CHAPTER VIII

CONCLUSION AND
RECOMMENDATIONS
8.0. CONCLUSION AND RECOMMENDATIONS:

In this chapter conclusion is drawn based on the data collected and analysed.

8.1. INTRODUCTION:

Transportation is the backbone of economic development. Growth in transportation sector is one of the benchmarks of economic development of any country.

There are three modes of transportation that is by surface, sea and air. Surface transportation can be further subdivided as rail and road transportation. Beginning of rail transportation on Indian soil dates back to 16th April 1853 when first train ran between Thane and Mumbai.

Due to variety of reasons, road transport enjoys the most prominent position in our country. Change in the road transportation industry is noticed every day that passes by. This change is noticed in all the segments of transportation whether it is cargo or passenger. The changes are undertaken in all the aspect of transportation, which includes not only changes in the mode of transportation but roads also.
Scope of my study is restricted to passenger transportation by cars. Mode of passenger transportation has undergone major change in the last century and the process is continuing. From a humble beginning of bullock cart to the most advanced car costing few million rupees is available today. On Indian roads the first car was seen in the year 1928, this car was imported. In the year 1942 Hindustan Motors was incorporated and in 1944 Premier automobiles was started. It was the year 1948 when first car was manufactured in India.

In the process of development other factor relating to mode of transportation has necessarily undergone the change. This change is noticed in various components like engine, body of the car, tyres, air conditioners etc.

Among various components tyres are the most important and critical consumables of the car. A tyre not only provides contact between the car and the road but is also the load-carrying component. It provides the speed and the safety to the car.

Tyre industry has come a long way from solid tyre to pneumatic tyre. From cross ply tyre to radial tyre and in radial tyres further development is on.

In India development of tryres date backs to 1926 with the establishment of the first tyre company, Dunlop Rubber
Company. As the automobile sector began to take roots in the country, the tyre industry saw the entry of many players and grew until the late 70s. With waves of liberalization sweeping the land in 1992, the industry saw the entry of many global players as part of joint ventures.

During the study I have tried to analyse the problems and the prospects of passenger car radial tyres in our country. It was early 1950s when a new concept of Tyre design was developed called as RADIAL. In radial tyres the fabric plies in the casing do not have angle and lay parallel to each other and the cord on the side of the band meets diagonally opposite to the other side of the bead.

In late seventies radial tyres were introduced in India. Radial tyres did not gain much importance in the initial years this could be attributed due to several factors, viz. Indian roads generally not being suitable for ideal plying of radial tyres; vehicles produced in India not having suitable geometry for fitment of radial tyres (and hence the general, and wrong, perception that radial tyres are not required for Indian vehicle); unwillingness of consumer to pay higher price for radial tyres etc.

However, the situation has radically changed in recent years. In passenger car tyre segment due to number of reasons estimated production of cross ply and radial passenger car tyres which has been in the ratio from 70:30
in late nineties changed to about 40:60 in year 2001. The reasons for this change are studied and analysed. Based on the study the conclusions are arrived at and recommendations are made. For study following methodology is adopted:

1. Secondary data: Secondary data of cars and tyres is collected from various sources, such as society of Indian Automobile Manufacturers (SIAM), Automobile Tyre Manufacturers Association (ATMA) Commercial libraries.

2. Primary data: Primary data collected by following sources and analysed:

a. Car owners: Car owners using the cars for personal usage. Here data is analysed separately for single car owners and multiple car owners.

b. Taxi owners: Cars used for commercial purpose. Taxi owners are contacted and data is analysed separately for small or single taxi operators and large or multiple tourist taxi operators.

c. Car manufacturers and dealers.

d. Tyre manufacturers and dealers.
e. Industry experts: Industry experts both for car and tyre industry.

8.2 MARKET SCENARIO:

At the time I undertook the study in June 2000, between then and now lot of changes have taken place both in cars and tyres. Before discussing about the tyres it is essential to understand about the car market scenario.

8.2.1. CAR MARKET SCENARIO:

Indian cars traditionally are family vehicles keeping this factor in mind Indian car manufacturers used to manufacture the cars, which can easily fit a family consisting five or six people till the time Maruti Udyog launched small car. Till such time market was dominated by Ambassador and Fiat cars using conventional tyres.

Till the year 2002 some of the models of Maruti 800, Tata Sumo, Bajaj Tempo’s MUV and Ambassador were fitted with cross ply tyres as OE fitment.

Maruti launched small car and till late nineties in their top end-selling model Maruti 800 and Omni conventional tyres were fitted. In the phased manner Maruti Udyog started using radial tyre in their Maruti 800 model. In the year
1999-2000 Maruti 800 Dlx model started with radial tyres as OE fitment and other models of Maruti 800 continued to sell with the cross ply tyres.

