there has been a shift in demand towards the Asian region in the last ten years. During this period the highest growth in two wheeler production was recorded in China which grew at a compound annual rate of 22.4 percent from a base of 1.0 mn. two wheelers in 1985 to 7.8 mn. two wheelers in 1995. China is the world's largest two wheeler
Global Production of Two-Wheeler - 1995

Source: World Motorcycles Facts & Figures By Honda
market and manufacturer of two wheelers accounting for 39 percent of the world's two wheeler production of the total production. Of 20 mn. two wheeler in the world in 1995, the Asian region (excluding Japan) accounted for around 75 percent. Italy is one of the largest producer of two wheelers in the European market and accounted for 4.4 percent of the total two wheeler production in the world in 1995.

Following China, the Indian market is the second largest with total sales of 2.6 mn. vehicles in the year 1995. The Indian and Chinese markets are similar in terms of two wheelers specification, with the major production is less than 50cc and 51-125cc categories. Unlike India and China, two wheelers with less than 75cc or Motorcycles with greater than 250cc account for the bulk of the two wheeler market in developed countries like Japan and Italy.

**TWO WHEELER PENETRATION RATES**

India has a very low Penetration rate of two wheelers at 23 per thousand. This is very low compared to other developing countries like Indonesia, Korea and Singapore at about 40. Thailand at 142 and Taiwan at 565. The largest two wheeler market, China, however, has a lower penetration rate at only 12 vehicles per thousand. This is because of the late starting of the two wheeler industry in that country.

[Refer Exhibit 2 for global Production data]
INTRODUCTION

Introduction: The movement of passengers is mainly facilitated by public transportation systems like roadways, airways, and rail networks in India. The share of airways for internal transportation is very low, while railways and buses together account for the bulk of the passenger traffic. The remaining passengers are transported by personally owned vehicles like cars, utility vehicles, and two/three wheelers. In India, two and three wheelers are an important form of transport in the urban and semi-urban centres.

Over time, the share of railways is transporting passengers has been declining. In 1993-94, railways carried only about 20 percent of the passenger traffic, while the share of passengers traveling by road increased to 80 percent.

Buses run by the 48 State Transport Undertakings (STUs) all over India carry the bulk of passengers by road. The share of buses in transporting passengers has also been declining. This is indicated by the growth in the population of different categories of vehicles compared to the growth in passenger kilometer (PKM) transported by the road sector. Lack of an adequate mass transport system has resulted in personal transport vehicles becoming an important mode of transportation, especially in urban and semi-urban areas. Given the low income levels in India, for the bulk of the population motorized two wheelers are the only affordable personal vehicles.
**Economic Role :-**

The automobile industry and its related activities contribute substantially to the economy. During 1994-95 as per the Association of Indian Automobile Manufactures (AIAM), the Indian automobile sector employed 0.2 mn. Persons directly and about 10mn. indirectly in the form of labour required in ancillary units and in service stations. The total revenue to the Government from automobile and related activities was high at Rs. 242 bn. The automobile industry has been growing at a high rate over the last few years. The 2/3 wheeler industry carries a weight of 0.4 percent in the index of industrial production while the automobile industry as a whole has a weight of 2.2 percent. The industry had a turnover of Rs. 67 bn. in the year 1996-97.
**INDUSTRY FRAMEWORK**

![Diagram of industry framework]

**AUTO ANCILLARIES**

The numerous components required for the manufacture of 2/3 wheelers are supplied by a large network of auto ancillaries (vendors). The outsourced components could vary from 60 to 90 percent...
of a 2/3 wheeler company’s raw material costs. The relationship between the vendor and the 2/3 wheeler producer is one of interdependence. However the 2/3 wheeler manufacturer has a better bargaining position due to its large size as well as the higher degree of flexibility as most components are sourced from more than one vendor.

**SERVICE AND DISTRIBUTION NETWORK**

In India 2/3 wheeler have a long running life and are used in rural, semi-urban and urban areas. Therefore, it is essential to have a wide network of service stations as also to ensure easy availability of low priced spares.

Dealers are an important link between manufacturers and customers, besides being a valuable source of information on customers preferences. In a vast country like India, only dealers can provide satisfactory geographic penetration. The Indian automobile industry is supported by over 700 dealers which account for 80 percent of the vehicle sales. They also arrange credit finance for their clients, especially in areas where auto finance companies do not have a presence.

**AUTO FINANCE**

In India reportedly only about 25 to 30 percent of two wheeler sales are made on credit, compared to about 70 percent of car sales and about 90 percent of commercial vehicle sales. Although at present the percentage of two wheelers sold through auto finance is low,
with increasing reach. Auto finance will be a key demand driver for two wheelers in the future. Most two wheeler manufactures have promoted their own finance companies and also have financing arrangements through other finance companies.

**STATE TRANSPORT UNDERTAKINGS (STUs)**

Buses run by STUs are the main substitutes for 2/3 wheelers. However, the comfort and convenience of a personally owned vehicle cannot be substituted by the present public transportation system. Although buses are more economical mode of transport, their slow growth does not allow them to meet the requirement of the increasing passenger traffic.

**CUSTOMERS**

Retail sales of two wheelers are primarily accomplished through a wide dealer network. The customers can be classified as rural or urban. Depending on the means of livelihood the customer can also be classified as salaried, businessman, cultivator etc.

Three wheelers are broadly classified into passenger and foreign three wheeler. Passenger three wheelers constitute about 85 percent of the three wheelers produced in India. These are mainly bought by single owner operators.
PRODUCT DEVELOPMENT CAPABILITIES/
FOREIGN COLLABORATION

Globally, vehicle manufacturers focus on design and development of new models. Research is done on the important areas requiring technical expertise and designing capabilities such as the engine, the transmission and the aerodynamic design of the vehicle. However, in India, due to the demand for inexpensive and no frill models, Research and Development (R&D) has focused on cost cutting and the development of different versions of existing models.

Most domestic companies have international technical collaborations for the critical parts usually one design is indigenised over a period of time and modified for different models. This is especially true of engine and transmission technology. Hence, a new, indigenously developed model would usually be based on one or more older, international models.
Table No. 3

<table>
<thead>
<tr>
<th>Company</th>
<th>Collaborator</th>
<th>Product</th>
<th>Nature of Collaboration</th>
</tr>
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<tbody>
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<td>BAL</td>
<td>Kawasaki Heavy Industries Japan,</td>
<td>Motorcycle</td>
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<td>Orbital Engine, Australia</td>
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<td>Kubota corporation, Japan</td>
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<td>Escort</td>
<td>Motor Minarelli Italy</td>
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<td>Yamaha Motor Co. Limited Japan</td>
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<td>Honda Motor Co. Japan</td>
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<td>BMW - AG, Germany</td>
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<td>Malaguti, Italy</td>
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In the recent past, with the changes in customer expectations, the basis of competition has changed significantly. Increasingly, new models are being introduced to cater to niche markets, sales of these niche products are growing at a fast pace and are driving the demand for two wheelers.

The imposition of stricter fuel emission and efficiency norms in India, have also forced 2/3 wheeler manufacturers to upgrade their vehicles. Some older models have been replaced by newer environment
friendly vehicles. Further several new models are planned to be introduced by the year 2000, when stricter emission norms will come into force.

Thus introduction of new models at short intervals, improving models to suit the changing needs and offering a wide range of products helps companies cater to a wide market and gain market share. For example, in the last few years, TVS gained market share mainly due to the introduction of several new models in different segments.

COMMERCIAL VEHICLES

STATE OF THE INDUSTRY

The automobile Industry, comprising of commercial vehicles (CVs), cars, utility vehicles, two wheelers and three wheelers encompasses the movement of passengers and Cargo on roadways. As a result, CVs from a core sector industry which has strong linkages with the growth in agricultural and industrial production as well as the road and rail network.

GLOBAL SCENARIO

The US is the world's largest CV market with 1997 production of M & HCVs at over 3,31,000, followed by Japan with 2,69,000 vehicles and Germany with 1,07,000 vehicles. Indian Medium and Heavy commercial vehicles Industry was the fourth largest in the world in 1997.
Commercial Vehicle Penetration
(Vehicles/1000 population)

Name of Country

Population of Vehicle

Pakistan  Philippnes  India  China  Indonesia  Shri-Lanka  Thailand  Taiwan  Mexico  S. Africa  S.Korea

2 2.5 3 5 8 9 30 39 42 43 50
GLOBAL OVER CAPACITY IN THE CV MARKET

The global CV Market is characterised by significant over capacity. The US market which constitutes around 27 percent of the global market is expected to grow at a maximum of 1 percent per annum, while Japan, which accounts for over 25 percent of the total market is expected to grow at 1.2 percent per annum and the European market, constituting 28 percent is also expected to be low. Hence the three major markets are expected to either stagnate or decline, and the South East Asian markets also expected to clock negative growth, it looks likely that the current intense competition is expected to further intensify.

Such poor prospects have spurred many leading truck manufacturers to enter into newer territory namely the former communist block. As a first step towards establishing their presence in Eastern Europe and former Soviet Union, many European manufacturers have set up operations in Poland. The other main target area is China, which is being targeted by freightliner Paccar, and other US truck makers. India's unique position due to the state of the roads limits foreign competition.

INTRODUCTION TO INDIAN CV INDUSTRY STRUCTURE

In India the bulk of the Cargo and about 75 percent of the passenger traffic in terms of passenger kilometers is carried by CVs—through trucks and buses respectively. CVs carry a weight of 1.37 percent in the Index of Industrial Production (IIP) while the automobile industry as a whole has a weight of 2.2 percent in the IIP. There is a time lag
before demand for CVs corresponds to change in the economic scenario and hence, CVs demand could be considered to be a lagging indicator.

Although the railways is an alternative and much cheaper option to the road transport sector, the minimal growth in the rail network since the 1950s, has led to road transportation becoming the dominant mode and which carried about 60 percent of the 66 percent bn. tonne-Km freight traffic amounting to 400 BTKM (bn. tonne-km), and about 80 percent of the 1875 bn. Passenger-kms passenger traffic in 1995 amounting to 23 BPKM. (bn. passenger-km), This share is expected to increase to 65 percent and 85% respectively by 2000 as per the estimates of Ministry of Surface Transport (MOST). Freight traffic is expected to increase at a CAGR of 4.8 percent and touch 800 billion tonne-kms by 2000 while passenger traffic is expected to increase at a CAGR of 8.1 percent and touch 3000 billion passenger kms. by 2000. Although India has the third largest road network in the world with a length of two mn. kilometers (kms.) the growth in road length and width has not kept pace with the growth in vehicle population. While, the road network has grown 4.5 times over the last 35 years, vehicle population has increased by 34 times and road traffic by 65 times. Therefore, the Government has set up a Road Development plan with targets to be achieved by the year 2000.

[Refer exhibit 2 for details about the road development plan freight and passenger traffic]
INDUSTRY FRAMEWORK

Ancillaries

Components

Railways

Substitute

Cv Industry

Service Network

Distribution Network

Cv Sales

Customers

Auto Finance Companies

Institutional

Retail

Owner Operators Share

State Transport Undertaking Share

Fleet Operators Share
COMMERCIAL VEHICLE MANUFACTURERS

The CV industry consists of a few large companies manufacturing large volumes and various models of CVs. These manufactures have product development capabilities as also the ability to manufacture dies and teals. The CV producer typically concentrates on meeting demand targets and on the launch of new CV models. The CV body a few critical components and the assembly of the important sub-assemblies like transmission and engines are done in house. At present there are eight companies manufacturing CVs in India. However, about 90 percent of the market is controlled by three main companies namely; Ashok Leyland Limited (ALL), Bajaj Tempo Limited (BTL), and Tata Engineering and Locomotive Company Limited (TELCO) Telco is the largest player and has a presence in both medium & heavy commercial vehicles (M&HCV) and Light Commercial Vehicles (LVCs) with an overall market share of 68 percent while (ALL) Ashok Leyland Ltd. derives more than 90 percent its sales from the M&HCV Segments and BTL does not have a presence in M&HCV.

ANCILLARIES

More than 10,000 components are required for CV manufacture and these are supplied by large network of auto ancillaries (Vendors). The out sourced components could vary from 70-80 percent of a CV company’s raw material costs. The relationship between the vendor
and the CV producer is one of interdependence with the CV manufacturers in a better bargaining position due to their large size as well as the higher degree of flexibility as most components are sourced from more than one vendor.

**SERVICE AND DISTRIBUTION NETWORK**

CVs have a long running period and mainly ply on the highways and it is essential to have a wide network of service stations to ensure easy availability of spares and repeat sales. The dealer plays a crucial role as he usually arranges the credit finance for his clients, specially the Single truck owners. Hence, a wide distribution network is important to ensure wide reach.

The dealer plays a crucial role as he usually arranges the credit finance for his clients, specially the single truck owners. In India about 90 percent of all CVs are purchased through credit schemes. Further, India is a large country and a wide distribution network is important to ensure easy reach to customers. CVs have a long running period and mainly ply on the highways. Therefore, it is essential to have a wide network of service station to ensure easy repairs as well as availability of low cost genuine spares, for example, TELCO's policy of locating at least one service per 100 square kms. helped the company widen its customer base and strengthen its market position.
CV FINANCING

In India availability of credit for purchase of a CV plays a significant role in determining demand with about 90 percent of all CV sales being credit purchase. Most CV manufactures have promoted their own finance companies and also have financing arrangements through other finance companies.

CUSTOMERS

The customers for CVs can be divided into retail and institutional customers. Retail customers comprise mainly single owner operators of trucks who in turn account for about 42 percent of total CV Sales. Institutional customers who account for 58 percent of the sales are further divided into State Transport Undertaking (STU's) which account for the bulk of the bus and the private fleet operators of bus and truck services.

PASSENGER CARS

In the beginning there was the Ambassador and a little later joined by the Fiat. They lived in perfect case for many years. Then a small guy called Maruti just entered with a bang. The Ambassador and the Fiat [later called the Premier Padmini] are still around. And now there are other smaller and bigger players who will be posing challenges for all those old and new in this sector of the vital automobile industry.
An attempt is made have to trace the history of the Indian cars and its metamorphosis the passenger car in India has always been considered a luxury item. Only the rich and super rich could afford a car. In the fifties and sixties owning a car was the ultimate statement of having made it in life. There were just three major manufactures, namely Hindustan Motors, Premier Automobiles and Standard Motors.

The models they offered were one each, save for cosmetic upgradations. The Baby Hindustan (its later version called the Ambassador) the Fiat 1100, and the standard Herald seemingly fought for market share in a fairly stagnant market. The Ambassador and the Fiat were the front runners with the Herald coming later.

There were others players, in other segments, like the Willys, Jeep and Mahindra & Mahindra's offering. The late seventies saw a movement to produce a "people's car", an attempt to bring the less rich into the fold of the more fortunate ones. And so a seed was sown for many new entrants.

While the architectures of modern India brought democracy to one of the world's most populous and most socially divided countries, India is only now joining the world economy.

The economic reforms of 1991-93 began to dismantle the policies that had kept India isolated and pushed the country's growth rate from 4 percent a year, between 1960 and 1990 to roughly 7 percent a year
since 1994. India is now being touted as the new Asian Tiger and this could be the order of the day.

The union Budget of 1991 saw the opening up of the Indian market to foreign investments. The world turned its eyes on India and remained there. The multinational car majors scrambled for a piece of the Indian action.

The first to enter the market was the South Korean major Daewoo. Its Cielo was in direct competition with the just launched Maruti Esteem. The Cielo had a price advantage on the feature to feature comparison and was initially quite a success. This was followed by the Peugeot 309, manufactured by Premier Automobile (of the Fiat fame) in collaboration with Peugeot of France. Premier also tied up with its original collaborator, Fiat of Italy and launched the Fiat Uno in direct competition with the Maruti Zen, again with a price advantage.

**SMALL CAR WAR**

On 23rd September 1998, Hyundai Motors India (HMI) fired the first salve with the launch of its much awaited Santro, to spark off the small car war. This 1 litre 5 door hatchback comes with a shock price tag of Rs. 2.99 lakh (Ex-showroom Delhi), for the base model. The Santro has taken the price lead in this segment, but that may not last for long. Waiting in the trenches is Daewoo, which is tipped to fight back with an even more attractive price. For its trendy Matiz. And if, Telco Sticks to its
word the [finally named] Indica will be priced at around Rs. 2.5 lakh. Market leader Maruti will surely not sit back and watch its dominant position get attacked and is expected to react to its red hot competition by either dropping prices or by further adding value to its model line up. HMI's Marketing Director B.V.R. Subbu does not share the view that his company has triggered off a price war. "Until now Maruti had a monopoly and could get away by overpricing its products, we have simply offered our customers a good product at a fair and realistic price".

