

Chapter III

The Objectives, Research Methodology, Hypotheses and Data Analysis Tools of the Study.

3.1 Introduction to the research problem

As discussed in the Introduction (Chapter I), lot of activity is seen in the Indian automobile industry: passenger vehicles segment. Manufacturers are building strategies based on the four 'P's of 'Marketing mix', namely, 'Product', 'Price', 'Promotion' and 'Place', to increase the sale of the vehicles which in turn results in profit maximisation.

The purpose of the study was to investigate the *modus operandi* of the manufacturers in the field of channels of distribution. The researcher intended to find out the strategies that are employed by different automobile manufacturers in their distribution channels and the impact of these strategies on the sale of passenger vehicles in Pune region. The passenger vehicle dealers as the members of the distribution channels too have a vital role in the distribution channel. Understanding their opinions, attitudes and feelings were also of utmost importance. With the above view in mind the researcher intended to study the present channels of distribution in automobile industry, new: passenger vehicles segment, in Pune region.

3.2 The objectives of the Study

Based on the research problem the researcher had well defined objectives in mind to make the Study conclusive. The following objectives of the Study were decided:

- i. Comprehensive study of present channels of distribution
- ii. Factors taken into consideration while deciding need of a dealer in city/town
- iii. Association between the number of dealers of each manufacturer and the sales
- iv. Association between the location of the dealers and effective functioning of the dealers

3.2.1 Comprehensive study of present channels of distribution

The 'distribution channel design' being a multi faceted activity the Study demanded a comprehensive approach. Thus comprehensive study of the present channels of distribution of the automobile industry: new passenger vehicles segment in Pune region was undertaken.

3.2.2 Factors taken into consideration while deciding need of a dealer in city/town

It is a quite noticeable fact that the passenger vehicles dealer of each and every manufacturer is not present in every city/town. With this in mind the researcher intended to find out the factors that are taken into consideration by the manufacturers in deciding whether a dealer is needed in city/town.

The dealer might be thought as a bridge between the manufacturers and the customers. The dealer has a strategic role to play as a member of the 'channels of distribution'. He should have thorough knowledge about the product, market size and the customers. That is, the dealer should be a psychologist to understand the psyche of the

manufacturers and the customers. The researcher intended to find out the most preferred qualities that the manufacturer would undoubtedly like to find in his dealers. In other words such qualities that would qualify him as the most sought after dealer for the manufacturers.

3.2.3 Association between the number of dealers of each manufacturer and the sales

The researcher wanted to find out whether there existed any association between the number of dealers of each manufacturer and the sale of vehicles.

3.2.4 Association between the location of the dealers and effective functioning of the dealers

The Study was carried out to find whether the location and the premises of the dealers had any relation with effective functioning of the dealers and achieving the goals. The location, place or the premises assumes tremendous significance in any business dealing. There is something called the spirit of the place which though invisible seems to control the entire gamut of the business. Whether the place is far off from the main/ arterial road or whether it is cut out from the hubbub of the customer activity or whether it is shadowed by the other business activities.

3.3 Research method consideration

A research method is highly graded and vitally important factor in any research. It is absolutely essential not only to highlight but also to focus on the 'how' factor after the 'what' factor of the research is stated. Research methods serve the role which may be compared to the role of 'transportation' in any business activity. Formally, research methodologies can be defined as 'an operational frame work within which the facts are placed so that their meaning may be seen more

clearly'.¹ Research methodology is a procedural frame work within which the research is conducted. The social science research is about two-hundred years old. Modern social science is a phenomenon of the twentieth century and has hundred years of experience behind it. Research in business and management is comparatively recent ². It has scope and need for further study. A great deal of attention is given to the methods employed to justify the claim that something material and valuable has been added to the body of knowledge. Thus, it is necessary to explicitly define the methodology in the present study. The research method adapted for the Study was the 'Survey' method.

