ABSTRACT

TITLE OF THE THESIS- “A study of Sustainability of the small car segment in automobile sector of India.”

INTRODUCTION - Indian automobile sector witnessed a modest beginning when first car was produced by Premier Automobile limited, and rolled out on Indian roads in 1949,. For a long time only three players dominated the Indian car manufacturing industry. When Maruti Udyog Limited introduced its much awaited and much sought after small car, MARUTI-800 in India, in 80’s, a sensation was created in Indian car market.

The government of India’s shift in the approach towards Indian automobile industry, as spelled out in the government of India, Auto policy 2002, the increased disposable income with Indian Middle Class, fast development of good quality roads linking metros and other big cities of India, urbanization of population, shift in the consumer profile has provided much needed boost to the Indian automobile sector.

The economic reforms in 1991, policy of allowing 100% Foreign Direct Investment (FDI), in automobile manufacturing, has resulted in entry of foreign car manufacturers like Hyundai Motor Company, Ford Motors, Honda , Toyota, Chevrolet, Volkswagen, Audi, etc. Meanwhile Tata Motors and Mahindra &Mahindra which were earlier in production of heavy and light commercial vehicles also entered in the small car market. Maruti Suzuki had already entered in the Indian car market in 1980.

With this backdrop which indicates rapid growth in the automobile sector of India and launching of big cars in Indian market by almost all car manufactures, it becomes important to find out the sustainability of small car in view of the fact that currently it is the driving force of Indian auto sector growth, specially knowing the fact that mini car segment production reduced from 1, 50,000 in 2002-03 to 98,000 in 2005-06. At one point of time there was a great demand for the scooters which was also propelled by purchasing preference by the Indian middle class families but by 2005-06 it has almost vanished from the Indian market.
Aims of the Research -

Currently Automobile Industry in India is growing very rapidly. It appears that the manufacturing sector activities in India is going to be driven to a very large extend by the automobile sector. The small car segment of automobile sector that form the foundation stone, of this growth would probably the pivot around which the automobile sector in India would revolve in years to come. Therefore, a systematic study of small car segment and its Economic Sustainability is required. Present study is aimed at to study the “Economic Sustainability of the Small Car segment in automobile sector of India”.

Hypotheses -

H1: Small cars are still a preferred choice of Indian consumers.

H2: Constantly rising costs of inputs and fuel prices will contribute to sustainability of small cars in India.

H3: Small car will continue to be a choice of Indian middle class consumers.

H4: Recently launched Tata’s Nano car is not a preferred choice of Indian consumers.

Research Methodology & Analysis of the Data-

The research design used to complete the research study is exploratory in initial stage followed by descriptive research. The research is predominately based on collection of primary data. For collecting primary data a sample of 1500 car users across India was selected by using the technique of convenience and purposive sampling. To collect the primary data a questionnaire containing 55 questions was developed. Responses were sought along with the Likert’s five point rating scale. To supplement and substantiate primary data researcher has also used secondary data, taken from Govt. publications, books, journals, websites etc.

Data collected from primary as well as secondary sources was analyzed by using the statistical tools and techniques, like mean, mode median, range, standard deviation,
correlation, regression etc. Graphical representation has been made by using bar and pie charts. These data have been interpreted and logical conclusions have been drawn.

Hypotheses as mentioned above have also been tested by using statistical measures and all the four hypotheses developed by researcher held valid and true by empirical findings of the study.

**Structure of the Thesis**

The thesis is structured in to six chapters:-

Chapter 1:- Introduction and Concepts.

Chapter 2:- Overview of Indian Automobile Sector.

Chapter 3:- Review of Literature.

Chapter 4:- Research Methodology and Design.

Chapter 5:- Data Analysis and Interpretation

Chapter 6:- Findings, conclusions, recommendations and scope for further research.

Appendices: - (i) Questionnaire  (ii) Bibliography

**Chapter I- Introduction and concepts**

Introduction to the Global and Indian Automobile sector and concepts related to this study are dealt with in details.