From now on, any revision in car prices is more likely to be downwards than upwards. This was unthinkable a few years ago, when car prices and premiums raced so for forward that it was not uncommon to buy a car, use it for a couple of years, and then sell it for a profit. It was a classic case of demand for outstripping supply, a situation that has been swiftly reversed to put the boot on the car buyer's foot.

The huge investments made by Daewoo, Hyundai and Telco implies that they must sell in large numbers to avoid drowning in red ink. Each company is talking of selling at least 60,000 units per year. Theoretically, this is possible. The entry-level segment (below Rs. 4 lakh) accounts for 2,50,000 cars per year, and hence there is enough of the pie to go around also, this segment is still to a small extent supply-led because of lack of choice. The arrival of these new cars is likely to increase demand and hence enlarge this segment. But it seems highly
unlikely that the new comers will all achieve their targets. To do so would mean slashing Maruti's market share in this segment, from an invincible 95 percent to less than 25 percent, a scenario no one would bet on.

Quite clearly in what promises to develop into a fierce battle, the selling price is the main artillery manufacturers will use. Most companies are unlikely to see any profits in the short term, given the pricing strategy they plan to adopt. "We do not intend to make any profits for the first three years". But prices is not the only issue. Each manufacturer is flaunting its own set of competitive advantages to lure buyers. The new players are all harping on the maxim, 'more car for less money'. Knowing well that, its not a small car people want but an affordable one that is large as possible. This is a key area where they have an advantage over Maruti, whose 800 and Zen seem a whole size smaller. The Uno was the first of the 'big' small cars but failed to make an impression thanks to the circumstances at PAL and the poor image and perception that surrounded it.

**A WELL-CONCEIVED PRODUCT**

On the other hand, Hynudai has done its homework well to raise the game in the entry level Segment. To piggy back on Shahruckh Khan's larger-than-life image was a master stroke by the Korean company, which until now has been unknown in India. This high profile brand-building exercise is indicative of its forceful strategy and
marketing. But it takes more than a megastar to convince value conscious Indians to part with their money for a set of wheels, especially in this segment. Hyundai has understood the Indian consumer's psyche to make the Santro a well-conceived product. However the styling is too radical for a car that has set out to attract a huge customer base of essentially conservative Indians. The 'tall boy' design lacks proportions and makes the Santro look like a skyscraper on wheels.

But like it or not, the shape is contemporary and is the way forward into Y2k. Maximizing space in a minimal foot print is the name of the game. And internal space is what the Santro is all about. Headroom is available by the hat load but the main advantage of the high-roof design is that the seat base is located high, just like in the good old Ambassador. The Santro's power plant is another plus point. The 999cc Epsilon engine has a good torque, spread and is pretty hi-tech, with three valves per cylinder and multipoint fuel injections. What this techno-jargon means to the owner is that you get seamless power delivery and a very driver. Friendly car with good fuel efficiency. The Santro's prominent character is its versatility. It is great as a city runabout and just as good on the highway. What's more, it is the first car in the entry level segment to come packed with features like power steering, power windows, and central locking. You only expect in midsize cars. Rivals Zen and Uno simply can not match the Santro's value proposition.
Next out of the block will be the Daewoo Matiz, expected to be launched by the end of October. The Matiz's key selling point is its trendy looks, which could make it a fashion statement on four wheels. Styled by Giugiaro the legendary Italian design house, the cute, bug-eyed Matiz has a distinctly European look. The semi one box body styled makes it look like a mini-MPV. Excellent packaging gives this car loads of practically, and internal space is pretty impressive for a car of its dimensions. Power comes from a 796cc engine which has been heavily modified by UK engine specialist Tick ford, with goodies like multi point fuel injection. The claimed output is 52 bhp, pretty amazing from an engine block that is similar to the Maruti 800cc. Though this three cylinder engine delivers sprightly performance, it lacks the inherent smoothness of a four cylinder. The nimble handling and compact dimension make the Matiz a great city car. But what everyone wants to know is the price. The industry Grapevine says that the Matiz will be the least expensive of the new lot, right down in Maruti 800 territory, at Rs.2.2 lakh, for the base model. That sort of pricing could shake out the entire segment.

**THE DIESEL ADVANTAGE**

The car most Indian are waiting for is Telco's home grown Indica. Exquisitely styled, this is undoubtedly the best looking car we have. How much and how good are questions that remain unanswered
since its spectacular unveiling at this year's Auto Expo in January. Telco is confident of achieving its price target of Rs. 2.5 lakh for the petrol version. But analysts and Financial institutions who have put Telco's most ambitious project under a microscope believe that it will be hard pressed to achieve that figure. The bigger question concern quality. That's hardly surprising looking at the company's track record. Even the Safari a well conceived sport utility vehicle (SUV) is plagued with few faults. Telco says it is taking no chances with the Indica. Extensive tests are being carried out on prototypes to exercise them of all bugs before the car is launched on the market, which should happen in November. Telco's main advantage over its rivals is a diesel option that promise to be the cheapest in its class. Maruti offers a diesel version of the Zen, but has priced it out of contention. The only other diesel small car is the Uno Diesel, which has received fantastic response, pushing sales of the model to over 1,000 a month.

In fact Fiat has side stepped the main slugfest against the two Koreans. The petrol Uno appears to have been marginalised by the Italian company, which is focusing on building the brand with the increasingly popular diesel model. The absence of diesel competition in this segment has given Fiat some breathing space to consolidate its image and product before the Indica hits the market.

But what of Maruti? It is sure to lose market share, but can it continue to be the leader? of course it can. It did not squander the advantage of a 14 year monopoly and raked in profits while the going
was good to build up its financial muscle. This is a well oiled manufacturing company with world class efficiency, and with Suzuki's know-how in the small car business, it can never be underestimated. No one is better equipped to right a price war than Maruti. Its phenomenal profitability, cash reserves, and efficiency in manufacturing will allow it to slash prices on all its models without feeling the pinch as mush as the others. The question is, will it? reducing prices is anathema to Maruti and it is more likely to add value packages to its existing model line-up with no additional cost to the customer. The Zen VX, which was launched with goodies like a sound system, redesigned rear view mirrors, a rear parcel shelf, etc is a pointer in this direction. But if push comes to shave Maruti is well prepared to use the knife. Slashing the price of the Zen and even the 800 is a distinct possibility.

However, these are all short term measures. Maruti's current model range is getting increasingly outclassed by the competition. To complete effectively in the long term, Suzuki will have to design India specific models, for Maruti all new models that are larger have more features, and offer better value. As the Indian car-buyer continues to upgrade it is unlikely that Suzuki's small compact designs will continue to find acceptance. The stage is set for a cut-throat battle in the sub Rs. 4 Lakh market. But the good news is that the market has already decided the winner. And that is the consumer.

[Business India October 5 to 18, 1998]
TELCO

HISTORY

The Tata Engineering and Locomotive company was incorporated in 1945. It is 53 years old company. Its Registered office in Bombay House Hutatma Chowk, Mumbai and its works area are Jamshedpur, Pune, and Lucknow.

In one large corner of truck giant Telco's sprawling complex in Pune, behind a thick veil of secrecy, furious activity is on to give shape to the most talked about project in the automobile industry. The results of the past few years reflect some of the efforts made in these direction to transform TELCO into a more responsive, customer oriented company. There is great satisfaction in applauding the progress made but one has to accept that much more needs to be done and much more needs to be achieved if TELCO is to meet its objective of becoming a truly world-class automotive manufacturer which can make its place amongst some of the global manufacturers.

TELCO's small car model 'Indica' is due to be launched in the domestic market by end-1998 and will be available in both petrol and diesel versions. The company proposes to launch its small car in the international market in 1999. TELCO is planning to introduce a new car model every year, subsequent to the launch of its small car. TELCO plans to launch a midsize car, which is being designed indigenously, by
end 1999. TELCO plans to introduce several variants of each model. The small car would have four variants, two each in the standard and deluxe categories. In addition an automatic transmission version of the small car is also scheduled for launch subsequently.

**THE PRODUCT**

With a 1,400-cc engine the Indica is definitely closer to the mid-segment than the Zen. But at a proposed price tag of around Rs. 3 lakh it will give the small cars a run for their money. Designed by an Italian company I.DE.A. (In house designers actually) this 5-door hatchback is much bigger than either the Santro or the Matiz. Funnily enough, the Indica and the Palio look like twins, and TECO is probably the imitator. Explains Chhabna "Designwise, its sheer form and proportions are just right and not overtly fussy".

However, TELCO has made sure that the Indica which will be powered by a petrol or a diesel engine pumping 65 bhp from a 4-cylinder engine does not lack in ruggedness. But unlike Hyundai and Daewoo, this is TELCO's first attempt at making a car point out, Richard D'Souza, 27, Analyst, Alchemy Share & Stock Brokers "TELCO must ensure that the quality of its components is absolutely perfect. Even the small/estlapse could have a negative impact".
THE POSITIONING

When Project Indica was launched, Telco's CEO Ratan Tata's brief to his designers and engineers was simple: make a car that has the spaciousness of an Ambassador and the price of a Maruti 800. If the product is priced below Rs. 3 lakh when it is launched in December 1998 it will be compete with almost every car in the market. Points out AIAM's TELCO has strong engineering skills, which it can use to offer a different product to consumers.

THE DOWNSTREAM STRATEGY

If there is one thing that the Indica can rely on, it is parent TELCO's distribution muscle. With 90 sales-and 290 service-points around the country, the Light Commercial Vehicle (LCV) and Heavy Commercial vehicle (HCV) manufacturer has already erected a big barrier for new entrants. Explains Alchem'y D' Souza "TELCO reaches even remote villages. A new entrant cannot duplicate such a network and be viable." Only by piggybacking on TELCO's sales infrastructure can the Indica hope to gain the cost advantage in the small car segment. That is critical since TELCO proposes to price the Indica as close to the Maruti 800 as possible.

THE UPSTREAM STRATEGY

With as investment of Rs. 1,700 crore the Year 1 financial costs will be huge: Rs 85 crore of interest payments (assuming a debt-
equity ratio of 1:1 and an interest charge of 10 per cent), and a
depreciation charge of Rs 170 crore (at a rate of 10 per cent). Assuming a
matenal cost per car of Rs 1.25 lakh, conversion cost of Rs 30,000
depreciation and interest charges of Rs 51,000, excise duty of Rs 82,400
(40 percent), and a sales tax of Rs 28,800 (10 percent), the cost of the
Indica would work out to Rs 3.17 lakh.

To be sure, TELCO has several strengths: tremendous in-
house engineering skills which, even if not strictly comparable to the
competition's are good enough to deliver a sturdy, V-F-M car. But
TELCO faces the challenge of image and positioning. Everybody knows
it as an HCV and LCV maker, not a car-manufacturer. To acquire a
pedigree, it cannot afford to offer a basic model, sell the product through
mass channels or bank on its rugged strengths. It needs to re-invent
manufacturing and marketing to differentiate its product.

By managing costs downstream and differentiating
upstream, the truck-manufacturer hopes to stamp the Indica with
differentiation. TELCO's subsidiary for sourcing components, Tata
Automotive Components (TACO), is helping it to slash its raw material
costs. Although figures are not available from the company, industry
experts estimate the cost savings to be between 20 and 25 percent. How
hard a bargain TACO is able to drive will depend on the Indica's initial
sales. In small cars, margins are tied to the sales figures.
THE SURVIVAL PROSPECTS

To break even, Indica must sell 75,000 cars a year. To achieve that, TELCO is imitating GM’s Satum strategy-creating a company within a company and has kept the Indica project independent of the parent’s operations, even creating a new distribution channel. It has tied up with the Hong Kong-based car dealership, Concorde, a member of the Jardine Matheson Group, to set up world-class distribution outlets across the country. Still, distribution could prove to be TELCO’s biggest hurdle.

Already, the company has picked up a 26 percent stake in Concorde; but with just 7 Concorde outlets operational, and only 11 more on the anvil, TELCO obviously, has to bank on its own dealer network. While exclusive channels would truly differentiate the Indica, they would slim TELCO’s margins. Agrees an ex-TELCO senior executive: "A showroom today could cost anything between Rs 50 lakh and Rs 5 crore. The returns are always long-term."

Just imagine the burden such a strategy might put on the recession-battered TELCO, which reported losses of Rs 36 crore in the first quarter of 1998-99 against profits of Rs 91 crore the previous year. Its medium and heavy vehicle sales have halved: it sold just 11,810 vehicles between April and July, 1998 against 31,538 in the
corresponding period of 1997, Naturally that can only make TELCO's task tougher.

Which way will the small car battle go? In terms of the product offering, nobody is taking any chances. Each has a clutch of variants to offer the no-frills version (with the air-conditioner), the semi-frills version (with the power windows), and the frills version (with a power transmission thrown in). And while that may force an upgrade from the Maruti 800, preventing India's most popular small car from being the best V-F-M proposition that alone will not win the war for any of the new players.

For the lure of technology and the sophistication of the customer are creating a new world, where cars will no longer be just four-wheelers, where a ride is associated with performance, where comforts come in surprise packages, and where the customer is loaded with a choice of specs and financing options. Her needs, therefore, are multiplying rapidly. Only by gearing their entire value-chain to fulfill the complete needs set of the customer can the sub-compact samurai hope to unseat the leader. And stay on the road to sustainable success.

**THE MARKING OF A SMALL WONDER**

Last year was a dreadful one for the house of Tata and its undisputed head, 59-year-old Ratan Naval Tata. In early 1997, the Tata-SIA project was blocked by a hostile minister and an absurd aviation
policy, which had been formulated expressly to stall the project. The rumpus had barely died down when the Tata's were entangled in the farcical episode of Ajit Kerkar's removal from the chairmanship of Indian Hotels. And then came the Tata Tea tangle when it was accused of funding militancy in Assam. The nadir was the publication of the Tata tapes on the front pages of The Indian Express. All in all, it was not a memorable year Ratan Tata.

Except Telco, India's second largest private sector company had scored its biggest success, since the launch of the LCVs in the 1980s is the Sumo. It became the fastest-selling automobile in Indian history in 1997, when it chalked sales of 1,00,000 in less than 18 months. Even Maruti 800 took a longer time to achieve this. But an even bigger story was unfolding at the truck maker's Pune facility. Largely unnoticed, a dream was taking shape in Telco's engineering research centre in Pune. The car was crucial for Ratan Tata; it was he who conceived it, who decided to take the risk and who personally oversaw its development. Its success will no doubt ensure him a place in the pantheon of Indian industrialists who have created world class products and world class companies.

Not that Telco has not done something like this before. In the 1980's, capitalizing on the huge R&D infrastructure created by its visionary cofounder Sumant Moolgaonker, the company used in-house
technology to develop its successful range of LCVs. The trucks were a big hit and the success was the sweeter because they destroyed the competition from four of Japan's largest auto companies-Toyota, Nissan, Mitsubishi, and Mazda. India was the only country in Asia where these would renowned names had to face such humiliation. The LCV revolution propelled Telco overnight into the front ranks of Indian companies. Then in 1995 came the launch and success of Sumo.

But the new small car represents a different kind of challenge for Telco and its chairman. Ratan Tata has won the first round of his battle with his critics who were sceptical whether Telco would ever be able to develop a world-class car on its own. An equally daunting task remains that of putting the car into mass production while maintaining consistent quality. Should Tata succeed, he would change the face of Telco for ever.

Tata says that the idea of developing an Indian car first crossed his mind at the annual general meeting of the Automobile Component Manufacturers Association in Delhi in September 1993. "I said (at the AGM) that all of us, component and car manufacturers, should get together to produce what I called an Asian people's car," Tata told Business India Though others did not catch on, Telco began work on its chairman's dream in right earnest. By mid-1994 a rudimentary design was in place. In 1995 the world learned for the first time that Telco
planned to build a car which would be priced close to the Maruti 800, shaped like the Zen, and spacious as an Ambassador. The first two running prototypes were ready by June 1997, which means the design to prototype stage took precisely three years.

To put this in perspective, the shortest time taken to develop a major model is 31 months for the Chrysler Neon. The major Japanese manufacturers take around 36 months, but new models are essentially modifications of existing models and share lots of parts. Building a brand new car from first principles in three years is a formidable technological feat. The Maruti range of vehicles are based entirely on Suzuki designs, down to the last nut and bolt.

**In The Beginning**

The first stage, from mid-1994 to mid-1995, was the pure Swadeshi stage. "The conceptual stage started in mid-1994, when we made a rudimentary design. We made a lot of sketches and showed it to Ratan Tata, who selected two. We also made some 3-D models and showed them to him," says N.S. Babu, senior deputy general manager at Telco's Engineering Research Centre (ERC), the scene of much of the action over the following three years. By the end of that year, the ERC engineers had made a rudimentary prototype (known in technical parlance as a mule). It was a running model, which gave Tata a rough idea of what the final product would look like. "As early as January 1995,
we were clear in our minds what we wanted in the small car - good overall driveability rapid acceleration through the gears, small turning radius and easy handling" says a top ERC Executive.

