CHAPTER 4
RESEARCH METHODOLOGY
Introduction:

In this kind of research the most common method is survey and descriptive method. Needless to say that, this method is being considered as the essence and basis of research in this thesis.

In this regard, the researcher has made an endeavor to enrich the present research by referring to a good number of books and journals relating to research methodology in human and behavioral science, specifically in commerce and business.

4.1.0 Subject:

The research aims at making a systematic survey of marketing channels in order to characterize the role of dealers and distributors of durable consumer electronic (household) home appliances in Pune.

In the field of marketing, distribution is considered to be a link from producers to consumers. Moreover, distribution channel is being regarded as the set of interdependent marketing institutions participating in the marketing activities involved in the movement of the flow of goods or services from primary producers to the ultimate consumer.

Therefore, the study would follow the distribution channel system comprising two flows viz.,

A. Channel of distribution.
B. Physical distribution.

The channel members such as mercantile agents, wholesalers and dealers are middlemen in distribution and such middlemen are specialized in the most of the marketing functions.

These middlemen facilitate the process of exchange and create time, place and possession utilities through marketing and sorting process.

In connection with electronic appliances, the researcher will consider only home appliances as a focus.
The mode of distribution of these commodities in connection with channel members and the method of mediation of number of distributors is also being studied in terms of the efficiency as well as its impact on marketing of these commodities.

4.2.0 The Significance of the Research:

The durable consumer electronic home appliances do play a very significant role in today's industrial world, and have brought about a new field in the world market.

This is evidently manifested and observed in India, as well as in the city of Pune. In reality, phenomenal growth of these electronic appliances is being clearly observed. Therefore, marketing for these appliances are regarded to be as an unavoidable issue for producers.

Needless to say that, this situation could give rise to further competition amongst the producers specifically in variety and diversification context. It is to be emphasized that one of the best means for the use of home consuming electronic appliances is the study of marketing channels and its members.

The necessary information could be gathered with careful planning in respect of method of production and buying through buyers. Amongst marketing channels the information role of distributors and dealers should not be over looked by manufacturing unit.

Accordingly expert knowledge, recognition and the effectiveness of these two factors could be considered to be a very important step towards systematic marketing of electronic appliances.

4.3.0 Objective of the Study:

The main objective of this study is to evaluate the various aspect of distribution management (marketing channels) in Pune. The following highlight the detailed objectives of the study:
1-The study of work force quality at the level of dealers and distributors in durable electronic home appliances.

2-The study of the present marketing operations at the level of dealers and distributors in durable electronic home appliances.

3-The identification of the competitive methods at the level of dealers and distributors, in durable electronic home appliances.

4-The analysis of the kind of policy that has been used by dealers and distributor in durable electronic home appliances.

5-The measurement of the customers satisfaction or dissatisfaction in dealing with dealers and distributors of durable electronic home appliances.

4.4.0 The Research Questions of the Study:

The research questions driving this Study are as follows:

1-How is the condition of work force quality at the level of dealers and distributors?

2-What is the condition of marketing mix at the level of dealers and distributors?

3-What kind of competitive methods are used by the level of dealers and distributors?

4-What kind of polices are followed at the level of dealers and distributors?

5-What is the level of the customers’ satisfaction or dissatisfaction?

4.5.0 Methodology:

The research methodology used in this study is based on both survey and descriptive method.

The researcher has sought an answer to research questions in order to enable him self to review area of study from a realistic angels and further to gain and access optimum information.
Methodology gives a brief technical account of procedure adducted by Study. The methodology includes sampling design, designing of questionnaires, administration of the questionnaires, existing variables, the statistical analysis of the date including the tests of significance employed for testing the research questions. These are discussed as follows:

4. 5. 1 Sampling Design:

The samples for this study have been selected from two broad types of areas: Distribution management (marketing channels) and Customers in Pune. The sampling design for both the areas involved two-stage process:

Stage 1: Selection of channels of distribution, and selection of customers.