**Introduction**- Historically the automobile sector was considered as comprising of Automobile Manufacturing Plants. In 1980’s and 1990’s the manufacturing facilities were driven by the theory of self reliance. Except for very few parts of the automobiles like Auto Electricals, Fuel Injection systems, Spark Plugs, Bearings, Pistons and Piston Rings, Automobile Batteries, Tyres etc. all other components and body parts used to be processed or finished in house. In Indian Auto- Industry the concept of out sourcing and using sub-assemblies ready for assembly line, has started gaining momentum only at the
turn of the 20th century. This change in the system has resulted in giving multi
dimensional meaning to Automobile sector in India.

The Indian Automobile Sector broadly includes the following-

1. Automobile Manufacturing Industry.
3. Auto finance companies.
5. Repair workshops.
6. R & D, Automobile / Auto component designee and testing organizations.
7. Auto Logistic support services.

Small Car

The term "Small Car" is both relative and subjective. A small car in the US or the Middle
East is regarded as big in countries such as India and Indonesia. Within a particular
country too, the small car market has fairly heterogeneous products. While a car equipped
with the latest technology such as the Suzuki Swift is a small car, the basic Nano, which
is available at one-third the price of the Swift, also belongs to the same segment.
For the purpose of this research, researcher has considered the Government of India’s
definition of small car, as used in Excise duty rules, which is as under-

A small car as one that is shorter than 4,000 mm with an engine size smaller than 1,200
cc, if gasoline based, and 1,500 cc, if diesel based.
**Indian Middle Class**

The much talked about Indian Middle Class, which is a driving force behind the boom in Indian consumer market, is also contributed significantly in the growth of Indian auto market.

National Council for Applied Economic Research's (NCAER) Centre for Macro Consumer Research, which uses 'household income' as the criterion has defined that “a family with an annual income between Rs 3.4 lakh to Rs 17 lakh (at 2009-10 price levels) falls in the middle class category. Currently India has 31.4 million middle class households (160 million individuals). A report by National Council for Applied Economic Research's (NCAER) Centre for Macro Consumer Research said by 2015-16, India will be a country of 53.3 million middle class households, translating into 267 million people falling in the category. Further ahead, by 2025-26 the number of middle class households in India is likely to more than double from the 2015-16 levels to 113.8 million households or 547 million individuals. As per the findings, the percentage of the middle class in the country's total population will increase to 20.3 per cent by 2015-16 and 37.2 per cent by 2025-26.

**Sustainability** -

For this study, since it is related to the life cycle of a product naming the Small Car the term sustainability is used for ‘Market Sustainability’ which is part of bigger concept of economic sustainability.

**Government policies** -

The government policies, and statement of future policy directions and goals, have impact on the industry. Auto policy of government of India is one of such document. Researcher has dealt with the Auto Policy of Government of India 2002 at length. The other policies related to automobile sector and development of roads are also deliberated in this study.
Chapter II – Over View of Indian Automobile Sector

Researcher has presented an overview of automobile sector in India. With the help of different tables and charts, graphs and figures researcher has discussed the present status of automobile industry in India.

Since the development and growth of Auto Component segment is closely related to the overall growth of automotive industry, in this chapter issues relating to current status of auto component industry, are also elaborated.

Chapter III- Review of Literature

Researcher has made an extensive and in depth review of literature on the work done so far on the related topics. The work of literature review has been divided into four headings viz. Introduction, the emergence of small cars and their political and socio-economic context, change and continuity of India’s small cars from the 1990s and onwards – under this particular sub-heading researcher reviewed the literature relating to New industrial policy in the 1990s, economic reforms and new players in the small car segments, economic reforms and small car demands, a new government focus on the development and export of the small cars in the 2000s, the emergence of India as a worldwide research and production hub for small cars and finally researcher reviewed the literature available on challenges to the sustainability of small cars in future.

Chapter IV- Research Methodology & Design

Researcher has elaborately discussed the research methodology and design used to carry out the research study. The research design used for the study was exploratory in the initial stage followed by descriptive research. Data have been collected from both primary as well secondary sources. For collection of primary data a sample of 1500 respondents from whole of the country, by dividing it into five geographical regions and selecting a sample of 300 respondents from each region, has been selected by using simple random sampling technique. To elicit the responses from the respondents a structures questionnaire (refer. Appendix-2) has been designed.
After collecting information from primary as well as secondary sources researcher proceeded to analyze and interpret the same. The researcher classified and tabulated the information and data Graphic representation of the collected is made by using bar diagrams and pie charts. Collected data have been properly interpreted and logical conclusions have been drawn from them which have been presented in chapter –V and VI of this thesis.