3.3.1 Rationale for adapting the survey method for the research

Surveys refer to a method of data collection that utilizes questionnaires or interview techniques for recording the data. Surveys and questionnaires are among the most popular data collection methods in business studies ³.

- i. As the survey research is systematic gathering of information from the respondents for the purpose of understanding and or predicting some aspects of the population of interest.
- ii. The Study is related to describing, recording, analysing and interpreting the conditions that exist in the distribution channels design in the automobile industry new passenger vehicles segment in Pune region.
- iii. The Study is concerning the condition or relationship that exists between the manufacturers of automobiles new passenger vehicles segment and their dealers in Pune region.
- iv. The researcher intended to find out attitudes, opinions and beliefs of the manufacturers of new passenger vehicles and their dealers in Pune region.
- v. The researcher premeditated to find out multidimensional activities of the manufacturers and the dealers of new passenger vehicles in Pune region.

3.4 Questionnaire as the tool for the data collection

The tool used for the data collection was the 'Questionnaire'. The questionnaires were used to collect the data because the required data, sought opinions, attitudes and feelings, of the automobile manufacturers of passenger vehicles segment and their dealers in Pune region. The data required for the Study could not be easily had or be 'observed' and be quantified. The data were required for describing the activities, functions of automobile manufacturers and dealers of new automobiles passenger segment in Pune region. Questionnaires were thought to be the proper tools. The critical data to test the validity of the hypotheses could also be collected through the questionnaires.

Two different questionnaires were designed keeping in view the objectives of the Study because the entire research literally rested on the two mutually inclusive factors the 'manufacturers' and the 'dealers'. One questionnaire was designed for the manufacturers of the new automobiles passenger vehicle segment in Pune region and the other was designed for the dealers of new automobiles passenger vehicle segment in Pune region.

3.4.1 Designing the draft questionnaires

The draft questionnaire for the manufacturers of the passenger vehicles in Pune region was prepared based on the preliminary interviews conducted with the two manufacturers keeping in mind the objectives of the Study.

The questionnaire for the dealers was pragmatically designed which was based on the observations made at the dealers' showroom. For this reason four dealers were chosen. The activities at the showroom were closely observed and interviews conducted with the owners/persons in-charge of the showroom. Information on their interaction with the manufactures was also taken into account.

3.4.2 Testing of the questionnaire (Pilot survey)

Pilot Testing of the questionnaire was carried to find out:

- i. Relevancy of the questions enlisted in the questionnaire
- ii. Comprehension of the questionnaire by the respondents
- iii. Willingness of the respondents to share information
- iv. Time taken by the respondents to respond to the questionnaire and
- v. To weed out embarrassing questions, if any, in the questionnaire.

3.4.3 Finalisation of the questionnaire

Based on the results of the 'pilot survey', the questionnaires were finalised.

3.4.3.1 Finalisation the questionnaire for the manufacturers

The data sought through the finalised questionnaire for the manufacturers were:

- i. The distribution channels through which the manufacturers sell their vehicles
- ii. Factors taken into consideration by the manufacturers while considering need of a dealer in city/town
- iii. Manufacturers' preferences regarding the dealers' premises
- iv. Qualities preferred by the manufacturers of the person who would take up the dealership
- v. Activities undertaken by the manufacturers to groom their dealers
- vi. Factors related to the manufacturers' concern and motivation for the dealers and his strategy to monitor the later's satisfaction
- vii. Manufacturer's view regarding the alternative channels of distribution.

The questionnaire had questions with multiple-choice answers. Most of the questions were closed ended questions. The respondents

were to choose the answers they felt most appropriate. Every question with multiple choice answers, had space kept for answers to be written, if the respondent wanted to add something more or wanted to express something different from the choice of answers, available and something which would always come out as an after thought.