TELCO examined various small cars such as the Opel Corsa, Fiat Punto and Uno and Ford Fiesta. Simulations were carried out under Indian conditions, using computer-aided design (CAD) techniques, "Some of these cars also have diesel versions, which were of interest to us. The Punto had six versions of engines with different horsepower ratings. We selected 54 HP for our diesel engine and 60 HP for the carbureted petrol version because these specifications provided the best balance between power and fuel economy," says an ERC Engine Designer. At a later stage Le Moteur moderns of France, TELCO's engine design consultants, came into the picture and a multipoint fuel injection petrol engine with a power of 65 HP was also designed to meet the stricter emission norms of the European and US markets.

**Enter I.DE.A**

By early 1995 Telco's in-house designers actually had a 3-D model ready. But the pure Swadeshi phase was coming to an end, because Ratan Tata had decided to bring in I.DE.A institute, an Italian design house. "There was nothing wrong with the in-house effort. But, there was no need to reinvent the wheel. I felt that we should look at the best available options in the world in terms of car design," says Tata. He and
his team went to a few other car stylists like Pin in farina and Ital design. But I.DE.A's service was the best and most cost competitive. And its pedigree was impeccable. It had designed cars for Fiat, including the Palio world car, Daewoo, Volkswagen, Toyota, and Nissan.

Despite their initial in-house design effort, Telco's designers and engineers seem to have worked quite well with I.DE.A's team. The I.DE.A connection provided valuable exposure for Telco's engineers, currently engaged in developing a midsize car. The fundamental reason I.DE.A was called in was because the volume Telco was planning, 600 cars per day, was more than anything else it had achieved before (only around 120 Sumos are turned out daily). "The body design should suit the volumes and here we needed outside help. The 'Takt' time, which is the time a vehicle rolls out, say every two minutes, had to be kept low. This was one of the major reasons why we sought outside help," says T. Telco body stylist.

That does not mean that I.DE.A did the entire design. Two chief ERC designers were stationed at I.DE.A's. Turin factory for months and many others were sent for three-month periods. "In fact, our engineers made lots of suggestions to I.DE.A., most of which were accepted," says an ERC source. One feature of the entire exercise was Ratan Tata's involvement in every aspect of the actual design and manufacturing of the car. "Our chairman Ratan Tata, along with me and
some other executives, visited IDE.A at least five times and each time Tata went into the minutest styling details, like body trim, interiors, and even door handles. These suggestions were incorporated or improved upon," says V.M. Raval, executive director (automobiles). Other executives confirm Tata's hands-on involvement." Ratan Tata's commitment to the car project was total from day one. Till today he makes himself available to us 24 hours if any decision is required to be taken by him, and gets back to us immediately. He was intimately involved not only in every aspect of the car's design, but also the layout of the plant. So much so that he even got involved in selecting the shades of paint for the car," says Y. Nath senior General Manager, who heads Telco's huge Pune unit.

**Building The Car**

While the styling exercise was in progress, Telco was gearing up for the design and research work needed for the innards of the car. In early 1995, a co-ordination group consisting of six ERC experts was constituted. Their mandate from Ratan Tata: match the cost of the Maruti 800 while building a much bigger car. The six, together with costing and accounting experts, a group of 15, carried out a detailed analysis of the cost of each component, given the Maruti 800 target cost. By mid 1995 this group had worked out the cost of each component. The ERC would then work out a design and in case of a cost overrun, either
change the design or manufacturing technique without sacrificing quality. "For example," says one of the designers.

"We decided to make the door pads with the injection moulding technique, rather than the Woodstock method used by most manufacturers in India in which wood chips are mixed with polypropylene as a base and sheets are extruded and formed by heating. We found that for large volumes, injection moulding was more cost-effective and is being increasingly used all over the world."

Tata's auto component company TACO played a major part in providing these new techniques. "We have had bad experiences with component manufacturers for our earlier models. We made sure we selected the best," says R.B. Khadilkar, General Manager, ERC. TACO's (JV) (Joint Venture) with Sommer Alibert, a French company, supplied dashboards, car trim and bumpers, while radiators came from Tata Toyo, a JV with Toyo of Japan Tata Johnson Controls provided the seats and interior trim, while Tata Ficosa, a JV with Ficosa of Spain, provided the rear-view mirrors, and Tata Yazaki provided the electrical. "These companies are all world leaders in their respective areas," says Khadilkar.

TELCO did not hesitate to squeeze its suppliers, "TELCO is very aggressively keeping component costs low and quality high, which is tough to achieve. But this practice is good for us because it helps us reduce the costs of other components too. We completed the entire
development process of the crankshaft forgings in just 22 days, from the
time we first received the drawings till we supplied the first lot," says
G.K. Aggarwal, President (operations) Bharat Forge, which has been
short-listed to supply these critical forgings for the engine.

Other component manufactures testify to Talco's meticulous
preparation "They first approached us in January 1996 and I remember
that in that meeting they had clearly set stiff target costs and benchmarks
of performance started, they arrived at these costs after doing very
extensive homework on cost of brake systems all over the world and in
India. It took us two years to develop the brake systems from scratch
whereas it takes three years worldwide" says Satish Sekhri, MD, Kalyani
Brakes. "However, it was the first truly joint effort between our boys and
the Telco ERC engineers, who were present at our works throughout the
two years, continuously testing and modifying each of the six devices that
go into the brake systems," adds Sekhri. A highlight of the brake system
was that it had a vacuum booster, which amplifies the foot pressure on the
pedal by up to three times. Neither the Maruti 800 nor the Omni has this
feature, according to Telco sources.

As with the design, chairman Tata was intimately involved
in monitoring component vendors. " We had a clear directive from Ratan
Tata to use only non- asbestos brake liners for environmental reasons, as
asbestos linings are harmful to the workers who manufacture them," says
Sekhri. Fifty percent of Maruti cars have asbestos liners. "Tata was also not satisfied with the quality of brake linings available in India, as we had to meet stiff European standards that specify the distance in which a car must come to a halt even if one of the two brake circuits has failed. For safety, every car has dual brake circuits, so that if one fails the other takes over. So Tata told us to import the first 2,000 brake linings from a Japanese manufacturer, Japan Brake Industrials, and develop indigenous linings to match their performance," says Sekhri. Subsequently, Rane Brakes and Sundaram of Chennai have developed such linings.

"Telco gave us a target cost for each item and told us to either meet it or better it," says Brij Kataria, executive director, Mahindra Sintered products which makes powdered metal components for the engine and gearbox. Contrary to usual auto industry practice, no tooling cost was paid upfront to the vendors. "We were told to amortise tooling costs, which are quite heavy, over the first 100,000 sets of components. They said look at the volumes for profits and not at the unit cost, which was quite fair," says Kataria. To upgrade vendor quality, a special supplier quality improvement group (SQIG) was formed within Telco which carried out regular quality audits of vendors and set very exacting standards for their manufacturing processes. "Senior executives like
Raval and Nath kept in constant touch with the vendors. These meetings helped take spot decisions and cut down development time," says Kataria.

Meanwhile, at the ERC, when the design work was at its peak, about 90 designers were working round-the-clock, organized into various groups like body design, engine design, transmission design, vehicle systems design, and so on. By August 1996, Telco had put together another mule, the time with much more refined powertrain aggregates. Its first run was successful. "The suspension was good it steered well, the braking was effective and the vehicle did not wander or roll excessively," says an ERC executive. A surge of jubilation ran through the entire design team.

Meanwhile, I.D.E.A had begun work on the styling, which was to eventually create such a sensation at the Auto Expo. Their first formal presentation was in October 1995. As many as eight designs were submitted and three were shortlisted. The external styling was finally frozen by April 1996 and the internal styling by that July.

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THE MAHINDRA GROUP

The Mahindra & Mahindra group was incorporated in 1947, it is 51 years old company. Its registered office in Wadia Building 17/19 Dalal Street Fort, Bombay and Marketing, Advertising office in Bombay, Bangalore, Calcutta, Delhi, Hyderabad, Madras, Ahmedabad, Pune, Trivendrum and Cochine.

Mahindra & Mahindra is one of the best examples of a company that has taken full advantages of liberalisation to clean up its act and knock itself into competitive shape. Needless to say the process has been neither easy nor painless. Differentiation has helped the M & M Group succeed in its core areas so far, but the fact that it had to rely on a transnational brand name Ford, to help it enter the passenger car segment of the Automobile markets is a trifle worrying. As it its persistent, and touchey refusal to accept that it is carrying excess business baggage.

M & M had strong reasons to tie up with the Blue oval since the auto business hinges on product development and technology spend in two critical areas, safety and emission, M & M can either become a full range manufacturers of vehicles by investing in scale or become a niche player by buying or absorbing technology.

Given its level of technological evolution M & M can only nest in niches. But even they are not individually sustainable. M & M partnership with Ford not only gives the former a share of the domestic
car market it allows it to learn through a process of osmosis which it can apply in areas where it has developed capabilities e.g. People carriers (light commercial vehicle) and offroaders (light utility vehicle) instead of developing a car from scratch and M&M could even target overseas market with a value proposition that matches India's.

The Mahindras have not forgotten the painful year of 1990 when the company was relatively weak, succession planning not clear and the Mahindra family's control seemed tenuous.

A simple indicator of how well the company has done is to look at how the share price has moved during this time in March 1991, the share price was Rs. 68. It climbed steadily thereafter and touched a high of Rs. 405 earlier this year and currently quotes at about Rs. 350. Even in the tough markets of 1995-96 and 1996-97 the share price has risen steadily in fact it has almost doubled.

Three years ago Mahindras announced a 50:50 joint venture with Ford to produce Ford cars in India. Mahindra Ford started producing in record time delivering the first cars a month after booking were closed. At a time when the Bombay club has raised the spectre of multinational companies swallow owing up. Or making redundant their Indian joint venture partners, it is a reflection on the strength of Mahindras that the joint venture is an equal 50:50 partnership while sceptics feel that given the difference in size between Mahindras and Ford, it is too early to
judge the long term viability or success of this marriage, there is no doubt that Mahindras will emerge as an enormously stronger company whatever the result.

There is one last but most important point that needs to be made. The Mahindras have long had a reputation for running their businesses in a clean and highly ethical fashion. The transformation of Mahindras has taken place in an open and fully transparent manner. Mahindras is one of the best examples to hold up and to prove that belief in values is also the best and most profitable way to run a business.

The slow down in the automobile business has prompted the utility and tractor major, Mahindra & Mahindra to put on hold its Rs. 200 crores foundry project. Instead of putting up a green field unit, M & M may now go in for an acquisition of an existing unit and upgrade the facilities. The company is believed to have already considered two units—one in Maharashtra belonging to the Kirloskar group and the other in Tamil Nadu.

M & M is believed to have already spent Rs. 16 crores on its forging project. "The company has thought it prudent to put the project on hold at a time when the domestic and global markets are going through a slow down and uncertainly" said sources in the company. Out of the initial investment, about Rs. 5 crores may not be recoverable following
the abrupt decision to shelve the unit. The project has been deferred for a year or so, the sources added.

The project to be located at a 200 acre complex at Baramati would have a capacity of making 50,000 tonnes of speciality casting. The castings were meant for M & M's ambitions new generation multi-utility vehicle project Scorpio, existing vehicles and tractor division.

The project had received the environmental clearance and even the design of the building was complete for the project, M&M had entered into a technical licensing agreement with Montrjon of Spain the license with Montrjon stands, despite the project being put on hold, the sources said.

M & M is India's largest tractor manufacture and the fifth largest in the world. The company had a market share of 27.5 percent in the period Apr-Dec 97, with a similar market share in all the three HP segments. The company's sales mix is similar to the industry sales mix with about 63 percent coming from the 21-30 HP segment. However the company derives only 35 percent of its revenues from the tractor business and is a major utility vehicle player. The company which has been the market leader in the tractor industry for over a decade is expected to continue to have the largest market share in 2000-01.
EICHER LTD.

HISTORY

On April 24th 1959, Eicher Tractor Corporation of India Pvt. Ltd. was founded by Shri M.M. Lal. The name Eicher is derived from Gear Eicher GMBH., the original collaborators from the Federal Republic of Germany. Eicher Good earth Ltd. was formed on 3rd September 1960 with a small investment of Rs. 19 lakhs, India's first tractor rolled out of the Faridabad plant in the same year.

Today Eicher is a significant player in the Indian automobile industry. It has diversified business interests in manufacturing and marketing of tractors, light commercial vehicles automotive gears, motorcycles and the export of vehicles aggregates, components and hand tools. Eicher has also invested in the potential growth areas of financial services and management consultancy services, garments and footwears.

Today Eicher employs more than 6,000 people in 10 manufacturing facilities across seven states and 30 marketing offices all around the country. The group has a strong base of 1,335 vendors supplying components across all Bus distributing across the length and breadth of the country. Over 300 employees work exclusively in the area of R&D, product development and product engineering facilities are available at each of Eicher's major manufacturing locations. Expertise has been developed in the areas of design and development of tractors.
commercial vehicle, diesel engines, automotive transmission, electronic instrumentation, material science, metrology as well as manufacturing and testing.

The Eicher Tractor manufacturing and marketing facility at Faridabad and the Eicher tractor Engineering centre at Ballabgarh have been awarded the ISO 9001 Certification. The Eicher Tractor manufacturing facility at Hyderabad and the Parwanoo plant of the Gears Business unit have been awarded the ISO 9002 certification.

**Group Milestones**

**Table No. 4**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>Eicher Tractors corporation of India set up to import tractors.</td>
</tr>
<tr>
<td>1960</td>
<td>Eicher Good earth Ltd was founded on September 6</td>
</tr>
<tr>
<td>1976</td>
<td>Plant set up at Alwar</td>
</tr>
<tr>
<td>1978</td>
<td>Plant set up at Parwanoo</td>
</tr>
<tr>
<td>1983</td>
<td>Eicher Motors Ltd. was incorporated in collaboration with MMC Japan to manufacture 6 tonne LCV's</td>
</tr>
<tr>
<td>1990</td>
<td>Eicher enters into a strategic alliance with Enfield India Ltd. for manufacturing of Motorcycles.</td>
</tr>
<tr>
<td>1991</td>
<td>Eicher consultancy services formed. Eicher span financial services was also established in collaboration with Span India Ltd.</td>
</tr>
<tr>
<td>1992</td>
<td>Eicher Tractors take over Ramon and Demm Thane</td>
</tr>
<tr>
<td>1993</td>
<td>Eicher adopts new identifier Eicher increase stake in Enfield and renames company to Royal Enfield Motors Limited.</td>
</tr>
<tr>
<td>1995</td>
<td>Eicher foot wears Ltd. was formed along with setting up of plant at Bangalore.</td>
</tr>
<tr>
<td>1996</td>
<td>Merger of REML and ETL to Eicher Ltd.</td>
</tr>
</tbody>
</table>
The Eicher group has consolidated its tractor operations at Eicher Limited which was formed by the merger of Eicher Tractors Limited and The Royal Enfield Motors Limited in 1995-96 Eicher is predominantly in the small tractor segment (with a current market share of 36 percent in the 21-30 HP segment) and was the main beneficiary of the small tractor demand in the Northern states of Punjab, Haryana and western Uttar Pradesh.

With the increase in demand for higher HP tractors, the company steadily lost market share in the overall tractor industry from about 13 percent in 1993-94 to 1997-98, mainly because the preferences for medium and high HP tractors increased during this period.
ASHOK LEYLAND LTD.

Ashok Leyland Ltd. was incorporated in 1958. It is a 41 years old company. Ashok Leyland has a very strong presence in the deopolistic heavy and medium commercial vehicles (HCVs and MCVs) market, the leading player being Telco. Its registered and corporate office in 19 Rajaji Salai, Chennai. The company has a technical collaboration with IVECO of Italy which along with the Hindujas currently holds 51 percent of the equity with the launch of two truck models in the medium-duty range, the company is slowly cornering a niche for itself. It now plans to clot a vehicle in each segment.

Ashok Leyland is on a different track. India's second largest commercial vehicle manufacture has been number two to Telco since the inception of the industry. With technology inherited from its earlier collaboration with Leyland trucks, Ashok Leyland has concentrated on the heavier truck segments and selling bus chassis predominantly to the various state transport undertakings.