**Limitations of the Study**

The present research study pertains to study of sustainability of small cars in Indian automobile sector. There are millions of car users in India, out of which researcher selected a sample of 1500 users by using simple random sampling technique purposive or convenience sampling method. The findings are based on the responses given by the respondents; therefore, validity of research findings depends on the responses given by the respondents.

The research is confined only to the study of market sustainability of small cars; other dimensions of sustainability like, environmental sustainability social sustainability, technical sustainability and financial sustainability have not been studies in this study.

**Chapter V - Analysis & Interpretation of data and Validation of Hypotheses**

The data collected through the questionnaire are tabulated and analyzed to find out the opinions of the respondents. For easy understanding the same were also represented through a pie chart or bar diagram. The analysis of the responses received for each query was carried out.

The present study is based on four premises/ hypotheses. These hypotheses have been tested by using three criteria – by using percentage of responses received, by using Chi-Square test and by using weighted average score of individual response.

The final results after the testing by all the three methods are the same for each hypothesis are the same and as follows:
Chapter VI - Findings, conclusions, recommendations and scope for further research.

Major findings and conclusions drawn from the study are listed below –

1. The small car is a preferred choice of Indian consumers due to the following reasons-

   i. Buyers are finding it economically affordable due to the reasons like it gives higher fuel efficiency. Price of the cars as well cost of spares parts is low. Disposable income permits them to buy only a small car. Easy availability of repair facilities, Government levies taxes on small cars are at low rates and rate of insurance of small cars is also very low.

   ii. Small car is also preferred considering need of the family. Small Car can accommodate comfortably the small nuclear family; it is considered a better option then two wheelers etc.

   iii. Infrastructural issues like increased traffic and congestion on roads, parking convenience of roads, improvement in the road network etc.

   iv. Easy availability of loans and finance facilities, urbanization, has led to many two wheeler users to buy their first car which is normally a small car.

2. The Indian Middle Class prefer the small car as small cars prove sufficient to meet their family needs and it is a status symbol. Their financial concertinos, parking convenience at their residence, the family and peer pressure are also reasons for the Indian middle class to buy a small car. Working women in general and from middle class in particular prefer to buy a small car due to driving and parking comforts offered by such cars.

3. A very small car launched by Tata Motors is not preferred as it is perceived as not safe and stable. Nano is not preferred by Indian car users though it is low priced and more fuel efficient. This is an indication of that price of car and fuel efficiency of it, are not only the factors taken into consideration by Indian consumers while making purchase decision for cars. Their decisions are governed by other factors also like safety, features, driving comfort, status, convenience, etc. Nano car was positioned as a better alternative for
'Two Wheelers', however those who are using two wheelers for their personal and family use and can afford to buy at least a low priced small car are also having hesitation in buying Nano.

**RECOMMENDATIONDS AND SUGGESTIONS**

For this study the questionnaire was so designed to get a clear idea about the preferences, choices, socio-economic issues, financial constraints, influencing factor of government actions and policies, consumer profiles etc.

Since the study covers interest of all stake holders of Indian automobile sector, the recommendations are grouped under the following four groups.

1. Recommendations for the car and auto component manufactures.
2. Recommendations for auto finance organizations.
3. Recommendations for government policy planners
4. Recommendations for the prospective car buyers.

**Directions for Future/ Further Study**

1. The study pertains to study of sustainability of small cars in Indian automobile sector. This study opens the scope for conducting future researches on the sustainability of big cars MPVs, SUVs, LCVs and heavy vehicles.
2. The study is confined to conduct the study of market sustainability; however, future studies may be undertaken for conducting the technical sustainability, social sustainability, environmental sustainability, and financial sustainability of small cars or any other product.
3. The study also opens the avenue of conducting such study at international level covering different dimensions of sustainability of small cars.