Hyundai Motors started their production by mid 1998 launched their cars with the latest technology having MPFI engine and other features, this included radial tyre fitment for batter road grip and comfort. Daewoo Motors was in the market between 1995 and mid 2001, due to problems in the parent company at Korea, India operations were stopped.

Understanding the change in the market scenario Maruti Udyog Ltd., made the changes in their highest selling Maruti800 Cars These changes were done in the phased manner. In the first stage in year 2001, Maruti 800 Dlx and Ex models were modified, number of changes were made in the car among other changes it was launched with 5 gears and radial tyres. These changes were implemented in other Maruti 800 models that are fitted with radial tyres from the year 2002.

However Maruti Van now Known as Omni is still fitted with cross ply tyres. Maruti has positioned this vehicle in the taxi segment, now this vehicle is also sold as cargo vehicle. Here in both the segments customer comfort is not the priority since as per the data collected and analysed more than 80% Maruti Vans are with the single taxi owners. This segment is price conscious. Its priority is the tyre cost and life, both
initial and the second life on account of retreading. Cross ply tyres are better suited for all above mentioned parameters which becomes naturally first choice for this segment.

Other manufacturers such as Hindustan Motors continued to use cross ply tyres till beginning of 2001. Fiat’s popular model was manufactured till mid 1998 and the manufacturer used the cross ply tyre in the cars.

Today in the MUV segment, all the models of Tata MUV are fitted with radial tyres. Bajaj Tempo makes nine different models of MUV has only one model by the name Rough Road is fitted with cross ply this vehicle is positioned for all the terrains urban and rural, rest of the models are fitted with radial tyres. Mahindra and Mahindra has popular brand jeep is fitted with cross ply tyres and other new models are fitted with radial tyres.

After the economic liberalisation in the year 1992 and between the time of my starting this study in the year 2000 car industry has seen lot of up’s and down’s. From 209203 cars in the year 1994, in the year 2000 total 638815 cars were sold in the country.

From 1998 recession in the economy is also noticed in the car sales. Car sales for this period upto the time of my starting of the study is shown below:
CARS SALES FUTURE PROJECTIONS:

For forecasting future growth in the car sales following points needs to be considered:

1. After registering negative growth in the year 1998 car market registered high growth in the year 2000. In the year gone by car sales have registered even better sale as per the figures available from SIAM in the history of Indian car manufacturing total car production for the year 2003-2004 was over one million cars. Compared to the last year’s production of 779,203 cars this year’s domestic and export sales put together was at 1,030,068 units that up by 32.2%. Even the domestic car sales were up by about 27% over the last year sale sales to 900752 cars against 707198 cars.

2. Worldwide India’s sale for 2003 takes India in to the league of the countries having more than 1 million car sales. India is 12th in the global ranking and is the second fastest growing market in the million club after China. According to the world motor vehicle production
survey, while India’s growth of 32% is less than half of China’s 83%, but is much higher than South Korea’s 4% (2.7 million unit), Russia’s 3% (1.01 million units) or UK’s 2%(1.6 million units). These are the countries registering the positive growth having more than 1 million sales. Other countries like USA (4.5 million units), Japan (8.4 million units), France (3.2 million units, Germany (5.1 million units, Italy (1 million units), Canada (1.3 million units) are all negative growth markets.

3. In view of the past trend and the recent sales it is noticed that between the year 2000 and 2003 the average growth was about 4%. Interestingly in the year gone by sales have improved by 27%. In such a scenario we cannot say that the growth in the coming years be either 4% of 27%. Since the base has now increased substantially it will be difficult for market to grow with 27% on yearly basis for next few years.

4. In the last decade the average growth was about 14%. Now since the base is large and realistically it will not be possible to register similar growth but on the optimistic side we consider the future average growth will be same as last decade. On the other side we find that in last decade there are few years when the growth was close to 2% and in one particular year it was even -2%.
Keeping above in mind we can project the future growth indicating optimistic level of growth (same as last decade 14%), pessimistic level (close to least of last decade) and average (average of optimistic and pessimistic 8.5%) expected growth up-to 2010.

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<tbody>
<tr>
<td>Vol 14%</td>
<td>900752</td>
<td>1026850</td>
<td>1170620</td>
<td>1334500</td>
<td>1521330</td>
<td>1734320</td>
<td>1977000</td>
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<tr>
<td>Vol 8.5%</td>
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<td>977300</td>
<td>1060400</td>
<td>1150500</td>
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<td>984300</td>
<td>1014000</td>
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Car Sales future trend upto year 2010.
In the given Car market scenario old cars were fitted with the conventional or cross ply tyre and among the new generation cars, some of the models were fitted with cross ply tyres and rest were fitted with the radial tyres and the level of tyre fitment for all the cars on Indian roads was approximately 20% radial tyres in late nineties.