In 1989 Leyland's stake was bought out by the Hindujas and IVECO (70 and 30 percent respectively) and they jointly hold 51 percent of the company. Iveco-fiat's commercial vehicle division is expected to play, an increasingly important role in Ashok Leyland providing all the future new products. The IVECO range that has been introduced includes the 709 and 909 and a 13-and 16-tonner will follow. The new trucks are
modern and in being European are perhaps more appropriate for India. But they may face the same problem as the Indo-Japanese LCVs faced, that of poor down time due to not so-easy availability of spares cost competitiveness should be less of a problem as localisation is expected to be quite high from the beginning. Ashok Leyland which hitherto had no light truck in its product mix and lost out on a whole new market opportunity during the last ten years stealing the show with its attempt to open up a whole new segment of seven and nine tonne ICVs (Intermediate Commercial Vehicles) being introduced in collaboration with IVECO of Italy.
BAJAJ AUTO LTD.

HISTORY

You just can't beat a Bajaj. But you can sure bruise its chances of evolution. After decades of lording it over the country's Rs. 7000-crore market for two and three wheelers, the Rs. 3.454.10 crore Bajaj Auto is skidding through the worst recession in its 37 years old history, the Pune based company's showing in the first half of this fiscal year has been nothing short of disastrous for the first time in 22 years, Bajaj Auto's net profits in the first half of a year were lower than those it had earned during the corresponding period of the previous year, net profits in the First half of 1997-98 were Rs. 205.38 crore, 9 percent less than the Rs. 225.89 crore Bajaj Auto had earned in the first half of 1996-97.

The Bajaj Auto Ltd. is started on 1960 in Pune, its Registered office in Mumbai-Pune Road, Akurdi, Pune. The Houses of Bajaj is a bit apprehensive about the future. A loose confederation of independently-run businesses, managed by several segments of the Bajaj family.

Bajaj Tempo was incorporated in 1958, subsequently it became a public limited company in 1961 and come out with a public issue in 1964. Initially, the company took up manufacture of Tempo
commercial vehicles. 3-wheeler auto rickshaws and other 3 Wheelers driven by petrol engines.

How every in 1969 it started manufacturing four wheelers fitted with diesel engines name as Matador at its Akurdi plant (Pune) which was constructed in 1964. Recognizing the importance of manufacturing some of its components in house Bajaj Tempo constructed its own foundry in 1973-74 It also started manufacturing four cylinder diesel engines OM 616 in tie-up with Dailmer Benz in 1987. For the first time in 1987, it started manufacturing Tempo Traveler which was categorized as LCV at its Pithampur plant in Indore. This was followed by the enhanced production of Matadors, pickup trucks and Tempo Trax in the same plant.

**VALUATION OF BAJAJ AUTO**

The two wheeler industry is facing slack demand. The growth of the industry is also much below the average growth in IIP (Index of Industrial Production). The IIP grew by 6 percent, as compared to two wheeler industry's growth of 2 percent. While the growth rate in FY 96 was recorded at 21 percent in FY 98 the industry grew by just 2 percent. There has been a slowdown in the economy. Personal income, which is one of the main demand drivers, did not rise substantially.
Apart from these economic factors, the industry is also affected by the shift in consumer preference from scooters and mopeds to motorcycles.

The performance of the corporate in FY 98 has not been very different from that in FY 97. However, the competition among the leading players like Bajaj Auto Ltd. (BAL), LML Ltd, TVS Suzuki, and Honda has intensified. BAL, the leader of the scooters segment, is losing its share to LML in the premium scooters segment.

In order to gear up, BAL introduced modified version of premium scooters in the first half of FY 99. Keeping in view the general fall in scooters demand, BAL decided to reduce the scooters production, and concentrate more on motorcycles. These strategic decisions and the expected improvement in the economy is likely to boost the company’s performance in FY 99.
### Table No. 5

**Income & Expenditure: Bajaj Auto Ltd.**

<table>
<thead>
<tr>
<th>Income</th>
<th>Mar 94</th>
<th>Mar 95</th>
<th>Mar 96</th>
<th>Mar 97</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1603.53</td>
<td>2149.81</td>
<td>2742.92</td>
<td>3220.86</td>
</tr>
<tr>
<td>Other Income</td>
<td>72.12</td>
<td>120.37</td>
<td>176.83</td>
<td>214.18</td>
</tr>
<tr>
<td>Change in Stocks</td>
<td>-2.88</td>
<td>-0.67</td>
<td>5.6</td>
<td>25.36</td>
</tr>
<tr>
<td>Non-recurring income</td>
<td>8.66</td>
<td>21.92</td>
<td>13.42</td>
<td>19.31</td>
</tr>
</tbody>
</table>

**Expenditure**

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>Mar 94</th>
<th>Mar 95</th>
<th>Mar 96</th>
<th>Mar 97</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw materials Store, etc.</td>
<td>763.68</td>
<td>1045.87</td>
<td>1352.88</td>
<td>1577.95</td>
</tr>
<tr>
<td>Wagers daries</td>
<td>104.95</td>
<td>128.04</td>
<td>172.82</td>
<td>198.85</td>
</tr>
<tr>
<td>Energy (power &amp; fuel)</td>
<td>34.52</td>
<td>42.63</td>
<td>47.83</td>
<td>61.57</td>
</tr>
<tr>
<td>Other manufacturing expenses</td>
<td>39.77</td>
<td>56.11</td>
<td>68.66</td>
<td>74.58</td>
</tr>
<tr>
<td>Indirect taxes</td>
<td>281.64</td>
<td>357.87</td>
<td>433.07</td>
<td>519.51</td>
</tr>
<tr>
<td>Repairs &amp; maintenance</td>
<td>22.08</td>
<td>26.78</td>
<td>37.71</td>
<td>46.12</td>
</tr>
<tr>
<td>Amortisation</td>
<td>49.81</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Miscellaneous expenses</td>
<td>43.93</td>
<td>41.24</td>
<td>50.46</td>
<td>52.93</td>
</tr>
<tr>
<td>Non-recurring expenses</td>
<td>43.93</td>
<td>0.72</td>
<td>2.44</td>
<td>1.02</td>
</tr>
<tr>
<td>Less: Expenses capitalised</td>
<td>3.06</td>
<td>7.67</td>
<td>9.93</td>
<td>13.21</td>
</tr>
<tr>
<td>PBDIT</td>
<td>345.13</td>
<td>523.42</td>
<td>677.88</td>
<td>789.73</td>
</tr>
<tr>
<td>Interest</td>
<td>15.25</td>
<td>11.57</td>
<td>10.02</td>
<td>7.41</td>
</tr>
<tr>
<td>PBDT</td>
<td>329.88</td>
<td>511.85</td>
<td>667.86</td>
<td>782.32</td>
</tr>
<tr>
<td>Depreciation</td>
<td>66.46</td>
<td>58.77</td>
<td>74.02</td>
<td>105.86</td>
</tr>
<tr>
<td>PBT</td>
<td>263.42</td>
<td>453.08</td>
<td>177</td>
<td>236.5</td>
</tr>
<tr>
<td>Tax provision</td>
<td>117.25</td>
<td>143.5</td>
<td>177</td>
<td>236.5</td>
</tr>
<tr>
<td>PAT</td>
<td>146.17</td>
<td>309.58</td>
<td>416.84</td>
<td>439.96</td>
</tr>
</tbody>
</table>

**Appropriation Of Profit**

<table>
<thead>
<tr>
<th>Appropriation of Profit</th>
<th>Mar 94</th>
<th>Mar 95</th>
<th>Mar 96</th>
<th>Mar 97</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividends</td>
<td>30.1</td>
<td>61.62</td>
<td>79.59</td>
<td>87.55</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>116.07</td>
<td>247.96</td>
<td>337.25</td>
<td>352.41</td>
</tr>
</tbody>
</table>
FORECASTS

Conventionally, BAL's sales in the second half of a financial year are on an average 20 percent more as compared to the first half. But in the second half of FY 97, the sales grew by just 2 percent over the first half. Considering the similarity in the industry's situation in FY 97 and FY 98, the sales in the second half of FY 98 are assumed to be almost the same as in the first half of FY 98. Since the company's performance is expected to improve in FY 99, the AAGR of sales at 26.36 percent has been used to forecast sales for FY 99.

On average, 5.5 percent of BAL's total income is from investment income. The company invests heavily in outside business. The other income has been showing a rising trend over the past five years. The other income is spread equally in both the halves of a financial year, hence, for FY 98 the other income is assumed to be twice the amount shown in the half yearly results. For FY 99, the other income is expected to rise at the annual average growth rate of 45 percent.

For the past three years, BAL has been maintaining its operating margin at 24 percent. For the next two years, we estimate the trend to continue.
### Table No. 6

**Projected Cash Flows**

<table>
<thead>
<tr>
<th></th>
<th>FY 98</th>
<th>FY 99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>3025.98</td>
<td>38.23.63</td>
</tr>
<tr>
<td>Other income</td>
<td>235.60</td>
<td>341.62</td>
</tr>
<tr>
<td>Total expenses</td>
<td>2535.34</td>
<td>3247.58</td>
</tr>
<tr>
<td>PBDTT</td>
<td>726.24</td>
<td>917.67</td>
</tr>
<tr>
<td>Interest</td>
<td>4.44</td>
<td>3.50</td>
</tr>
<tr>
<td>PBDT</td>
<td>721.80</td>
<td>914.17</td>
</tr>
<tr>
<td>Depreciation</td>
<td>137.02</td>
<td>163.23</td>
</tr>
<tr>
<td>PBT</td>
<td>584.78</td>
<td>750.94</td>
</tr>
<tr>
<td>Tax</td>
<td>198.00</td>
<td>234.93</td>
</tr>
<tr>
<td>PAT</td>
<td>386.78</td>
<td>496.01</td>
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**Number Of Equity**

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<table>
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<tr>
<td>share (in crores)</td>
<td>11.94</td>
<td>11.94</td>
</tr>
<tr>
<td>EPS</td>
<td>32.39</td>
<td>41.54</td>
</tr>
<tr>
<td>D/P ratio</td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td>DPS</td>
<td>6.48</td>
<td>8.31</td>
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The interest payable has been declining at an annual average rate of 21.2 percent over the last five years. The comparison of results in the two halves of financial year during 1994-97 reveals that the annual
interest payable is shown equally in both the halves. Hence, the interest liability for FY 98 is assumed at twice the amount revealed in the half yearly results. For FY 99, the interest is expected to fall by 21.2 percent as compared to FY 98.

BAL adds to its fixed assets, especially plant and machinery, every year. The depreciation charged by the company also shows an annual average growth rate of 19.13 percent. As in the care of interest payable, the depreciation charged annually is shown equally in both the halves of a financial year. Hence for FY 98, the depreciation chargeable is assumed to be twice the amount shown in the half yearly result. As for FY 99, the depreciation is estimated to rise at the AAGR of 19.13 percent.

BAL’s average effective tax rate over the period 1994-97 is 33.94 percent. The same has been applied for FY 99. For the year 1997-98, twice the amount shown in the first half results has been assumed to be the effective tax payable.

In September 1997, the company had a bonus issue, in the ratio of 1:2, the issue raised BAL’s paid up capital from Rs. 79.6 crores to Rs. 119.4 crores.

The above assumptions have been incorporated in arriving at the cash flows for FY 98 and FY 99. The PAT for the two years is estimated at Rs. 386.78 crores and Rs. 496.01 crores respectively. The
EPS for FY 98 is estimated at Rs. 32.39 and at Rs. 41.54 for FY 99. For the last four years, the company has been paying dividend at the rate of approximately 20 percent. The same rate has been assumed for FY 98 and FY 99.

**CALCULATION OF THE INTRINSIC VALUE OF THE SHARE DIVIDEND DISCOUNT MODEL (DDM)**

In the case of valuation of BAL, the dividend discount model is inappropriate. Although the total dividends paid by the company show a rising trend, the yearly growth is not steady. While in FY 95, the total dividends grew by 104.72 percent, in FY 96 and FY 97 the growth rate was 29.16 percent and 10 percent respectively. DDM assumes that there is constant growth in dividends and EPS. Since this is not the case with BAL, the DDM approach has been excluded in the final valuation model.

**PRICE-EARNING MODEL**

The price earning ratio of the leading players rose in March 1998, as compared to March 1997. However, as compared to its peers, BAL has a low P/E ratio. While BAL recorded a 2 percentage point growth in March, 98. LML's P/E (Price/Earning) ratio rose from 8.86 to 25.93 Considering the fact that LML is BAL's main competitor in the scooters market, the indication of the P/E movement does not seem to favour the company. Applying the P/E of 17.33 to the projected EPS, the intrinsic value for FY 98 is estimated at Rs. 559.59, and for FY 99, and at Rs. 719.89.
**Table No. 7**

<table>
<thead>
<tr>
<th></th>
<th>EPS Rs.</th>
<th>P/E</th>
<th>Intrinsic value Rs.</th>
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<tr>
<td>FY 98</td>
<td>32.29</td>
<td>17.33</td>
<td>559.59</td>
</tr>
<tr>
<td>FY 99</td>
<td>41.54</td>
<td>17.33</td>
<td>719.89</td>
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**VALUATION MODEL**

For calculation of the intrinsic value, the valuation model assigns weights to the values arrived at by using the price earning model, net asset value (NAV) and the current market price (MPS). As mentioned earlier, the DDM model has been excluded due to its irrelevance. The book value per share is taken as the NAV. (Net Asset Value).

On the three models considered in the final valuation model, NAV has been assigned the least weight on the other hand, the P/E model has been assigned 60 percent weightage, which is higher as compared to the weight assigned in the Hindalco valuation model. The higher weight is assigned considering the fact that BAL is losing market share to LML, which is reflected in the trend of the P/E movement. Another reason for higher weightage to P/E is that it is a better indicator of the future, while NAV and market price reflect more of the past. Since BAL is aiming for a higher market share in future, P/E has been assigned higher weight. The current market price has been assigned a weight of 30 percent. The valuation model give a final value of Rs. 535.15 which is lesser than the current market price.

[June 1998 The Analyst]
THE HERO GROUP

HISTORY COMPANIES PROFILE AND BACKGROUND

Hero group of Companies born nearly 40 years ago, a manufacturer of Bicycle components. Hero has today grown into a multifaceted gaint with wide ranging interests. The mission of Hero Group is to provide high quality and economic means of transport to common man to this end the hero group has diversified in to the Manufacture of motor cycle, step through motorcycles, Mopeds, state of the art bicycles exercise bikes and auto ancillaries.

GROUP HIGHLIGHTS

1. Largest Manufacturers of bicycles in the world (Guinness Book of world Records).

2. Largest manufacturer of Motorcycles in India (in collaboration with Honda, Japan).

3. Largest Exporter of step through motorcycles (technology from Steyr Daimler Puch, Austria).

4. Having total manpower strength 13000.

Hero is well known name in Indian corporate sector, particularly in two wheeler market. This well known group of Ludhiana from House of Munjal's is not only one of the largest corporate house of Punjab but of India.
Hero Motor is a division of Majestic Auto Ltd. of Ludhiana which manufacturers mopeds, exercise bikes etc. Hero Motor's production unit is placed at Dadri (Ghaziabad) U.P. In this unit, A step through bike Hero Puch's various models are being manufactured. This bike is well accepted in market, a short period of just 6 years.

This company has started its production in 1988-89 with the production of 6000 vehicles only and has reached the peak of 60,000 vehicles in 1992-93. It is also the largest exported bike of India. It is being exported in more than 45 countries all around the world, technology of Hero Puch is transferred by Steyr Daimler Puch of Austria. Hero Motor is one of the fastest growing light two wheeler company with having almost 17 percent market share in 1992-93.

Quality is a way of life at Hero Motors, and it is considered as a continuous process, not a destination for continuous improving of quality, the company has introduced well tested Japanese systems such as Total quality management and Kaizen voluntary improvement teams and quality circles in each department are now well established in company's day to day working, and are giving very positive results. Company is also using elaborated computersied systems and JIT (Just in Time) processes which are fast taking in towards zero inventory levels. It is apparent from export of company, which is contributing significantly in total turnover of Rs. 109 crores in 1992-93. Hero Motor is providing step-through
motorcycles in India with best technology available from Steyr Daimler Puch of Austria. This technology would give its customers the power of 4.15 bhp along with 91 kilometers for the litre. This combination of power and milage which is very rare in light two wheelers. It is the U.S.P. (Unique Selling Proposition) for selling the product More over, it is most environment friendly bike on Indian roads. All the three models produced by company namely. Hero Puch standard, Hero Puch Shakti, Hero Puch Turbo sport are amongst the least polluting two wheelers in India.
Piaggio established its presence in the Indian two wheeler market, in its collaboration with LML, by bringing in a number of models of its famous brand of scooters. In fact the various iteration on the same base model constitute a good example of progressive evolution.