The questionnaire included two questions which were open ended. They were kept at the end. In one of the questions, manufacturers were asked to describe the procedure for dealer selection. In the other question, the manufacturers were asked whether they monitored dealers' satisfaction. If they did, the procedure they followed to monitor the same was to be elaborated. As these questions required the respondent to describe the process, here again ample of blank space was provided for the respondent to answer these questions.

3.4.3.2 Finalisation the questionnaire for the dealers

The finalised questionnaire for the dealers sought information (data) about:

- i. Type of vehicles the dealers dealt with,
- ii. Location and the premises of the dealership,
- iii. Infrastructure and investments made by the dealers in their business,
- iv. The socio-economic background of the person who took up the dealership,
- v. Participation of the dealers in the training programmes conducted by the manufacturers and the level of participation, in terms of the involvement of the dealers in these training programmes,
- vi. Support from the manufacturers in the initial stages of the dealership
- vii. The satisfaction level of the dealers with the manufacturers
- viii. The views of the dealers were also sought about the alternative channels of distribution.

The questionnaire was designed with closed ended questions. Most of the questions had multiple-choice answers. The respondents were asked to choose the answers they felt were most appropriate. The questionnaire was self-administered; it guaranteed the absolute unbiased answering. Objectivity was maintained to the last syllable. The respondents were asked to fill the questionnaire on their own. To overcome the usual disadvantages of multiple-choice questions, space was provided at the end of every question for answers to be written if the respondent had to add something more or wanted to express something different from the choice of answers available.

3.5 Data collection

The primary data were collected through the questionnaires and the secondary data was collected through different sources.

3.5.1 Primary data regarding the manufacturers

The manufacturers of passenger vehicles were identified from:

- i. Website of the Society of Indian Automobile Manufacturers, (SIAM) ⁴,
- ii. Trade journals and Magazines related to the automobile trade ⁵,
- iii. The Regional Transport Office, Pune located at 38, Dr B R Ambedkar Road, near Sangam Bridge, Pune -411001.

There were twenty-two manufacturers of passenger vehicles, who have their distribution network in Pune region (as of September, 2003), All the manufacturers were contacted for collection of data. Some of the 4-wheeler passenger vehicles dealers also sell commercial vehicles. They were included in the Study, to the extent of their part as passenger vehicles dealers. In spite of the efforts made there were two manufacturers (One was a 2-wheeler and the other was 4-wheeler) who did not respond to the questionnaires. The percentage of

sales of each of the non respondent manufacturer was less than 10% of the total sales in Pune region.

3.5.2 Primary data regarding the dealers

It is mandatory under the Rule 33 of the Central Motor Vehicle Rules, 1989 ⁵ for automobile dealers to obtain a trade certificate in prescribed form (Form 17) ⁷ from the motor vehicle registering authority in whose jurisdiction they carry on their business. The dealers to be involved in the study were identified on the basis of the data collected from:

- i. The Regional Transport office Pune
- ii. The Deputy Regional Transport Office Pimpri- Chinchwad, Chikhali Rd Pimpri, Pune
- iii. The Deputy Regional Transport Office, located at 86-87 Rly. Lines, Budhane Bldg., Solapur and
- iv. From the passenger vehicles manufacturers and their websites for names and addresses of their dealers.

The number of passenger vehicles dealers in Pune region was sixty seven (as of September 2003). There were two 2-wheeler dealers in Pune city that had stopped their business as 2-wheeler dealers; they were excluded from the Study.

The data were collected from twenty manufacturers who have their distribution network in the Pune region and their sixty five dealers (as of September 2003). As the data were collected from all the manufacturers and their dealers in Pune region, there was no sampling done and the Study was a census Study.

3.5.3 The secondary data

The secondary data mainly related to the sales in volumes (number of vehicles sold) from different sources. It is mandatory as per the Section 39 ⁸ of the Motor Vehicles Act 1988, and Rule 42 ⁹ of the

Central Motor Vehicle Rules 1989, that every motor vehicle to be registered with the motor vehicle registering authority. It can be convincingly noted that the number of vehicles registered is equal to the number of vehicles sold in the respective jurisdictions of the Transport Offices. There might be marginal differences in the sales data as some dealers might have sold the vehicles outside Pune region, but it was compensated as some vehicles registered in Pune region were sold by the dealers located outside Pune region.