Tyre industry has tried to match the change required in the cars. Radial tyres were introduced in our country in late 70’s but the were not accepted as choice of the user till 90’s.

To understand the car tyre replacement market we need to know the usage of the cars. From the data collected it is found that the person using the car for personal usage changes the tyres once in two or three years, this clearly indicates that the average running of the cars in India for personal usage is not more than 10 to 15000 kms per year since average cross ply tyre life is 25 to 30000 kms in case of radial tyres life is 20 to 30 % more. Radial tyre is very sensitive tyre needs regular alignment. In case proper attention is paid tyre life can be as high as 50% over cross ply tyre, in absence of proper attention one may get the same life as cross ply tyre or even less.

It is the taxi segment, which uses the car for average 50000kms and more per year. Here it is worth mentioning that the taxi owners using cross ply tyres prefer to retread
the tyre at least once. Which gives the additional 30 to 40% mileage.

In the year 2000-2001 when the car market was about 8.0 million cars tyre industry sold about 6.8 million tyres and the tyre industry sales indicates that about 35% tyres are sold in the OE segment and about 60% sales comes from the replacement market balance 5% sale is from export and sale to government departments. Every year only about 10 to 15% of existing cars are fitting with the new tyres.

8.3. PROBLEMS AND PROSPECTS:
At the time of this study there were number of problems preventing higher car tyre radialisation in our country. Problems can be classified in two categories:

1. Problems related with tyre marketing of radial car tyres.
2. Other Problems.

In first category following problems can be listed:

a. Customer awareness about the advantage of radial tyre.
b. Unfavourable market perception of radial tyres.
c. Availability of good quality radial tyres at reasonable price.
d. Adequate facilities of after sales services.
e. Radial tyre retreading facility.
In the second category problems can be listed:
   a. Government’s Role.
   b. Car Manufacturer’s Role.

If the above problems can be resolved then tyre industry can look forward for even 100% radialisation of car tyres. Possible solutions are discussed under as per the data collected and analysed and actions taken by various segments.

8.4. CONCLUSION AND RECOMMENDATIONS:

Car market has shown almost flat growth in the last decade. In the last few years’ car industry has registered a double-digit growth. The year just gone by has registered even better sales. Car production for the year 2003-2004 was over one million cars. Domestic sales were up by 27.37% over the last year sales to 900752 units against 707198 units. Even the exports have also increased substantially.

Though the car market is growing by almost 20% but the cars with the cross ply tyres is not registering the similar growth. It may be noted that Omni has registered a growth of only 7% last year if it continues with the same growth rate even then the car market for cross ply tyres is shrinking in other words we can say that market for radial car tyres is increasing.
The market size in year 2000 was 6.1 million vehicles and about 3.0 million vehicles using both radial and cross ply tyres between then and now this ratio is changing due to following reasons:

a. Old cars are phased out from the market with the time.
b. Car manufacturers made changes in the cars and introduced radial tyres in the models, which used to be fitted with cross ply tyres.
c. Existing customers are changing over to radial tyre.
d. All the new generation cars manufactured in the country are fitted with radial tyres except few.

With the above factors in mind the car market size in the year 2002 was about 7.6 million units but the cars with using radial and cross ply tyres is at about 3 million that means ratio which was about 50% cars using both cross ply and radial tyres today it is about 30 %. Following table shows the number of cars registered between 1998-2002.
Number of registered four wheeler passenger cars.

<table>
<thead>
<tr>
<th>Year (1998-2002)</th>
<th>Number of cars (in millions)</th>
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<tr>
<td>1</td>
<td>5.1</td>
</tr>
<tr>
<td>2</td>
<td>5.5</td>
</tr>
<tr>
<td>3</td>
<td>6.1</td>
</tr>
<tr>
<td>4</td>
<td>7.1</td>
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<tr>
<td>5</td>
<td>7.6</td>
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Source: Ministry of Surface Transport

As per the data published by ATMA car tyre radialisation was at about 28% during 1995 which has increased to about 75% in the year 2002-2003 as shown:

Estimated level of radialisation (Percentage)

<table>
<thead>
<tr>
<th>Year (1995-96 to 2002-03)</th>
<th>Percentage of radialisation</th>
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Source: ATMA
POSSIBLE SOLUTIONS TO THE PROBLEMS AND RECOMMENDATIONS:

1. **TYRE MARKETING**: Based on the findings marketing team of Tyre Companies should design the strategies to solve the problems faced. For this following are the recommendations:
   a. Customer should be first segmented in different groups based on the usage and priorities. There should be three groups, one for the personal usage this can be sub divided in two sub groups one those who still prefer conventional tyres, other group those who have used radial tyre and are open for change.
   b. For commercial usage also the customers should be divided in two sub group one single taxi operators and others large taxi operators.
   c. Products should be designed suiting to the particular groups requirement.
   d. Prices play an important factor for single taxi operators and single car owners in the personal usage segment.
   e. For advertising and sales promotions marketing team should organise regular campaigns at taxi stand for taxi operators. For single car owners petrol pump campaigns can be organised. Marketing teams need to educate customers about
the superiority of using radial tyres to both dealers and consumers.

f. Radial tyres perform exceedingly well if properly maintained. For this regular air pressure checks, on the regular intervals wheel alignment, tyre rotation is suggested. Tyre companies should educate the customers. This will help the customer to get the higher tyre life, which in turn means that the price conscious customers will also buy the radial tyres.

g. Appointing more dealers for radial tyres. Dealers will increase the availability. With the changing customers requirement it is suggested that the tyre dealers should be appointed with the tyre fitment, wheel balancing and alignment facilities at a reasonable cost. Providing facilities of regular checkups at the dealers point either free or at a nominal cost.

h. Efforts are made by the car and tyre manufacturers to create positive perception about the radial car tyres. Here major problem is with the single taxi operators having fiat, Maruti Van and ambassador, as per the data collected it is very clear that this segment is more comfortable with cross ply tyres they find it is more advantageous to use cross ply tyres comparing to radial tyres. Personal car owners are now slowly responding to the efforts made by the tyre
manufacturers and perception at this segment is changing from negative to positive. Tyre and car manufacturers have come together and along with their dealers designing new schemes to promote the radial tyres.

i. Radial tyre at reasonable price. It is noticed that the consumer find the price of radial tyre on higher side as compared to cross ply tyre. Tyre industry should make more intensive efforts to bring down the cost of radial tyres without sacrificing the quality. This is possible if the tyre consumption increases that will help the tyre manufacturers to get the benefits of economics of large scale production. Understanding the customer requirements tyre companies have started developing the customer specific tyres. Though the market of old existing cars is shrinking but still do not have low cost radial car tyre for it.

j. Radial tyre retreading is another important area that needs to be focused by the tyre manufacturers. Especially single taxi operators having old vehicles consider Tyre retreading essential requirement. Today we have equipments and qualified people for cross ply tyres this needs to be extended for the radial tyres. Tyre companies are developing the necessary infrastructure for radial tyre retreading. This needs to be coupled with the confidence building
exercise in the minds of customers about the suitability of radial tyre retreadability.

2. OTHER RECOMMENDATIONS:
As mentioned earlier that the other area for which can help in car tyre radialization are pertaining to government’s efforts and role played by car manufacturers.

a. GOVERNMENT’S ROLE: Government can play an important role in the radialization of car tyres mainly by two areas.

1. TAXES AND DUTIES: Currently tyres attract a high rate of Excise Duty; Government can make an effort to rationlaise the duty structure to make the car tyres more affordable. This will make radial tyres more affordable.

2. ROAD CONDITIONS: For the success of radial tyres it is essential to have good road conditions. This is one such area that is beyond the scope of car and tyre manufactures. This problem needs to be addressed by the government. It is worth mentioning that our central government has realized this and is making sincere efforts to make the new roads and improve the road conditions of the existing roads. Most appreciable act in this direction is government’s plan to connect the
major metro cities this project is called as Golden Quadrilateral. Though it is high cost involving project but it will change the shape of road transportation in the country. If government changes the road conditions of state high ways also that will certainly prepone the radialisation in the country.

b. CAR MANUFACTURER’S ROLE: At time of beginning of my study Maruti 800, Maruti Van Ambassador Car, Premier Padmini was manufactured till 1999, Mahindra’s Jeep, some of models of Bajaj Tempo and Tata Sumo were fitted with the cross ply tyres. Though now majority of the vehicles are now fitted with the radial tyres. If the Vehicle manufacturers make the changes in the vehicle to make it suitable for radial tyres more number of radial tyres can be sold. However making the change in the vehicles is an expensive proposition. An in-depth study of cost involvement vis a vis return on investments needs to be done.

Above combined efforts will make the car tyre radialisation much higher and faster. Prospects of radial car tyres are excellent we can comfortably expect 90% radialisation by the year 2010.

Tyre companies have to make a lot of efforts especially at the rural level for educating the customer towards the benefits of the radial tyres. Sooner these are achieved the
better it is otherwise radialisation will reach the higher levels but it will take longer time.

COMMENTS ON THE HYPOTHESIS VIS A VIA ACTUAL FINDINGS & RECOMMENDATIONS:

With above findings and recommendations the hypothesis considered at the beginning of the study (refer page no.12) holds good.