The LML Ltd. started on 1972 in Kanpur, its Registered office is C-3, Panki Industrial Estate, Kanpur and Administrative office in Mumbai. Regional office in New Delhi and thus is a so many sales offices like Mumbai, Banglore, Calcutta and Ahmedabad.

Actually, LML Ltd. has been on the ascendant for quite some time now and is slowly but surely inching its way to the top. The reason are very simple. every one knows them, but LML is actually applying them.

The reasons are :

[a] Treat the customer like a king

[b] Innovate

LML is doing both with a little help from Piaggio of Italy as well as from its dealers. The LML range in 100cc form was first launched in India in 1984, though manufactured by Piaggio which also makes manufactured the original version of the Bajaj Scooter, the LML Scooters is different.
LML has come a long way from its beginnings in 1982 when scooters were synonymous with Bajaj. It was said that the premium from one mature allotment could get you two scooters, and the average waiting period was nearly five years. While it was an enviable situation for the monolith, it also meant that there was a huge market waiting to be tapped. Precisely, the idea with which LML decided to enter the fray.

Everything seemed to be in place. LML had the technical assistance of Piaggio to manufacture 100cc scooters, (Bajaj's scooters were also based on Piaggio's previous model) and the financial muscle of its proprietors, the Singhanias. And the company did notch up booking worth Rs. 100 crore.

But what LML failed to take into account was that it was not a Bajaj scooter that people identified with but with, Bajaj's 150cc scooter that gave wheels to the great Indian middle class. The Indian psyche could not accept the fact that a 100cc scooter, no matter how superior in technology, could match up with a 150cc scooter. Though LML suffered greatly, it went in for another agreement with Piaggio to manufacture 150cc scooters, only to fail again because of poor quality imported parts and ineffective advertising.

Things went from bad to worse for LML as it bled profusely from its losses. The winning formula of targeting Bajaj's consumers in
waiting did not seem to be working until the company realised that the golden egg did not lie in Bajaj's pil; rather, it lay removed from it.

In 1994, LML went in for a 24 percent equity participation by Piaggio, equal to the Singhanias. With this, Piaggio's commitment to the company increased and a lot more contemporary models were introduced. At the same time, a decision was taken to increase production from 3,00,000 scooters to 4,50,000 in the first phase of expansion, with an investment of Rs. 250 crore. The next phase, by the end of this year, has LML planning to increase production to 6,00,000 scooters, with another investment of Rs. 250 crore.

While the current LML portfolio includes four basic models in 150cc and one in 125cc segment (another niche created by LML the brand is called Sensation and was launched just about a month ago), the company plans to increase its spread to include models with 63cc, 75cc and 100cc capacities (two in the last segment). A 125cc, four-stroke motorcycle will also hit the market towards the end of this year, among the three four-stroke motorcycles slated for the calendar year.
**DAEWOO MOTORS INDIA LIMITED (DMIL)**

Daewoo motors' small car titled Matiz, was launched in Seoul, Korea, on March 27, 1998. DMIL is expected to start trial production of the Matiz in August 1998. Matiz is expected to be priced competitively on account of the cost advantages arising from increased indigenisation at its Surajpur plant in the State of Uttar Pradesh. In order to increase its existing capacity of 72,000 cars to 1,50,000 cars by 1999, the company has decided to raise debt amounting to Rs. 2 bn. and expand its equity by Rs. 1 bn. thereby taking the total committed to over Rs. 5.7 bn. A large portion of these investments is expected to made during 1998-99.

**DAEWOO'S DILEMMA**

Daewoo Motors has a worldwide reputation for aggressive pricing. In Europe it has won market share by pricing its cars below the competition partly because a Daewoo produces not rated as highly as a Toyota or a Volkswagen. This track record engendered expectations about the pricing of the Matiz the 796 cc small car it launched in India recently. But the company failed to live up to its reputation. On 4 November Daewoo Motors India Ltd (DMIL), a 92 percent subsidiary of Daewoo Corporation surprised the market by pricing the Matiz at Rs.3.55 lakh (showroom price, Delhi). This is a lakh more than the air conditioned version of the Maruti 800 and slightly more than the Zen, which has a 999cc engine.
In September 1998 Hyundai Motors India Ltd (HMIL) kicked off a price war by pricing the base model of the 999cc Santro at Rs. 2.99 lakh while two other versions are priced at Rs. 3.49 and Rs. 3.69 lakh. The basic version was targeted at buyers of the Maruti 800AC, and the other versions were aimed at the Zen. Indica, the much awaited small car from the Tata stable, is expected to hit the market in December. One version is widely expected to be priced Rs. 2.5 lakh. Industry analysts say that Daewoo might be forced to slash its prices if sales don't pick up and that it has made contingency plans to launch two other models, one priced at around Rs.3 lakh and a non-AC version at Rs. 2.7 lakh. In that case the earlier announcement that there would be three models might turn out to be accurate after all. "They are probably creaming the market to see how much they can sell. After that they" will either cut prices or introduce new models," says a source.

**THE FIGHT TO BE FIRST**

The Korean chaebol have been engaged in a 'war of launches' though September and October. Hyundai's 23rd September price announcement led to one by Daewoo that it would launch three versions of the Matiz. This turned out to be somewhat premature-whatever Daewoo's future plans because it opted to launch only one model, supposedly because its market research had led it to the conclusion that buyers of small cars wanted only the best. The Matiz Deluxe, as it is
called is air-conditioned and has power windows and central locking. The cheapest version of the Santro is air-conditioned, while the two versions have power windows and central locking. The most expensive version has power steering.

The flurry of announcements continued through October. On 8th October, when HMIL opened bookings for the Santro, Daewoo commenced commercial production of the Matiz. It announced that bookings would begin on 18th October and would stop after the first 5,000. As it transpired the actual bookings are stated to begin on 12th November and have been scaled down to a more modest 3,000. Preference is to be given to Cielo owners (1,500) and women customers (500). The Matiz will be sold through 102 dealerships in 86 cities.

The two chaebol, bitter rivals in Korea and in the international market were desperately keen to be the first to launch. They have also been engaged in a game of one-upmanship. Journalists who attended Daewoo's press conferences have become familiar with graphics showing the Matiz outselling the Hyundai Atoz in South Korea by a wide margin. However, the Atoz is a 800cc car in that country. Also, Hyundai's production was disrupted by a two-month strike this summer. Regardless of the Korean market, there's little doubt that Hyundai has won the contest, to launch first in India. Hyundai had garnered 15,470 bookings for the Santro by 12th October. Deliveries commenced on the 28th of the
month and HMIL had delivered 1,300 Santros by 10th November according to its marketing director B.V.R. Subbu. He expects to deliver 3,200 cars by the end of November and the entire lot by the end of January. "After clearing the bookings we will go on free sale" he says. Around 50 per cent of the Santro's bookings are for the basic version while rest is split between the two deluxe versions.

Before Daewoo's surprise price announcement, the Matiz was bracketed with the Maruti 800 while the Santro was pitted against the Zen. That's a comparison which drives Daewoo Motors otherwise affable managing director. Shiv Gopal Awasthi, to near apoplexy, "I don't know how the Matiz can be compared with the 800 considering its vastly superior features " he says its German- built engine generates 52 bhp (the Maruti 800's engine generates 39.5 bhp). The greater engine power is central to Daewoo's strategy of pitting the Matiz against the Zen rather than the 800. For good measure, Awasthi also claims to be baffled at comparisons with the Zen.

**RESEGMENTING THE MARKET**

At this moment, though the sense of bafflement if any is felt by the Matiz's prospective customers. Daewoo will need to doctor its spin of it wants to persuade the Indian customer to buy an 800cc car which costs more than the Zen. "We have done extensive market research on what people expect of an entry-level car. We will redefine the segment.
While the Maruti 800 segment is shrinking the Zen segment is growing very fast," claims Awasthi. Recall that Daewoo had also claimed to have carried out extensive market research when it launched the Cielo- the first car in the so called midsize segment in 1995. It had said it would sell 72,000 cars per year, supposedly because buyers of the Maruti 800 and Zen were buying such cars because of the absence of any alternative. In the event the total midsize segment was stagnant at 50,000 units in 1996-97 and 1998-99.

Awasthi's arguments justifying the pricing strategy for the Matiz are startlingly similar to pronouncements by from senior Daewoo officials including. Awasthi himself of a boom in the midsize-car segment which never happened. It is certainly true that there has been a slowdown in the Maruti 800 segment but the absolute size of that segment remains much larger than that of the Zen. In April-October 1998, Maruti 800's sold 97,399 compared to 40,845 Zens. There is no doubt that the growth rate has been slowing down. MUL sold 1.84 lakh 800's in 1996-97 which rose marginally in 1997-98. In contrast the number of Zens sold rose from 41,772 to 60,727, a much faster rate of growth. Till recently the Zen segment consisted only of Zen sales since its only competitor, the Fiat Uno, was unable to pose much of a threat. Sales of the Uno have only recently started to pick up after Fiat took over premier Automobiles and total 5,219 in April-October 1998. Fiat expects to sell
12,000 Unos by March 1999. With sales of the Zen having crossed 40,000 in the first seven months of this year, the size of the segment can be expected to exceed one lakh. And it will grow with the entry of the Santro and the Indica. Even so the absolute size of the 800 segment remains much larger and the recent slowdown in the sales of the 800 was probably in anticipation of a new offering in the small car segment.

Daewoo's decision against aggressive pricing seems to have a lot to do with the heavy losses it has incurred in the Indian market. It lost Rs. 35.14 crore in the six months ended March 1998. Sales were worth Rs. 122.07 crore compared to Rs. 269.64 crore in the six months ended March 1997, on account of a drop in volumes due to the downturn in the midsize car segment. It sold 16,866 Cielos in 1996-97. This declined to just around 10,000 in 1997-98. Huge price cuts, announced in January 1998, failed to provide more than a temporary boost. The current fiscal year has failed to reverse the trend. In April-October 1998 only 4,419 Cielos were sold compared to 6,247 in the corresponding period last year.

These modest figures are in sharp contrast to the size of Daewoo's investments in its Surajpur factory near Delhi-Rs. 2,800 crore so far with a further $50 million (around Rs. 220 crore at current exchange rates tied up for the Matiz project. "We have enough assembly line and paint shop capacity to make 72,000 cars. Besides we have the
capacity to make three lakh engines and transaxles," says Awasthi. However, these huge capacities largely unused. With the slump in the midsize segment unlikely to end any time soon, Daewoo was banking on the Matiz to generate larger volumes. Here it faced a genuine dilemma. While volumes would depend on price, Daewoo's ability to subsidies had been reduced by the losses it had already in the Indian market. Its parent's ability to subsidies has also been affected by the East Asian crisis. These factors probably prompted Daewoo's decision to opt for a pricing strategy which allowed a reasonable margin.

Perhaps in anticipation of a dull domestic market, the Matiz will be exported out of India in large volumes. "Half of the production will be exported." says Awasthi. India is slated to become the second production base for the Matiz after South Korea. There is little doubt about Daewoo's commitment to the Indian market. However, the pricing strategy for the Matiz is unlikely to result in the kind of volumes it needs. For the present, market leader Maruti's competition will consist of only Hyundai and Telco.

**DAEWOO LAUNCHES MID-SIZE BUSES**

Daewoo Motors India Ltd (DMIL) to day entered the commercial vehicle segment by launching two midsize buses. The buses which have been christened as 'Royale' and 'Caravan' are priced at Rs. 8.08 lakh and Rs. 7.60 lakh, respectively (Ex-showroom in Delhi),
and is the second product introduction from the Korean manufacturer which launched the maidsize car, Cielo in 1995.

Speaking on the occasion of the launch of the buses, Mr S.G. Awasthi, Managing director, Daewoo Motors said the company is targetting an annual production of 1,200 buses to cater to both domestic and export markets.

Export potential in markets like South Africa, Uganda, Mozambique, Zimbabwe, Sri Lanka and Bangladesh is already being explored for this purpose. Apart from completely built units (CBU), Daewoo will for the first time export CKD kits to African countries, Mr. Awasthi said. The commercial vehicle division of the company at Surajpur has a capacity to manufacture 15,000 buses.

Mr. Awasthi said the company was targetting 15 percent of the bus market share within one year. Both the buses are equipped with turbo charged engines and has an indigenisation level of 92 percent, he said.

He said the recession that has gripped the automobile industry, particularly the commercial vehicle segment, would be over soon and the bus segment would grow at the rate of ten percent annually.

Mr. Awasthi said the company was also working on light commercial trucks and multi utility vehicles and would unveil them soon. "This is part of our original strategy to broadbase the Daewoo product
range in India which was great potential for commercial vehicles both for domestic and export markets," he said.

Mr. Awasthi also said Daewoo would launch its small car 'Matiz' as scheduled and dismissed as "baseless and ridiculous" reports casting doubts about the car's safety. He said the 796cc car would be launched in the country as scheduled and its reported delay was a "tactical one." He said reports published regarding the safety of Matiz are a absolutely baseless.

**THE PRODUCT**

One manufacturer who can leverage its experience at building small cars is Daewoo. While Santro is Hyundai's second small car (the Atos was first), the flatter and compact Italy designed Matiz is Daewoo's third. Unlike the Santro, however the Matiz runs on the older Tico-Daewoo's first small car-engine although it has been modified at Daewoo's British Technical Centre. Neither is the Matiz the most powerful; it has a 796cc engine, which is comparable to Maruti 800's but generates more power at 52 bhp as against the latter's 39 bhp.

But like the Santro and unlike the Maruti 800 it employs a fuel-efficient MPFI system than can stretch a litre of petrol to 16 km. Matiz's only handicap is that it has 3 cylinders compared to Santro's 4, which, while maintaining parity in performance and power pinch smoothness. This could, however, make the Matiz slightly more fuel-
efficient. Ideally, if the Matiz is priced about Rs. 20,000 to Rs. 30,000 lower than the Santro's Rs. 2.99 lakh it could well become an excellent Value-For-Money (VFM) proposition.

THE POSITIONING

Billed the "bigsmall wonder," the Matiz conforms to the aesthetic taste of customers. Daewoo's creation looks like more a fusion of the Maruti 800 and the Zen. What might blur its differentiation pitch is the fact that it is a Korean car with Japanese pretensions and loosely wedged between the Maruti 800 and the Zen with a likely sticker-price between Rs. 2.50 lakh and Rs. 3.50 lakh. Points out Mr. S.G. Awasthi, 54. CEO, Daewoo Motors India: "We are creating a new category between the Maruti 800 and the Zen. It will be our effort to gain marketshares from both ends." While a technology-conscious customer would easily prefer the Santro to the Matiz, she may pick the Matiz over the Maruti 800. The product's sticker price could clearly, be the key to its success in the sub-compact segment.

THE DOWNSTREAM STRATEGY

Realizing that selling in a crowded market will not be easy, Daewoo is pinning its hopes on direct marketing. It has tied up with 6 non banking finance companies for car finance schemes, and set up finance counters at each of its 110 dealerships. Simultaneously, the South Korean
manufacturer is building distribution muscle in smaller cities and semi-urban areas which, it believes, will drive growth tomorrow.

**THE UPSTREAM STRATEGY**

When Daewoo entered India in 1993, it had looked at the country as a global sourcing-base. Now it turns out that its indigeniuation efforts—particularly of engines—may have been wasted on the wrong car. For mid car sales may not pick up for another 2 years. Preventing optimum utilization of the engine shop. To liquidate the unforeseen surplus, Daewoo is exporting cylinder blocks to its plants in Eastern Europe. But that doesn't quite help its key product, the Matiz.

What could throw a spanner in the Matiz's works is the low level of localization. Perceived as a direct competitor to the Maruti 800 it is under tremendous pressure to match the minis price line. But Daewoo may not be able to achieve that without hurting its bottom line. A weak won will make imports—which account for 60 percent of its cost of production cheaper, but it is unlikely to. Neutralize Maruti Udyog and Hyundai's localization advantage or guarantee long-term competitiveness.

**THE SURVIVAL PROSPECTS**

The first transnational car manufacture of a liberalized India, Daewoo is driving on a wing and hope. In has Rs. 2,700 crore of investments on ground at Shahjahanpur (Uttar Pradesh), but only losses to write home about. Its flagship product, the 1,498-cc Cielo has been hit
hard by the recession in the luxury segment. Its sales of 16,866 units in 1996-97 slumped to 10,108 in 1997-98, and in the first 4 months of this fiscal, if managed just 3,404.