- i. The sales data were collected from the Regional Transport Office, Pune, for the of motor vehicles sold / registered in Pune city and the Talukas of the Pune district falling under its jurisdiction,
- ii. The sales data were collected from Deputy Regional Transport Office, Pimpri, Chinchwad for the of motor vehicles sold/ registered in Pimpri, Chinchwad city and the Talukas of the Pune district falling under its jurisdiction
- iii. The sales data were collected from Deputy Regional Transport Office Solapur, regarding the vehicles registered at their respective offices for the of motor vehicles sold / registered in Solapur city and the Talukas of the Solapur district falling under its jurisdiction,
- iv. The 'Annual Statistical' publication of the Motor Vehicle Department, Government of Maharashtra,
- v. Journals and trade magazines related to the automobile industry,
- vi. Various websites listed in the Bibliography.

3.6 Hypotheses of the Study

The researcher was aware that the hypotheses are considered as the principal instruments in any research. The hypotheses help in decision making as the decisions can be made on the basis of the data collected. The researcher was guided by the characteristics and the functions that every hypothesis should have while formulating the hypotheses for the Study

A hypothesis was thought as a statement that proposes a relationship between two or more variables, based on mere assumptions or some suppositions, which are to be proved or disproved. The properties of a good hypothesis were contemplated to be:

- i. The hypothesis should be clear and precise. It must use simple terms which can be understandable by all concerned,
- ii. The hypothesis should be empirical statements about what should be and what should not be,
- iii. The hypothesis should explain general phenomena and not any particular occurrences,
- iv. The hypothesis should be plausible, the variables should be identified as which were dependent variables and which were independent variables The identified variables must be well defined

In the light of above factors the researcher formulated following hypotheses.

3.6.1 Hypothesis 1

The present distribution channels design does not seem to be helping the manufacturers in sales.

3.6.2 Hypothesis 2

The automobile manufacturers seem to be planning to change their present channels of distribution.

3.6.3 Hypothesis 3

There may not be any association between the number of dealers of each manufacturer and the sales.

3.7 Data analysis

The questionnaires filled by the manufacturers and the dealers were collected and tabulated to have a structured data. All the variables

and their values were properly labelled before the actual data analysis was carried out. The data were then analysed using suitable statistical tools.

3.7.1 Statistical tools used for data analysis

The data were presented as Mean, Standard Deviation (S D) and Median, I R Q (Inter range quartile 25th, 75th) wherever appropriate. All the categorical data were tested for unification of the coding. Wherever it was thought to be essential data were represented graphically using proper graphical representations (charts).

Unifunctional correlations were tested by using 'Spearman's non parametric correlation' technique. In the statistical tests where there was assumption of the variables to be 'Normally distributed', the variables that were not 'Normally distributed' were transformed to 'Normal distribution' using appropriate monotonic mathematical function such as Log_e to satisfy the 'Normality' assumptions. After identifying the variables for the 'Cause and Effect' relationship, regression models using 'Multivariate Linear Regression Analysis' (MLRA) technique were constructed. To validate the fitted regression model, the model was tested for 'Normal distribution' of residuals ($\epsilon = y - \hat{y} = \text{Observed} - \text{predicted}$) as one of the underlying assumptions of MLRA. The percentage contribution to the dependent variable by the independent variables was quantified by 'Coefficient of Determination' (R^2). The relative percentage contribution to the dependent variable by the list of independent variables was also quantified by per cent R^2 change. To test the hypotheses apposite quantitative statistical tests were applied. All the data analysis were carried out using 'Statistical Package SPSS for Windows version 10.05'

References

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