RESEARCH METHODOLOGY
CHAPTER V
RESEARCH METHODOLOGY

5.1 INTRODUCTION

This chapter discusses in detail the methodology adopted to study the factors influencing Brand Personality. This chapter discusses the results revealed from pilot study and the research design used for the study. Also the sampling and the brand selection for the study, the variables used for the study, and tools used for analysis are discussed.

5.2. RESEARCH DESIGN

A research design is the arrangement of conditions for collection and analysis in a manner, which aims to combine relevance to the research purpose with economy in procedure.

The research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Since the research problem is well defined and an attempt is made to describe the existing phenomena relating to the measurement of brand personality, this research well fits into empirical research design.

Descriptive research is a way of gaining knowledge by means of surveys and fact finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present. In social science and business research the term used is ex post facto research for descriptive research studies. The main characteristic of this method is that the researcher has no control over the variables, but can report what has happened or what is happening (C.R.Kothtari 2004). The methods of research utilized in descriptive research are survey methods of all kinds, including comparative and correlation methods.

5.3 DATA COLLECTION

The study is based on the survey of the respondent. The data required for the research purpose will be obtained from both primary and secondary sources.
5.3.1 THE PRIMARY SOURCES

The primary data was collected from the sample size of 402 respondents living in Madurai city. The questionnaires were left with the respondents and given sufficient time to fill up. The data was collected from the period of December 2010 to January 2012.

Questionnaire was prepared based on the Jennifer Aaker dimension of brand personality. The questionnaire contained 42 questions relating to the 5 brand personality dimensions. The other 20 questions were related to 5 human personality dimensions 6 questions were related to study the personal and demographic dimensions of the customer.

5.3.2 THE SECONDARY SOURCES

Information related to automobile market and its system, history of Madurai district, Maruti dealerships, and literatures related to the research, collected from various secondary sources. Various sources of information are-

- Newspapers and Magazines
- Company Literatures
- Reports and Publications of National and International organisations.
- Reports of Maruti Suzuki India Ltd and RBI.
- Various Research Journals & Periodicals.
- Various websites on Internet.
- E journals and reports available on Internet.

5.4 PILOT STUDY

Pilot study report provides information about the trail survey. Pilot study used to test the reliability and validity of the instrument, confirming the instrument for conducting research, determining the sample size required for the research study and finally to confirm the research model proposed to use for further research.
5.4.1. Reliability Statistics for the Impact of Human personality on Brand personality

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.854</td>
<td>.846</td>
<td>62</td>
</tr>
</tbody>
</table>

Source: Primary Data

Cronbach’s alpha test is used to measure the reliability of the instrument being used and to get the response from the respondents. Above test refers that reliability of the overall measurement of human personality and brand personality scales. Minimum reliability for the instrument is required about .6 to .8 required for attaining minimum reliability. This study is having 0.846 alpha (i.e., 84.6% of reliability) values. It infers that this instrument attained standards reliability.

5.5. SAMPLE DESIGN

Sampling design is a design, or a working plan, that specifies the population frame, sample size, sample selection, and estimation method in detail. Objective of the sampling design is to know the characteristic of the population.

5.5.1 TYPE OF UNIVERSE:

This study is having the nature of infinite population. It is not easy to estimate the customers of Maruti swift in Madurai district. Customers can be from those who buy a car from Madurai, Maruti dealers or from other city Maruti dealers.

5.5.2 SOURCE OF DATA:

Data for this research study has been collected from the respondents who own a Maruti Suzuki Swift car.
5.5.3 BRAND SELECTION

Maruti is a trusted brand name which comes first into the mind of a person who wishes to buy a new car or a used car. Maruti was launched in India in 1983 and for the past 30 years it has become a household name among automobile users. Maruti started catering to the Indian automobiles industry with a single product - M800 (car), today Maruti Suzuki has nearly 17 brands and 150 variants, catering to all segments of customers. Maruti has got products ranging from Rs.2.5 lacs to Rs.25 lacs. Maruti has been ranked first in the customer satisfaction ranking, for India by global marketing information firm JD power Asia Pacific for consecutively 13 years from 2000. Maruti also provides services station at every 25-30 kilometres on the highways and has the maximum number of service stations thought the country.