Daewoo's hopes of turning the corner now hinge on the Matiz, the 796cc challenger to the Maruti 800. Sure, its recent launch, the City Bus, may add some revenues, but with heavy commercial vehicle sales reporting negative growth, the bus is more likely to be a drag on its resources. Daewoo's hopes for the Matiz hinge on the value conscious-not the price-sensitive-customer. Agrees Awasthi "We believe people are as value sensitive as they are price-driven. We will provide them the best value for our category."So Daewoo expects the Matiz to sell 40,000 and 60,000 cars, respectively, in years 1 and 2. But without a localisation level of at least 70 percent which Daewoo hopes to reach in Year two to begin with the Matiz's future hinges on the value of the won. In any case sales of 60,000 will be difficult in a market with as many as 4 small cars. Agrees Mr.R. Santhanman, 44 the Executive Vice-president of the Rs. 1,304 crore Hindustan Motors "Car manufacturer will have to carve out competitive niches in order to survive".
MARUTI UDYOG LIMITED

In recent years, the Government of India (GOI) and Suzuki Motor Corporation (SMC) had developed differences regarding the company's expansion plan, the indigenisation schedule and over the appointment of certain key personnel. However the differences have been recently resolved and this is expected to facilitate introduction of newer and transfer of technology.

MUL's total income during 1997-98 increased to Rs. 84.5 bn. registering an increase of 6.3 percent over 1996-97 following the sale of 342,826 vehicles. All the models except MUL's Esteem and 1000cc models registered in increase in sales over the previous year. While MUL's net profits during 1997-98 rose to Rs. 6.5 bn registering an increase of 27.6 percent the company's net margins increased from 10.2 in 1996-97 to 11.5 percent in 1997-98. The increase in margins has been achieved following savings of Rs. 2.6 bn derived from the adoption of various cost cutting measures. While Rs. 750 mn. were saved following the adoption of Kaizen manufacturing technology and implementation of suggestions from employees, savings of Rs. 1 bn. were derived from the increased localization in different car models. The interest cost reduction due to lower inventories and input costs reduction by the company's vendors resulted in savings of Rs. 200 mn. and Rs. 600 mn. respectively. At the end of 1997-98, MUL also became a debt-free company. MUL's ongoing expansion at its Gurgaon facility at an estimated cost of Rs.
12bn. would add 100,000 cars to the company's existing capacity of 250,000 cars p.a. The expanded capacities are expected to be commissioned in March 1999.

**THE PRODUCTS**

In the last 14 years that the Maruti 800 has been around, its perception has been diluted form being a popular car to that of just a four wheeler. The shift has been rapid in the last 5 years because the Zen filled a much felt vacuum between the Maruti 800 and the Maruti 1000. Today, value to an enlightened customer has come to mean a technology like the Zen's. A pointer while the Maruti 800's sales growth is slowing down, that the Zen is clipping at a healthy 45 percent per annum. Points out Jagdish Khattar, 53, Joint Managing Director, Maruti Udyog. "The demand for the Zen is so strong that we have to free out capacities to produce it".

Maruti Udyog's Achilles Heel is however, technology. While the Maruti 800 embodied a revolutionary technology when it was introduced in 1984, that's hardly the case today. The Zen one of the most popular jelly-bean cars, still rides on a carburetor system. In India Suzuki's strategy has been limited to effecting periodic cosmetic changes in its cars. The heat of competition is bound to make these short comings visible.

**THE POSITIONING**

To counter competition Maruti Udyog aim to straddle the small car price spectrum form Rs. 1.97 lakh (the price of the Maruti Omni
E) to Rs. 4.96 lakh (the price of the loaded Zen D). Apart form the 600 to 1,000 cc range Wagon R, which is stated to be launched by 2000, Maruti Udyog will introduce 2 models between the Maruti 800 and the Zen to price out rival labels. The company's future offering will differentiated along price-lines, not just on engine capacity. points out Khatkar. "Our eventual strategy is to have models at price-gaps of Rs. 50,000." Agrees Santhanam."The splitting up of the small-car spectrum is inevitable. And car manufacturers are realizing that."

**THE DOWNSTREAM STRATEGY**

During the last 14 years, Maruti Udyog has systematically built a 140-dealer strong distribution and service network, which sets 5 products-the Maruti 800, the Omni, the Zen, the Gypsy, and the Esteem. The company's marketing structure has almost become a one-stop car shop. Agrees Sripad Bhat, 35 Assistant Director, Association of Indian automobile Manufacturers (AIAM) "Undoubtedly, Maruti Udyog offers the widest choice to customers today."The manufacturer has bolstered the enviable infrastructure by setting up car-financing facilities-through tie-ups with Citibank and Countrywide Finance, to spur sales. Indeed, half the cars sold by Maruti Udyog in 1997-98 were financed.

**THE UPSTREAM STRATEGY**

Standing atop a fully-depreciated plant, churning out 3.75 lakh cars a yeas. Maruti Udyog has the potential to make mincemeat of the competition. The reason? Costs There's simply no other car-manufacturer in India today which can match Maruti Udyog's economies
across the value chain. It has 365 vendors, 140 dealers, and 1,150 workshops in 460 cities. New models then can be rolled out quickly and cost effectively.

**THE SURVIVAL PROSPECTS**

Mauti Udyog's success hinges on its ability to upset its competitors sub-compact strategies. Its parent has tremendous cost-cutting capability, a critical attribute in the tough Japanese market, and one that will ensure that rivals cannot outprice Maruti Udyog. For instance, the cost of components for the Matiz could work cut to Rs. 1.50 lakh per car, thanks to imports of Rs. 80,000 and locally-sourced materials worth Rs. 70,000 Factor in a conversion cost of Rs. 25,000 interest and depreciation charges of another Rs. 20,000, excise duty of 40 percent (Rs.78,000) and sales tax of 10 percent (Rs. 27,300) and the sticker-price works out to nearly Rs. 3 lakh without a margin. TELCO's plight is similar, although the company will have a local content of nearly 80 per cent to begin with.

If the global economic situation worsens, Maruti Udyog will find exports—which account for 7.88 percent of the manufacture's sales—difficult, and, consequently, throw all its weight behind domestic sales. That will spell bad news for its competitors, who may not be able to endure in a price war. For, their cost of capital per car is substantially higher. Hyundai's for instance is Rs. 1.77 lakh compared to Maruti Udyog's Rs. 48,994 The marketleader will leverage every conceivable strength that it has to elbow the competition out of the market.
HINDUSTAN MOTORS LIMITED

Hindustan Motors Limited (HML) has announced 3.3 percent growth net sales to Rs. 12.98 bn. while net profit has stagnated at Rs. 0.39 bn. for the financial year ending March, 1998. The poor performance of the car industry in 1997-98 has impacted HML also, which has recorded a 12 percent fall in its sales volumes. The company has been continuously losing market share since the entry of MUL in 1984-85 and now mainly caters to the institutional and taxi markets. HML has reported a marginal increase in net sales despite lower car sales volume, primarily due to the improved performance of its earth moving equipment division, which contributed to over 20 percent of the company's turnover. Despite a sharp increase of 63 percent in other income, net profits have stagnated at the previous year's level of Rs. 0.39 bn.

The Ambassador, which has a strong market share in Calcutta, is now being faced with competition for the Padmini 137 D, from PAL, which is being now used by taxi operators. The Padmini enjoys a price advantage over the Ambassador of around Rs. 20,000 in Calcutta and Rs. 67,000 in Mumbai on account of a disparity in the sales and Octroi tax levied on the two cars.

The Rs. 3.2 bn Lancer project to manufacture the Lancer cars in being set up in Tamil Nadu, with an initial capacity of 30,000 units. The company plans to reach 50 percent indigenisation target by March 1999 and an additional 20 percent by March 2000. HML has tied up with several vendors to supply component parts for the company's Lancer MG41 model, being manufactured on collaboration with Mitsubishi of Japan.
PREMIER AUTOMOBILES LIMITED (PAL)

PAL has decided to transfer its passenger car business to a group company, PAL Cooper Limited. This in turn is proposed to be transformed into a joint venture (JV) with Fiat India Automobiles Private Limited (FIAL), the Indian subsidiary of the Italian major, Fiat Auto. As per the JV agreement, PAL would transfer its plant at Kurla, with assets estimated at Rs. 5 bn. and liabilities at Rs. 4.6 bn., as its contribution towards its 49 percent stake in the JV. Subsequent to the acquisition of the 51 percent stake by FIAL in PCL, the company would become a JV. The JV is expected to manufacture approximately 3,000 Uno models per month in addition to manufacturing PAL's Premier Padmini's diesel model. The Kurla plant is being revamped at a total cost of $150 mn. for the production of the Uno model. FIAL proposes to make a total investment of $1,050 mn. over the next few years in addition to its committed investment of Rs. 25 bn. PAL also plans to Commission a greenfield plant to manufacture gear boxes and critical engine components for the Uno and Palio models. The project cost for the plant, with a capacity to manufacture 80,000-100,000 gear transmission systems and engine components, has been estimated at Rs. 2-3 bn. The proposed project is expected to be set up at the Pune plant of PAL's machine tools division and may supply components to Fiat's global
sourcing network. PAL has decided to stop production of the petrol version of its Premier Padmini model following declining sales.

**Smooth Exit**

For years now, disturbed industrial relations at Premier Automobiles Ltd's (PAL's) sprawling 90-acre plant have been the norm. Particularly in the past two decades, the might of slain trade union leader Datta Samant's Kamgar Aghadi Sena has prevailed. Two years back the PAL management, stung by the union's alleged go slow tactics, declared a lockout. Dragging on for six months this culminated in a weakening of Samant's former might as most workers come back to work.

A voluntary retirement scheme (VRS), implemented successfully four years ago brought down workforce by nearly 3,000. However, turbulence in the country's car segment took its toll on the company. Early this year PAL—which at one point was India's most successful car maker—sold all its manufacturing facilities to a new company Ind Auto Pvt. Ltd, set up its collaborator Fiat. The Italian car giant has a 51 percent stake in Ind Auto, while PAL has the rest. Today the plant is witnessing a calm it rarely witnessed before, helped no doubt by the fact that the company is negotiating with an internal union, the Premier Kamgar Ekta Sanghatana formed by those workers who disobeyed Samant's diktat and returned to work two years ago.
These amicable industrial relations have helped Ind Auto a great deal. It has been able to implement one of the most successful VRS compared to any other Indian company in recent times. The scheme, open during the 27 July to 22 September period, was availed of by 1,050 workers. This figure was just 50 short of the management's own target of reducing workforce by about a third. The scheme's success was no doubt due to the generous severance package a lumpsum payment ranging from Rs.5 lakh depending on the tenure of service. Of course, the regular dues on leaving service like provident fund and gratuity boosted the retiring worker's cash in hand. The VRS was also supported by marketing gimmicks such as early bird incentives of Rs 12,000, 14-inch TVS on occasion, and tax and investment counselling by Marathi-speaking persons.

Says Mr. Gianni Ravina, executive director, Ind-Auto and managing director of Fiat India Automobiles Ltd (FIAL): "VRS is the only option for companies who want to reduce flab in India. In order to modernize and follow international standards of manufacturing we have brought $200 million to the Kurla plant. This means that less people will be needed." What makes matters worse for the Kurla plant is that even though PAL started outsourcing from vendors a decade ago the employees stayed on and were usually redeployed. Even without Fiat's recent investment and automation drive it was an overstuffed plant by any
standards. As Ravina points out, the new state-of-the-art fully automated paint shop needs only one-third of the previous workforce.

The July 1998 scheme was open to all officers, staff and workmen of Ind Auto in the Kurla factory and six branches who had completed 10 years of service or were 40 years old. The compensation amount was worked out in two ways. For those who had not completed 50 years of age as on 30 June, 1998, compensation would be the higher of the two-calculated at the rate of three month's current salary for each completed year of service or 65 percent of current salary multiplied by the balance months of service left before the date of the employee's retirement on superannuating. Eligible employees who had completed the age of 50 years as on 30 June 1998, would however, be entitled to salary for remaining months till the age of retirement on superannuating. These employees would also receive additional compensation ranging from Rs 5,000 to Rs 50,000.

Employees took away amounts ranging from Rs 8 lakh to Rs 13 lakh and cost the company Rs 44 crore. But the company sees it as a small price to pay for accelerating their assembly and manufacturing operations in India. Fiat's original plan was to carry out much of its manufacturing at a large new greenfield plant it is setting up at Ranjangaon outside Pune. But developments of the past few months at Ind Auto means that it can now go easy on new facility and concentrate
much of its operations in Kurla, where the company has already invested close to Rs 800 crore in upgrading. Next year the company plans to meet a production schedule of 16,000 Unos and 10,000 Piala and Siena models. Company sources say the plant has a capacity of 60,000 cars a year, which is probably what Fiat is hoping to sell in India over the next two years. So in a sense, the VRS has indeed been able to save PAL's Kurla plant from extinction.
HYUNDAI MOTOR INDIA LIMITED (HMIL)

Trial production of HMIL's 999-cc small car, Santro, is scheduled to commence at the Irungattukottai car factory, near Chennai by the end of May 1998, and commercial production in November 1998. The company's total investment in the plant, which is Hyundai's largest integrated plant outside Korea, has been estimated at $212.4 mn. In the first phase, the company plans to invest Rs. 23 bn. in building a capacity of 0.12mn. cars p.a. India is expected to serve as an export base for Hyundai's small cars. The company has finalized all the component supplier for its Santro model and proposes to achieve 80 percent indigenisation level in the first year. HMIL plans to produce 10,000 Santros in the first year and proposes to post a turnover of Rs. 2 bn. In addition, Hyundai plans to launch its advance Accent model with 1,300-1,500cc engines in Indian by August 1999. Although, HMIL would manufacture approximately 70,000-80,000 Santros and 40,000-50,000 Accents, the production mix is expected to depend upon the market demand for the two models.

THE PRODUCT

In the Santro, nicknamed the Tall Boy because of its high ground clearance of 172 mm, Hyundai has a perfect answer to the Zen. The Tall Boy packs a powerful 999-cc 4-cylinder Epsilon engine under its bonnet, churning out 55 bhp; its Multi-Point Fuel injections (MPFI)
system - the Zen still uses a carburetor-yields a fuel economy of 16 km to a litre. From the design, it is obvious that Hyundai has taken a lot of pains to tailor the car to Indian requirements. While he Santro scores on drivability, smoothness, and the feel factor in terms of power delivery, it is at par with the Matiz.

But, fears Dilip Chhabria 44, a Mumbai based car designer; "The Santro's drawback is its design and styling. It is not the cleanest of designs, and there is a chance that it will date very fast." Despite (or, perhaps, because of) its unconventional look- although it is a hatchback, much like the Zen and the Flat Uno- the Santro is roomier combining the spaciousness of a multipurpose vehicle and the everyday functionality of a family car. Points out Mr. Y.S. Kim, 56, Managing Director Hyundai Motor India. "Tall Boy is now the design norm worldwide. India cannot be an exception."

**THE POSITIONING**

From the day Hyundai made a midcourse correction, dumping the 1,495-cc Accent in favour of a smaller car, it was clear that its offering had to be a complete family car. Yet, given its relative obscurity in the Indian market, it had to offer tangible differentiators. That philosophy has been translated into a superior engine and a spacious interior while air-conditioning has become a standard feature in all the 5 versions of the Santro.
The Tall Boy sums up its creator's marketing strategy: load your car with unique features, but hold the priceline down. Priced between Rs 2.96 lakh (the basic variant which comes with air conditioning) and Rs 3.66 lakh (the loaded model which sports a power steering central-locking and a defogger), the Santro is targeted at the Maruti 800- user who desires to graduate to a superior vehicle. So, it competes directly with the Zen whose 3 models are priced between Rs 3.46 lakh and Rs 4.96 lakh. Although the Zen accounts for 25 percent of the small cars sold, it is present in a segment that is growing at 45 percent per annum. Explains Mr. A.P. Gandhi, 60. President, Hyundai Motor India. "India is in the initial stages of motorizations and this juncture in its evolution favours the small car."

**THE DOWNSTREAM STRATEGY**

Hyundai does not have the advantage of experience, but that is not tempering its aggression. At present, the South Korean manufacturer has set up a network of 70 dealers besides the exclusive Hyundai Plazas in Chennai, Delhi and Mumbai. To preempt breakaways, should sales belie expectations. Hyundai is not forcing its dealers to make huge investments; it is lowering their capital burden by centralizing equipment purchases, leading to cost savings of Rs 22 lakh per dealer. What might prove more helpful, however, is Hyundai's unique telescoping finance scheme, where annual repayments will increase every
year, instead of staying the same throughout the tenure. The idea is to increase the level of affordability by targeting that section of consumer whose members expect their income and by, extension, their repayment capacity to increase as they move up the career ladder or boost their businesses.