Stage 2: Selection of Respondents.

The purposive sampling and stratified random sampling techniques have been used at stage one for the selection of distributors and customers in Pune. In stage 2, sample respondents have been selected by using simple random and stratified random sampling techniques and cluster sampling.

Stage 1.

(a) Selection of Distributors:

Distributors who have been chosen in the durable consuming electronic home appliances as business in Pune market can be classified into three groups:

1- Dealers
2- Wholesalers
3- Retailers

Though several distributors of these three-categories are engaged in management of distribution in Pune, it was not possible to include all of them in the study because of the limitations of resources and time. Therefore, it was decided to restrict the study to merely fifty (50) 25 dealers, 10 wholesalers and 15 retailers, (table 4.1)
(b) Selection of Customers of Pune City:

A hundred (100) customers from the city have been selected. These customers are using electronic appliances in their houses. These customers have been selected from two sources as follows:

1. According to the pin-code
2. And then according to house numbers in each area.

Stage 2:
Selection of sample respondents:

The respondents for this study were the dealers, whole sailers, retailers and customers. For these four groups (denoted as group A, B, C and D respectively), sampling techniques have been followed as:

Groups A (Dealer): The dealers who have been recognized and listed by syndicate of electronic home appliances (Dass, Cooperative Dialers) have been selected randomly from the list. The sample size is 25.

Group B (wholesalers): The wholesalers, who have been identified by researcher and distributors in Pune market, have been selected 10 as a sample size randomly.

Group C (retailers): The retailers who have been identified, by researcher which are approximately 100 retailers. So sample size of retailers has been selected 15 randomly.

Group D (customers): The customers were all families who have stayed in Pune. Stratified random sampling technique has been applied to include families from all the categories from area house numbers. The sample size that has been selected is 100 families.

In the case of all sample groups, additional respondent have been selected, keeping in mind that some respondents may be unavailable or unwilling to give interview. Unavailable or unwilling respondent have been replaced by the respondents from additional lot, which have not been added to total sample so that sample size remained unchanged.
Sample size of the four respondent groups in Pune and the total sample are illustrated as under:

Table 4.1
The distribution of sample

<table>
<thead>
<tr>
<th>Groups Sample size</th>
<th>A: Dealers</th>
<th>B: Wholesalers</th>
<th>C: Retailers</th>
<th>D: Customers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samples</td>
<td>25</td>
<td>10</td>
<td>15</td>
<td>100</td>
<td>150</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>10</td>
<td>15</td>
<td>100</td>
<td>150</td>
</tr>
</tbody>
</table>

4.5.2 The Sources and kinds of Data:

Keeping in view of the survey method in this study, the researcher utilized the two sources of information (data):

A-Primary data  B-Secondary data

A-Primary data: The collection of the primary data, the researcher has applied three different techniques, which are as follows:

1- Observation
2- Interview
3- Questionnaire

Personal interview method was followed for the collection of primary data. The purpose of the study was briefed to the respondents before they were requested to fill up the questionnaires so as to ensure their full co-operation, they were assured that the information supplied by them shall be kept strictly confidential and shall lose individual identity and shall be only used for the
purposes of statistical analysis. Hundred and fifty respondents were interviewed by this method.

Interviews were also conducted for the verification of information from the questionnaires.

**B-Secondary Data:** Analysis has been based on not only on the primary data but also on a careful study of pertinent secondary materials including books, journals, encyclopedia specialized commercial (business) and marketing directories, and reference to the library of Chamber of Commerce and Industry.

The researcher has made an attempt to locate the list and addresses of distributors and dealers, and the electronic appliances handed by them in the City of Pune.

4. 6. 0 The Existing Variables in the Research:

With a view to judge the importance, significance and working of each one of the variables, researcher has dealt with two variables groups as follows:

1-Dependent variables; such as “The role of dealers and distributors in the marketing”.

2- Independent variable such as “Work force quality, Condition of marketing operation, Competitive methods, Adopted policy and Sources of customer satisfaction/dissatisfaction”.