5.6 SAMPLE SIZE DETERMINATION

5.6.1 NATURE OF UNIVERSE

The universe for this study is heterogeneous in nature. This study has Swift customers from different areas of Madurai city. This study is found to be infinite population in nature.

5.6.2 NUMBER OF CLASSES PROPOSED:

This study measures the factors which influences the Brand personality of automobile industry in Madurai city.

5.6.3 SAMPLE SIZE CALCULATION

Sampling error can be controlled by selecting adequate size. Researcher specified the precision for that wants in respect of estimation concerning the population parameter. In this case researcher desired precision is ± 5 i.e. the true values mean not less than 95%. Researcher accepts that the acceptable rate of error (e) is equal to 5%.

Researcher uses the following formula for deciding the required sample size for this study.

\[ n = \frac{z^2 \times \sigma^2}{e^2} \]

Here, \( n = \) size of the sample
\( z = \) the value of standard variate at a given confidence level. Here the confidence level is 95% and assumed to be a normal distribution. So, the table value under normal curve is 1.96.
e = acceptable error

$\sigma_p$ = Standard deviation of the population calculated by taking functional variables of the respondents as the key source for deciding sample size.

Hence, the sample size required for this study is

$$n = \frac{(0.5115)^2 \times (1.96)^2}{(0.05)^2};$$

$$n = 0.2616 \times 3.840 / 0.0025 = 401.8$$

So, 402 respondents are required for this present study. Finally, researcher decided to take over the lower limit of sample size as 402 samples.

5.6.4 SAMPLING TECHNIQUE

The researcher adopted convenience sampling, which is a non-probability sampling technique. Convenience sampling is a type of non-probability sampling which involves the sample being drawn from that part of the population which is close to hand. That is, a sample population selected because it is readily available and convenient. The researcher using such a sample cannot scientifically make generalizations about the total population from this sample because it would not be representative enough. (C.R.Kothtari 2004).

5.7 METHOD OF ANALYSIS

5.7.1 ANALYSIS OF VARIANCE

One way Analysis of Variance was applied to identify if there is any variation between influencers of high involvement and low involvement factors which influencing Impact of Human personality for determining Brand personality of Maruti Swift owners.

5.7.2 CRONBACH’S ALPHA

In statistics, Cronbach's alpha is a coefficient of internal consistency. It is commonly used as an estimate of the reliability of a psychometric test for a sample of examinees. It was first named alpha by Lee Cronbach in 1951, as he had intended to continue with further coefficients. The measure can be viewed as an extension of the Kuder–Richardson Formula 20 (KR-20), which is an equivalent measure for dichotomous items. Alpha is not robust against missing data. Cronbach's alpha statistics is widely used in the social sciences, business, nursing, and other disciplines for obtaining the average variance extracted (AVE). The term item is used throughout this article, but items could be anything — questions, raters, indicators —
of which one might ask to what extent they "measure the same thing." Items that are manipulated are commonly referred to as variables. The theoretical value of alpha varies from zero to 1, since it is the ratio of two variances. However, depending on the estimation procedure used, estimates of alpha can take on any value less than or equal to 1, including negative values, although only positive values make sense. Higher values of alpha are more desirable. Some professionals, as a rule of thumb, require a reliability of 0.70 or higher (obtained on a substantial sample) before they will use an instrument. Obviously, this rule should be applied with caution when \alpha has been computed from items that systematically violate its assumptions. Furthermore, the appropriate degree of reliability depends upon the use of the instrument. For example, an instrument designed to be used as part of a battery of tests may be intentionally designed to be as short as possible, and therefore somewhat less reliable.

5.8 Scope of the Study

In this study the researcher has complied to make a confirmatory study of Jennifer Aaker brand personality for Indian Automobile brand. A separate study can be made to explore the Indian brand personality dimensions. In future this study can be conducted in any other city or a village anywhere in India to study the brand personality of a brand.

This kind of a study will help the marketing managers to build a strong brand with a strong positioning strategy. This study was conducted only for Maruti swift and this study can be extended to all other brands of Maruti and a consolidated brand personality of Maruti Suzuki in Madurai city can be deduced, which will further improve the brand positioning.

5.9 Limitations of study

This is study has been made in Madurai and this cannot be generalized to other cities, since culture plays an important role on brand personality. In case of other cities human personality may have different impact on the brand personality.