**THE UPSTREAM STRATEGY**

Its Rs 2,300-crore 1.30-lakh-unit-capacity manufacturing facility at Sripemambdor in Tamil Nadu is Hyundai's largest integrated unit outside South Korea Emphasises Mong Gyung Chung 36, Chairman, Hyundai Motor. "India is going to be out sourcing base of engine components." Since Hyundai maker its own engines and transmissions, its costs are more controllable than those of, say, Daewoo, which will be importing Semi-Knocked Down Kits for its Matiz. With an army of 60 vendors Hyundai has already achieved a alocalisation level of 70 percent compared to Daewoo's 45 per cent. Even Maruti Udyog had a localization level of 25 percent when it launched the 800 in 1983. Agrees K. Mahesh, the CEO of the Rs. 60-crore Sundaram Brake Linings; "Localisation is critical for cost competitiveness and long-term strategy.

**THE SURVIVAL PROSPECTS**

Despite its clear-cut vision, Hyundai's energies are focused on tactical breakthroughs sales of 10,000, 65,000 and 1.10 lakh units. respectively in 1998-99, 1999-2000 and 2000-01. Is that likely? Points
out Sangeeta Mehta 28, Analyst, Kotak Securities "A lot will depend on how (Hyundai's) competitors price their products "Given an average price-realisation per car of Rs. 3 lakh and sales of 35,000 in Year two which is less than the company's projection Hyundai's revenues would be Rs. 1,050 crore.

Assuming an operating margin of Rs. 50,000 per car, the company's operating profits should up to Rs. 175 crore. Given Hyundai's debt-equity ratio of 1.19:1 on its Rs. 2,300 crore investment, the interest cost for Year 1st should work out to at least Rs. 125 crore, and depreciation to another Rs. 230 crore. The pay-out, then will be Rs. 180 crore more than the operating profits. But that's something the company has factored in. Points out Hyundai's Gandhi: "Nobody has come to India expecting profits from Year 1st"

Neither will exports buttress sales in the initial 2 years, since the focus will be solely on the domestic market. But, eventually, Hyundai is targeting 30 percent of its sales from exports. Given the low volumes, will it be able to justify its investment ? Hyundai needs a sales level of 71,000 units to break even. And that's the number it is expecting in 1st Year IInd and By Year IIIrd, the cash profits are expected to turn into net profits. Will they ? Points out Hyundai's Subbu: "If we achieve out sales targets, should be no problem."
TRACTORS

Tractor sales have traditionally been skewed in favour of certain states which were is the forefront of the Green Revolution. These states were the first to adopt modern farming techniques and hence the penetration levels of tractors in these states is significantly higher than the average for the nation and is comparable with the international penetration levels. Further growth potential in these areas is, therefore, limited and the demand would be mainly on account of replacement. Hence, these states can be called the mature markets for tractors and would include Punjab, Harayana and Western Uttar Pradesh.

Certain new states are now rapidly adopting modern farming techniques and the demand for tractors is high in these states. These markets for tractors include Madhya Pradesh, Andhra Pradesh, Tamilnadu, Maharashtra and Gujarat. The eastern states, especially Orissa are the fastest growing, but are a very small market owing to their low level of development.

Table No. 8
Region wise tractor sales

<table>
<thead>
<tr>
<th>Region</th>
<th>1996-97</th>
<th>1995-96</th>
<th>1994-95</th>
<th>CAGR1</th>
<th>CAGR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>12,862</td>
<td>8,898</td>
<td>6,572</td>
<td>44.5%</td>
<td>39.9%</td>
</tr>
<tr>
<td>North</td>
<td>87,017</td>
<td>77,017</td>
<td>75,113</td>
<td>13.0%</td>
<td>7.6%</td>
</tr>
<tr>
<td>South</td>
<td>37,388</td>
<td>31,985</td>
<td>22,788</td>
<td>16.9%</td>
<td>28.1%</td>
</tr>
<tr>
<td>West</td>
<td>79,332</td>
<td>69,419</td>
<td>56,456</td>
<td>14.3%</td>
<td>18.5%</td>
</tr>
<tr>
<td>Exports</td>
<td>4,237</td>
<td>3,461</td>
<td>2,544</td>
<td>22.4%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Total</td>
<td>220,836</td>
<td>190,780</td>
<td>163,473</td>
<td>15.8%</td>
<td>16.2%</td>
</tr>
</tbody>
</table>

[Source: Company Sources.]
The other markets, which are neither emerging nor mature at present, mainly constitute those states which have low per capita income and have inadequate agricultural infrastructure like irrigation facilities. Many of these states also have low industrial development and surplus cheap labour which will continue to be used in the farms. No short term impetus is expected in these areas.

**ESCORTS LIMITED**

The Escorts group, in a major restructuring move, consolidated their tractor operations at Escorts Limited. Escorts Tractors Limited which manufactured the FORD tractors was merged with Escorts Limited in 1995-96. With the merger of Escorts Tractors Limited with Escorts Limited, the company became the second largest tractor manufacturer in the country. The company which had a market share of about 20 percent in 1993-94 has lost market share in the current year and has fallen to the third spot.

Escorts is a dominant player in the > 41 HP segment, with a market share of 44 percent in this segment in the period Apr-Dec 97. In the medium segment it accounted for 14.2 percent while the market share in the 0-30 HP segment was 11.5 percent. The company derives most of its sales from the 31-50 HP segment as also from the Northern and Western regions. The increasing competition in the higher HP segments is however expected to put pressure on the company's market share and sales volumes.
TRACTORS AND FARM EQUIPMENT LIMITED (TAFE)

TAFE, the only South based tractor manufacturer, is the second largest player in 31-40 HP segment. It derives 84 percent of its sales from this segment, and has the advantage of being in the fast growing Southern market. These two factors have enabled to grow at a faster rate. The company is planning to increase its capacity and capitalise in the demand for higher powered tractors especially as it has the locations advantage of being in the South, the markets for the higher powered tractors. Thus the company has improved its market share and is now the second largest player in the industry.

PUNJAB TRACTORS LIMITED (PTL)

PTL is a the only major manufacturer which did not have any international collaborators and began tractor manufacture using indigenous technology. The company has been the major beneficiary of the growth in the demand with a gain of 3 percent market share from 1993-94 to 1997-98.

PTL, like TAFE, derives most of its sales from the medium HP segment. Further, the company has also been responsive to the changing market demands and has managed to produce a larger number of higher HP tractors. This has resulted in the company having close to 60 percent of the more than 51HP segment. Hence, the company has able to increase its over all market share in the tractor market over the years. The company is adding further capacity and this is likely to benefit the company in the form of higher sales and profits.
AUTO ANCILLARIES

The auto component industry has come a long way in the past decade which saw a whole range of new generation vehicles, not to mention components, technologies and manufacturing processes arrive on the Indian scene. The country’s automotive industry witnessed a significant growth in volumes, touching a peak production of 2.4 million vehicles in 1990-91. Production of components, which stood at Rs. 800 crore during 1982-83, multiplied five fold in the next decade.

The companies adapted well to the changing technological needs of vehicle manufacturers. There has been an increasing use of alloys, engineering plastics and synthetic rubber. A wide new range of products (like asbestos-free brake linings, dual brake systems, diaphragm clutches, power steerings, halogen lamps, fuel-efficient carburettors, etc) has had to be developed to keep up with the newer generation of vehicles. And the component industry has risen to the occasion, contributing to the high levels of indigenisation-to the tune of 90-95 percent-in almost all the segments of the Indian automobile industry.

Structurally, though, the Indian auto components industry continues to remain extremely fragmented, with over 300 players in the organised sector and an estimated 5,000-plus units in the small scale-sector. Locationally, the industry has developed major vehicle manufacturing centres. It is estimated that 26 percent of the units in the
organised sector are in the West, 3.0 percent in the south 36 percent in the North and 3 percent in the east. Vendor-OE relationships have strengthened considerably in recent years, and Maruti has played a major role in forging this evolving symbiotic relationship. Maruti has even acted as a guarantor to enable component makers get term loans and machines on lease.

An even more remarkable aspect of the auto component industry's recent growth has been the sea change in its export efforts. The new generation vehicles that hit the Indian roads during the 1980's, forced the local auto ancillaries to invest in technology upgradation. For example, ancillary units catering to Maruti invested heavily in state of the art plant and equipment. The ripple effect of this transformed the face of the industry. When Suzuki of Japan invested in Maruti, 43 Japanese auto parts firms followed. And they brought with them new technology, and more importantly, new levels of quality key factors responsible for Indian firms making inroads into the most demanding international markets in the last three to five years.

And as an ACMA official points out, what is most heartening is the broad base of exports from small, medium and large units that covers all major vehicle sub-system-engine parts, transmission, braking, suspension, steering, chassis components and accessories. Also, the destination of exported parts has changed from Africa, Russia and
Eastern Europe, to the more technologically advanced US, Europe and other developed nations.

Interestingly, the recent global slump in the auto industry has worked to India's advantage. Recessionary pressures have forced all leading auto makers to thoroughly review production costs. Global sourcing of components is the buzzword today and leading auto makers are constantly on the lookout for low cost supply sources. They are also in the process of shifting in house component manufacturing to outsourcing.

As for the local market, industry experts opine that 1993-94 is just the beginning of a big growth phase for the industry. This is evident because the automobile industry itself is coming out of the grips of a two-year recession. As per ACMA estimates, over Rs. 10,000 crore is to be invested in the auto sector within the next five years to augment capacities and roll out newer models. Telco, Maruti Udyog and Ashok Leyland alone are expected to chip in over Rs. 3,000 crore in the next three years. Besides, some of the top auto companies of the world, including General Motors, are looking at setting up assembly facilities in India, and some components will have to be indigenised.

And if the domestic OE market looks poised for a period of sustained growth, the replacement market too holds immense potential. Thanks to India's poor road conditions (which are not expected to
improve in a hurry), the high cost of new vehicles, and the not so widespread concept of scrapping vehicles in India and the ever-increasing stock of vehicles on the road, the replacement market can be expected to continue to thrive. However, dependence on the OE and replacement markets vary from company to company.

For example, in the case of spark plugs, as much as 80 percent of total demand is from the replacement market, while in the case of wheels or steering gears, 99 percent of demand is from the OE market.

The major bugbear for genuine parts makers in the replacement market continues to be spurious products, which are made cheaply by the unorganised sector units and sold under leading brand names. A study, conducted by the National Council of Applied Economic Research (NCAER) at the instance of ACMA, found that in 1991-92 almost 40 percent of all the products sold in the market came from spurious manufacturers. Moreover, the study also found that the manufacture of these kind of products was growing rapidly (by as much as 30 percent a year), thanks to the high cost and short supply of the original and genuine parts.

Alarming as the findings may be, they are indicative of the potential the replacement market offers to the organised sector. ACMA, or its prat, is getting its members to make an all-out effort to regain market shares from the spurious trade by flooding the market with
genuine parts. It is embarking on an intense customer-education programme and pressurising the government to give teeth to the Trade and Merchandising Act by making, such violations a cognisable offence. Besides, as vehicles get more and more sophisticated, technology intensive components will be called for, and this is where the organised sector should have a clear advantage. According to ACMA estimates, if the spurious components menace is addressed effectively, a 25 percent growth per annum in the replacement market should be possible.

But it is exports that holds an even better growth potential. India currently accounts for less than 1 percent of the world's trade in auto components, but this figure is expected to rise sharply in the coming years. The fact that most of the raw materials required are available locally and that labour costs—which are estimated to account for as much as 40 to 50 percent of total costs in developed countries are much lower, at 10 to 12 percent is India helps give the industry a competitive edge. For a properly lean automaker more than two-thirds of the automaker more than two-thirds of the cost of an automobile comprises bought out components and this has made all the leading global giants source these parts from low-cost countries.

And, India given its engineering base, low skilled labour costs, minimal over heads, high product flexibility and ability to cater to 'small batch' requirement could stand to gain substantially. In any product
segment wherein full automation is not required and where value addition by labour is high, India enjoys competitive advantages. Another major plus for India is that most of the leading global auto part makers have technical/financial tie-ups with local firms. These include several Fortune 500 companies, like Allied Signal (with Kalyani Brakes), Robert Bosch (Mico), Nippondenso (with SRF Nippondenso, Subros, International Instruments and Pricol), Dana Corp (with Perfect Circle Victor), Eaton (with Axles India), TRW (with Rane Power Steering), Lucas Ind (with TVS-Lucas), Rockwell Corporation (With Automotive Axles), etc. This ensures access to the latest technology as well as help in selling

Infra structural bottlenecks could hamper the auto component manufacturers' grand export designs. Also, as the industry invests for growth and improved technology, it will have to contend with major increases in costs of adding capacity. However, thanks to the opening up of the financial sector, well-managed companies with proven track records, should be able to garner large resources at low capital costs. While factors like technological edge, high levels of productivity and efficiency, cost and quality competitiveness long-term relationships with customers and vendors, cordial relationship with labour and an eye on global presence will be key determinants of success for any company, the most important with be the capacity to grow. Over the medium to long term, therefore, demand is not likely to be a constraint for growth,
capacities will be. Companies which are able to look ahead and invest in capacity creation are potential winners.

When Telco sneezes, the Indian auto component industry catches a cold. In July, Telco drastically cut back its vehicle production from 9,000 heavy commercial vehicles to 3,000. Having pushed its vendors to match its relentless overproduction (industry sources say inventory level reached 40,000 trucks by May) the auto giant pulled the rug from under the auto component industry in July. "Most of us were caught with our pants down," says a leading component manufacturer. Telco, with its numbers, is still the major customer for many original equipment component manufacturers.

Telco's cutback of production of heavy commercial vehicles could not have come at a worse time for the component manufacturers. The high growth curve for the automobile industry during the early months of the financial year 1996 crashed towards the end of the year. The average growth rate for the vehicle industry during April 1996 to March 1997 was 14 percent as compared to 25 percent during the previous year. The first quarter of the current financial year has seen a further slowdown in most segments of the automobile industry. And the effect of this can be seen from the stockmarket performance of the auto component companies. While many leading manufacturers are still investor favourites the stock prices of many others reflect the turmoil in

Corporate Database, Business India, June 6-19,1994
the industry. The Rane group has seen its price decline from Rs 300 in March 1997 to Rs 210 last fortnight. Similarly, Kalyani Brakes is down nearly 12 percent at Rs 104, Automotive Axles declined by 20 percent to Rs 46 and Autolite. Industries by 17 percent to Rs 84.

The automobile industry went through an unprecedented boom between 1994 and 1996. The heavy commercial vehicles were showing an unprecedented growth rate of 27 percent. Both the truck manufacturers, Telco and Ashok Leyland, went in for massive capacity expansion. There was a spate of new car manufacturers coming into the country. Maruti was showing healthy growth. The tractor industry was flourishing and so was the two-wheeler segment.

Based on all these factors, the component industry, in the last two to three years, went in for major capacity expansion. Most of the major manufacturers have, on an average, put in 30 percent additional capacity. Investment in the industry during 1995-96 was Rs 4,800 crore. The target for 1996-97 is Rs 6,240 crore. The growth rate in the last two years has been around 32 percent.

The party then came to an unexpected end last year. Says a source from a leading finance company, "The good times ended in September 1996. Starting October the demand started flattening. In December the bottom fell out of the market. We haven't started recovering yet. The growth rate in the passenger car segment, which was
around 30 percent, has also slipped down to 16 percent last year. This is a matter of concern to the components industry as this is the segment which is expected to lead the next five to ten years growth of the entire automotive sector," says Mr. K. Mahesh, president, Automobile Component Manufacturers Association (ACMA), and Chairman and Managing Director, Sundaram Brake Linings Ltd. There has been a perceptible slowdown in the retail market as well. Here again the fall has been unusually steep. "The market crashed overnight in November. It hasn't really recovered yet," says Mr. N. Krishnan, Deputy Managing Director IMPAL, one of the leading auto parts distributors based in Chennai.

In spite of the various market signals, Telco continued to be on overdrive. "This is the second time Telco has done this in recent times," grumbles an auto component industry source. Says Baba Kalyani of Bharat Forge," It is nothing unusual for Telco to heavily dump vehicles on the market. That is their policy to gain market share. It would have been better if instead of the drastic cut in production they had done it gradually. Bharat Forge is naturally affected, but in the medium and light commercial vehicle sectors, our exports to the US have shot up by 83 percent in the first four months, which has more or less offset the effect of loss of business from Telco."
Component manufacturers are more appreciative of Ashok Leyland, which has cut back gradually, giving them time to adjust their schedule. Ashok Leyland started reducing production by 10 percent in April, and by July closed down its Hosur factory for two weeks. Telco, on the other hand, stopped orders completely in July and August because it had built up a huge inventory of components.

The component industry was aware of the slowdown. Why did it not make the necessary adjustments? According to industry sources, it is very difficult to reason with the industry leader. If a component manufacturer refuses to supply, Telco is quite capable of blacklisting the manufacturer. Therefore barring a few, most component manufacturers also continued to produce and are now reeling under the slowdown. Says a leading Channai-based manufacturer who did anticipate the slowdown, "Even we are finding the cutback very severe and steep." This year, so far, most of the component manufacturers have seen only negative growth.