4. 7. 0 Designing the Questionnaires:

Keeping in view the objectives of the study, four sets of Questionnaires were prepared:

a-Questionnaires ‘A’ (see appendix ) was drawn for the ‘Group-A’ respondents-it aimed at bringing general and professional information and data relating to existing quality of work force, marketing operations, competitive methods and policies at the level of dealers.
b-Questionnaires ‘B’ (see appendix) was designed for ‘group-B’ respondents. These questionnaires aimed at seeking views regarding the aspects of work force like quality, marketing operation, and competitive methods and polices at the level of wholesalers.

c-Questionnaires ‘C’ (see appendix ) was prepared for ‘group-C’ respondents. It aimed at seeking information regarding the retailers’ role in the marketing to above-mentioned factors in questionnaires ‘A’ and ‘B’.

d-Questionnaires ‘D’ (see appendix ) was administered for the sources of satisfaction or dissatisfaction at the level of customers; such as measuring their perception on various aspects of satisfaction.

4. 7.1 Pre-testing of the questionnaires:

All the questionnaires were pre-tested with a view to determining the strengths and weaknesses of the questionnaires before a full-scale survey was made. As a result of pre-testing, some of the items were dropped and some others included as deemed relevant for the Study. It also helped in discovering and eliminating the ambiguity in some questions.

In this process the researcher made an attempt to prove the validity of questionnaires, on the basis of two methods as follows:

4. 7.1. A Armchair Validity:

In this connection, the researcher embarked upon designing questionnaires by using his knowledge in respect to marketing and distribution with consultation and deliberation with concerned professors and authorities on the subject.

4. 7.1. B Sampling Validity:

The method of sampling validity used by the researcher, before embarking on distribution of questionnaires were tested on few chosen members. Few of
typical members are selected randomly and accordingly questionnaires were distributed amongst them at two different times.

Therefore, the validity of questionnaires was confirmed by comparing them to one another.

4.8.0 Universe of Research:

The universe in this research is all of the dealers and distributors (retailer & wholesaler) of durable consuming electronic home appliances and people who are staying as household as customers in Pune.

As a whole these groups of the marketing channel members, take the risk of sales and distribution of above-mentioned appliances.

4.9.0 Time Frame:

The duration of this study was from May 1999 to January 2002. The researcher took all the interviews in the city of Pune himself. The work of data collection was completed in approximately eight months between November 2000 to June 2001.

4.10.0 Data Analysis:

The data collected through the questionnaires was tabulated, analyzed, and interpreted. However, before starting the work of tabulation and analyzing all the questionnaires were edited very carefully for completeness.

To maintain accuracy and uniformity as far as practicable all possibilities of statistical errors and bias were minimized. In some questionnaires in which all the questions were not answered the respondents were requested to supply the missing information. The tabulation of the information supplied in the questionnaires was done both manually and through electronic devices. The tabulated data was analyzed with the help of some statistical tools.
In order to measure the qualitative responses such as opinion, attitude, perception etc, the qualitative scale was converted to quantitative one.

For example; to the response, if a respondent ranked on attribute in any place of five point Likert-type scale comprising of: Poor, fair, good, very good and excellent, that was converted to quantitative scale by taking poor as one; Fair as two; good as three; very good as four; and excellent as five.\(^1\)

This was based on the assumption that the difference between poor and fair, is the same as between fair and good and very good and excellent i. e., the difference between different categories were treated as equally spaced.

By quantifying the qualitative scale it became possible to make use of statistical analysis.