**Supply Outstrips Demand**

According to L. Lakshman, chairman, Rane group, "This year, demand is not growing as fast as supply. Capacity utilization is nowhere near the healthy 80 to 85 percent. Margins are going to be squeezed." A lot of these manufacturers are coasting along because tractors are doing well and Maruti is maintaining its growth. Those who
have made breakthroughs to the export market are also able to make ends meet. Says Mr. S. Ram, Managing Director, Wheels India, for whom Telco is a major customer, "There is definitely going to be a drop in our results. It won't be so bad because of tractors, cars and the export market." According to industry sources, the growth rate of the component industry is not likely to exceed 5 percent.

However, the component industry hopes that by November things will start improving, the truck manufacturers will clear their backlog and demand will pick up. The Telco cutback, although painful, is still a short-term problem. But in the long term the industry has to gear itself for the kind of competition it has not seen before.

Competition is coming from all sides. Telco has set up a company, Tata Automotive Components Ltd (TACO) to manufacture components. Taco is promoting various joint ventures with world leaders. Chairman Ratan Tata apparently feels that there are not too many capable suppliers in the country. Taco would act as a catalyst to improve the situation. The existing manufacturers are not exactly amused.

The industry is also wary about the fact that the government has allowed global auto components giants like Delphi, a subsidiary of General Motors, to set up shop here. The Automotive Products Operations (Ford APO), a unit of the Ford Motor company, is establishing automotive component facilities with an investment of $150
million in Chennai. Several South Korean suppliers of Hyundai are also putting up units here.

When there was a wave of new technology in the automobile industry in the 1980s with the arrival of Maruti and the Japanese light commercial vehicles, the auto component industry went through a phase of collective paranoia. The complacent industry, which was largely based on British and German technology, had to suddenly face the onslaught of the Japanese. It was then thought that the Japanese component manufacturers would come into India and Maruti would place orders only from them and the Indian component industry would be wiped out.

This never really happened. In the pre-liberalization era it was not so easy to set up 100 percent subsidiaries, nor were the Japanese manufacturers interested in 40 percent joint ventures. The phased manufacturing programme also helped many of the better local manufacturers to get their act together, upgrade their technology and become suppliers to Maruti.

After nearly ten years, the auto component industry feels threatened all over again. Auto industry sources feel that there is some justification in the industry's fears. Says an auto industry spokesman, "For a part like constant velocity joints there are only two or three players in the world and Delphi is one of them. In spite of an existing manufacturer, Invel Transmissions, a subsidiary of GKN, Delphi was able to get a
considerable market share from Maruti. This is the kind of competition we are talking about."

The vehicle manufacturers are now persuading their own vendors to set up shop in India. These suppliers, with their deep pockets, are looking at the country with a long-term view. Considering that their parent companies sell components worth billions of dollars, these Indian subsidiaries are willing to manufacture uneconomic quantities and sell them at competitive prices and write off their losses as a goodwill investment in the global context. Companies like GM and Ford save a lot of time and effort by sourcing from these suppliers.

According to ACMA, the Indian laws do not lay down uniform and transparent guidelines for indigenisation. "Lack of local content guidelines, coupled with the reduction in the customs duty of auto components, has raised concerns about whether the emerging business climate will encourage large scale localization or not," says Mahesh. "Most developing countries have followed clear local content rules to develop their industry," he adds.

**A Very Upset Acma**

There is a strong feeling building up in the automobile industry that the government has just opened up the floodgates to foreigners without worrying about the consequences. It is now ACMA' s turn to ask for a level playing ground. Says a member rather eloquently,
"For years we were tied down with weights on our ankles. We were never given an opportunity to be competitive. How can we suddenly fly?"

Mahesh points out that ACMA has no objections to the entry of 100 percent subsidiaries as long as they are allowed on the basis of very clear and transparent guidelines. ACMA has suggested a graded system based on export obligation. It has asked the government to introduce a graded export obligation system for foreign companies no export obligation for those who have only 49 percent foreign stake, 25 percent export within three years for those who have up to 74 percent multinational stake, and 50 percent mandatory export for 100 percent subsidiaries of international majors.

ACMA members are obviously trying to protect their turf. Even leading manufacturers who have been investing in volumes and technology are in danger of seeing their market share eroded. While the government has allowed any number of passenger car manufacturers to enter the country, the actual number of cars manufactured has not gone up to any significant level. Which means there are a lot more component manufacturers fighting for the same pie.

For every quality manufacturer there are many who have not woken up to the realities of the changing scenario. Recently, GM blacklisted several component suppliers who did not meet its quality standards. According to Maruti sources, even an ISO-9000 certificate
does not ensure quality. Says Suresh Krishna chairman and Managing Director, Sandaram Fasteners, "The automobile and auto component industry has done a lot of work in upgrading hardware. Now, they have to concentrate on software have to look at issues like breakdown control, inventory control, just-in-time capability and so on. Only total quality management and total productivity management will finally deliver the goods."

Unfortunately, this message still has not sunk deep in the industry. Only those who get their act together, upgrade their technology and process capability and invest in R&D will be able to get through these trying times.
AUTOMOBILISING INDIA

Five years ago, no one would have believed that the Indian market would absorb an annual production of over 4,00,000 cars and some 1,30,000 off roaders and light vans.

Five years from now, no one will believe that there had once been long waiting lists and black marketing of cars. The market driven economy is now upon us. India is becoming like advanced countries with an abundance of TVs, washing machines, refrigerators and cars. Consumers can now get the models of their choice at rock bottom prices with credit and special offers and better service support.

The second hand prices have also crashed. When second hand cars are available for the price of a scooter, every middle class family will want to have one, and better income families will soon have two or more. The 4 million cars on the Indian roads today will not be enough for India's 18 million richer urban households, to say nothing of the many millions of the rural affluent.

Today, India has over 4 million cars or one car for every 200 people. Roughly one car for every 40 households or one car for every 13 urban households. About 1.5 million cars are more than 10 years old, one million are 5 to 10 years old and 1.5 million are less than 5 years old. Many cars are owned by companies or used as taxis so perhaps not more than 3 million are privately owned.
When low resale prices now enable cars to reach lower income strata, the car will rapidly become an integral part of every middle income home and the more affluent will aspire to cars that reflect their lifestyles.

Like their counterparts in recently industrialised Asian countries, buyers are becoming increasingly car minded. From two or three earlier, they are beginning to adjust to over a dozen choices now. They will no longer buy and old thing on wheels but will demand stylish and economical cars. The affluent will want classy cars. The young will prefer low cost or sporty cars. Women will in for small cars that reflect their personalities. Contractors and farmers will look out for working cars or comfortable pickups suitable both for work and leisure. Despite some ups and downs, demand should grow exponentially and the carmakers will have to tailor their models to suit the many evolving market niches.

In the short-term, the pressure on the roads will cause traffic congestion in cities as it had done in Bangkok. But like Thailand, when cars become a product of the masses, it will become a contentious political issue and governments will be forced to improve traffic management and find the funds for building roads, highways and over-bridges.

This automobilisation of India may cause anguish to thinkers and bureaucrats long conditioned to the socialist idea that cars are a
wasteful luxury of the leisure classes. They will have to correct themselves. The car has been conclusively proved to be a major engine of economic growth in every nation. For every employee in a car factory, there is a multiplier of about 10 jobs in the ancillaries, spares, accessories, delivery, distribution, service, fuel and supplies.

Then there is another big multiplier. Every good job in the organised industry and supporting services also creates gainful employment among those who provide the new incomes with housing, food, fuel, clothing, household gadgets, carpentry, plumbing, construction and leisure. The Proliferation of tea shops, general stores and services around auto factories create many more entrepreneurial jobs than the ones inside any plant.

The car may not, therefore, directly create many regular jobs but it does generate huge growth in gainful self-employment and other economic activities.

The experience of many Asian and South American countries shows automobilisation is capable of banishing poverty more surely than government projects and subsidies.

But Indian planners missed this golden opportunity. Political leaders and their bureaucrats imbued with elevated but impractical ideals of Gandhian simplicity and socialistic dogma condemned the car as a symbol of unnecessary elitism. Deploiring the wastefulness of capitalistic
competition, they introduced a regime of licences and regulations that stifled progress. Price controls and high taxes hurt industrial profitability and their ability to invest into product and plant modernisation and research. Foreign collaborations become the crutches upon which the industry leaned up on for respectability and progress.

In the sacred name of self reliance, innovation slumbered while service and quality took the beating. For nearly four decades, the auto industry produced obsolete, over-priced and shoddy products. India's cars could contribute little to industrial growth unlike in many developing countries where the auto industry at that time grew to command as much as 12 percent of the national income. India stagnated while less fortunate counties of Asia rapidly advanced through automobiles, enterprise and exports.

It was tragic because India is one of the few developing countries that possesses a mature iron and steel industry. Cars need huge quantities of steel. The world's annual production of some 35 million cars and its dependent components, fuels and services are worth about $ 2,000 billion (Rs. 70,00,000 crore.)

Apart from fully built cars, India could have produced and exported huge quantities of gears, shafts, castings and forgings that might have transformed India's engineering industry.
The impact of automobilisation goes beyond economic and industrial considerations. Every car also generates an instant demand for a variety of technical services: engineers at the factories and mechanics for service and delivery. It generates a spontaneous technical education affecting all forms of local production.

Wherever a scooter, motorcycle, car, truck or tractor goes it changes more than the lifestyles of the owners. It transforms the aspirations and technical aptitudes of the entire community.
THE FOREIGN ANATOMY

Did you know that the coveted Mercedes Benz is actually not made in Germany but is only put together there from parts made all over the world? Mercedes Benz is not longer only a German pride. It has been distributed. The division of labour that Adam Smith waxed eloquent about has crossed national boundaries. We are truly in an era of international division of labour. More than manufacturing, car plants have become experts in assembling.

Adam Smith, writing his magnum opus 'The Wealth of Nations' in 1776, presented a graphic picture of the 1,800 parts of which a pin was made. Today, the number of parts have come down and that no longer surprises us. We have become used to the marvels that modern technology ceaselessly throws at us. The surprise is at the number of countries involved in the making of one product. The manufacturing process, Michael porter's value chain, has been well and truly broken up. Kenichi Ohmae of McKinsey & Co. remarks that we are living in a borderless world.

The automobile sector has geared itself to being present in parts across the world. Mercedes Benz is not alone in this, though it gives one a good idea of what it means to have that international sweep in manufacturing.
Matthias Huthmacher, in an article on the German pride's splintered operations, calls global sourcing the strategy for the future. Global sourcing lets you locate your assembly plant in region where you expect the market to grow the fastest. And that is what Mercedes is doing, locating its plants in Latin America and Southeast Asia, where it is anticipating a growth of 6 percent and more. In less than ten years from now, the share of these regions in the world's stock of passenger care will shoot up from 18 to 30 percent.

Mercedes is locating its plants in the Philippines, Malaysia, Indonesia, India, Thailand and Vietnam and is doing two things simultaneously. It is setting up complete production facilities which will supply specific types of cars to markets which will drive them. For instance, A-Class models for South America will zoom off from the plant at Juiz de Fora in Brazil. The US obsession, all-terrain, leisure cars, will slide out of the Mercedes plant in Alabama. The European taste for small cars in taken care of by its plant in the Lorraine region in France.

But says Matthias Huthmacher, there is another transformation taking place not fully noticed by the world: 'Mercedes in not just making cars for the whole world all over the world, but the parst it needs to do this also come from all over the world. The 12,000 workers who assemble 1,800 cars every day are the children of a new international division of labour.
Such a strategy hinges on one new viat aspect: reducing the number of parts in a car. Global sourcing becomes a manageable rather than an unwieldy exercise. Huthmacher quotes Edith Meissner, Mercedes head of information, as saying, 'We concentrate on the central elements of the automobile: the engine, the gear box, the axles, the car body itself—everything else is supplied from outside'. Its own factory 'produces' 40 percent of the shimmering beauty.

Huthmacher says that Mercedes is deliberately increasing purchases of foreign components. The purchasing skill demands a network of suppliers. 38 percent of them are still in Germany, 40 percent in Europe in the form of its partner firms and 22 percent are outside Europe. Mercedes parts traverse some distance. The route is amazing. Cable harnesses alone come from Austria, Slovenia, Bulgaria, France, Portugal, South Africa and Mexico. While France and Japan supply the heating and air conditioning, Italy chips in with the air ducts. Thw wood for the interior is made in Romania and Canada makes the discs. The circuit boards come from Malaysia and the Philippines. The seat covers come from the Czech.

Mercedes strategy is built on a pyramidal structure with suppliers of raw materials at the bottom, individual parts above them, systems manufactures near the top and the factory itself at the top. And it is here that the Mercedes E-Class emerges for 10,000 individual parts. It
is a complex web that needs the mind of a criminologist to unravel, says Mercedes Meissner.

If mishandled, the entire edifice can fall like a pack of cards. But here is where traditionally understood principles of general management come into the picture. Huthmacher talks of three pillars on which the whole structure rests: planning, organising and communication. Planning here is not just anticipation future tasks but also the ability to address issues at the concrete level. With a network of suppliers acting as arteries to the factory, you need to be organised to collect ideas from suppliers and grapple with practical problems.

Imagine what can go wrong if even one factory supplying one part faces problems. Just a few days ago, Toyota faced this problem when one of its suppliers' factories caught fire and had to stop production directly, affecting Toyota's production. Toyota had to temporarily shut down one plant. Handling such supplies in any different from dealing with a military situation. Finally, there is free exchange of information among everyone.

If the world begins to see more and more of such factories one wonders what will happen to territorial ambitions of nations. Hopefully, they will recede. China or the Philippines or any other country for that matter could well be a mini Europe or US. Mercedes is no longer made in Germany. It is world in its body or engine.
STATE WISE DISTRIBUTION OF AUTOMOBILE INDUSTRY

* TWO WHEELER SEGMENT *

**STATE MAHARASHTRA**

Bajaj Auto Ltd.

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<tr>
<th>Model</th>
<th>Plant</th>
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<tr>
<td>Bajaj Scooter</td>
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<td>Bajaj Chetak</td>
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Kinetic Honda Motor Ltd.

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Maharashtra Scooter Ltd.

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**STATE MADHYA PRADESH**

Eicher Motorcycle

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**STATE UTTAR PRADESH**

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**STATE HARYANA**

**Hero Honda Motor Ltd.**

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**Majestic Auto Ltd.**

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**STATE TAMIL NADU**

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* **THREE WHEELER SEGMENT** *

**STATE MAHARASHTRA**

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* CAR & JEEP SEGMENT *

STATE MAHARASHTRA

Mahindra & Mahindra - Mumbai
Premir Automobile Ltd
PAL - Kurla
PAL Peugeot - Thana

Tata Engineering & Locomotive Company (Telco)
Telco Passenger Car - Pune Plant

STATE HARYANA

Maruti Udyog Ltd.
Pssenger Car - Gurgaon

STATE TAMIL NADU

Volvo India Pvt. Ltd. - Bangalore
Hindustan Motor Ltd. - Tamil Naadu
Pessenger Car Plant - Chennai
Mahindra Ford - Chennai

STATE GUJRAT

GM India Pesseger Car - Panchmahal

STATE WEST BENGAL

Hindustan Motor Ltd. - Ambassdor-Calcutta
STATE UTTAR PRADESH

DCM Deawoo Matiz - Surajpur
Telco Passenger Car Plant - Lucknow

STATE BIHAR

Telco Passenger Car Plant - Jamshedpur

STATE MADHYA PRADESH

Jonga Jeep - Jabalpur

*L, M & HCVS SEGMENT*

STATE MAHARASHTRA

Ashok Leyland - Bhandara LCVs Plant
Bajaj Tempo Ltd. LCVs - Akurdi

STATE UTTAR PRADESH

DCM Daewoo LCVs - Surajpur

STATE MADHYA PRADESH

Eicher Motor Ltd. LCVs - Pithampur
Vehicle Factory - Jabalpur
Nissan Truck MCVs - Jabalpur
Shaktiman Jeep HCVs - Jabalpur

STATE TAMIL NADU

Ashok Leyland CVs - Hosur
Hindustan Motors LCVs - Chennai
Hyundai Motor India Ltd, (Car) - Irungattukottai, Chennai
Hyundai SANTRO Car - Sriperambudar

STATE RAJASTHAN

Ashok Leyland - Alwar

STATE HYDERABAD

Ashok Leyland Ltd. - Hyderabad

STATE PUNJAB

Swaraj Mazda Ltd, LCVs - Chandigarh