4.10.1 Use of Statistical Tools:

Simple statistical tools like percentage mean, mode, variance; tests of significance have been used to analyze data. These are as follows:

a) Weighted mean score:

'Weighted mean score' has been used to measure the level of the attributes, opinions, which were scored by individual respondents on the five – point Likert – type scale.

b) Variance:

It is a powerful tool to test the research questions such as finding out the equality of two means or several means.\(^2\)

C) Chi-square test:

Chi-square test. As an important non-parametric test, has been used in this study to test significance of co- relation (association) among attributes.\(^3\)

D) Multiple Regression:

'Multiple regression, is a useful test for both non – parametric and parametric used in various types of data.\(^4\)
It is widely used in large-scaled samples. In this study multiple regression has been implemented to test and to measure the significant co-relation between attributes and opinions of the respondents (customers).

4.11.0 Data Interpretation:

Based on the analysis and the derived statistics, important conclusions were drawn, recommendations made and the limitations noted.

4.12.0 Limitations of the Study:

The following limitations have been noticed regarding this research:

1-Although the letter released by University of Pune announced that the information collected only be used for academic purpose, respondents (dealers and distributors) were not so eager to cooperate and the some of them refused to be interviewed, even some questioned the validity of the University letter.

2-Some of the distributors (esp. retailers) has traditional systems of marketing and distribution. In spite of the fact that all questions were simple, the majority of them felt uneasy to answer. So the researcher had to explain questions one by one.

This took a lot of researcher’s time (even a few days just for one questionnaire to be completed).

3-The hierarchical distributing system of the electronic home appliances at Pune market consists of dealers and retailers respectively. So to speak it seemed difficult to find wholesalers. Therefore it is fair to say that the real Wholesalers cannot be easily distinguished from these two groups mentioned-above.

4-Another serious problem can be put the insufficient knowledge of the interviewers general English. The researcher then had to speak through an interpreter (Hindi, Marathi, Gujarathi). It took a lot of time again.

5-In the source of the research, researcher was faced with some variables which were out of his control, some of them were included.
A) No resource materials for studying the marketing and distribution management in the case of durable consumers electronic home appliances.

B) Lack of cooperation by some managers’ especially General Manager of the electronic home appliance syndicate. He was not ready and willing to give any information out of his office.

C) Lack of cooperation by some distributors and customers at Pune market. Ten dealers and four wholesalers as well as eight retailers didn’t complete the questionnaires and given them back.

6-The importance and secrecy of market information for distributors specially in the atmosphere of growing competition was a serious problem in the process of research.

7-As far as the novelty of this research and scarcity of the corresponding (related) books are concerned, the researcher had to devote a lot of time to gather the research materials.

4. 13. 0 The Scheme of Presentation of the Study:

The study has been arranged in six chapters:

Chapter-1: Presents meaning and a conceptual frame work of what the marketing preamble and conceptual issues are and how literature review of the study has been made.

Chapter-2: Presents meaning and conceptual framework of what the distribution management (marketing channels) is and also depicts the emergence and function of distribution management in the marketing.
Chapter-3: Illustrates the profile of dealers and distributors at the Pune market in the line of durable consuming electronic home appliances, regarding the numbers, brand names and on the whole, the data base of dealers and distributors at Pune market.

Chapter-4: Gives the methodological issues and chapter plan of the study, which includes emergence of the study, significance of the study, scope of the study, objectives, research questions, collecting data, sampling design, questionnaire design, data analysis and limitations of the study.

Chapter-5: Evaluates the data processing and analysis, which has been collected through secondary and primary data in this Study. This chapter is divided into four sections, related to each group for dealers, wholesalers, retailers, and customers respectively.

Chapter-6: Is the concluding chapter. This chapter is divided into three sections:
Section 1-Over viewing of findings of the four groups through interview and observation have been presented in section 1.
Section 2-Presents the findings of four groups (dealers, wholesalers, retailers and customers) through questionnaires.
Section 3- Conclusions drawn, suggestion.
Notes and References:
1-Donald R. Cooper and Pamela S. Schindler 'Business Research Methods’ (Tata Mcgraw-Hill, Copyright 1998 Chapter 9.
3-Ibid, Chapter 7.
4-A.M Shirsagar ‘Linear Model’ (Publisher, Marcel Dekkar i.n.c, 1983. Chapter 2.