CHAPTER 3
RESEARCH METHODOLOGY

In this study, an attempt has been made to measure the customer satisfaction and how it influences renewal/non-renewal of credit cards by the credit cardholders. Because of its' cosmopolitan character, Baroda city in the state of Gujarat, India, was chosen as the universe for the study.

3.1 RESEARCH QUESTION FOR THE STUDY

The basic research question in point was: what makes the credit card holders satisfied or dissatisfied with their credit cards and what retains or detains them in order to continue/discontinue with their credit card usage. An in-depth review of literature was done in order to develop a sound theoretical framework. This revealed that not much substantial research had been researched in the field of customer satisfaction, in India. A majority of the researches in India have dealt with banking sector as a whole but have rarely dealt with the micro-component of banking sector such as credit cards1. Therefore, this study is an attempt to study a micro-component of the banking sector i.e., credit cards. It has tried to comprehensively include the various attributes of credit card so as to measure satisfaction of credit card holders. The hypothesis of study was framed on the basis of prior research and intuition.

The study has been conducted under the framework of the following hypothesis.

“There is a positive association between satisfaction of credit cardholders and renewal of membership of credit card.”
The scope of the study was restricted to the ‘silver’ or the ‘classic’ card category of the credit cards. It must be noted that credit cards now-a-days are being popularized by the banks as an easy payment device for the masses. Of all the categories available for a credit card, the benefits and features of the ‘silver’ or the ‘classic’ card category are designed to best suit the masses. This is in contrast with the benefits and features of other categories such as ‘gold’ that are designed to suit the elite.

The information required for the study was collected from the credit cardholders and its’ users as well as the banks and their respective Direct Sales Associates.

3.2 METHODOLOGY

The study used the following methodology:-

3.2.1 UNIVERSE FOR THE STUDY

The study was conducted on the credit cardholders in the city region of Baroda for the following reasons²:

- The first reason being the population, cosmopolitan profile of population, sheer number of credit cardholders and a strong retail consumer culture.
- The second reason is the increasing growth rate of credit cards in smaller cities like Baroda, Indore and Nasik, thus making it all the more relevant.
- The third reason being the easy accessibility of the respondents. The intensive nature of research required constant interaction with the respondents and extensive fieldwork, hence justifying the choice of the universe for the study.
3.2.2 Sampling Plan

• Sample Method

The method adopted for the sampling was stratified judgment sampling. The reason for adopting stratified judgment sampling was decided on the following bases:

• The method allowed proper representation of different credit cardholders who have a good presence in the city of Baroda. Also, it helped in selecting the right category of the card i.e., silver, gold etc., though the present study limited itself to the ‘silver’ or ‘classic’ card category, the most common and popular of all among the various categories offered by the banks.

• The credit cardholders of the following banks were considered as these banks have a fair number of their credit cardholders in the city of Baroda: Citibank, Standard Chartered bank, ICICI bank, State Bank of India & Bank of Baroda.

• For each of the five above mentioned banks a set of 30 credit cardholders was selected by the method of Judgment Sampling. The reason for adopting the same was “satisfaction” or “dissatisfaction” with the credit cards is more a result of using the credit cards than anything else. Therefore, the credit cardholders who used their card at least 6-8 times in a year were considered apt for the study.

• Sample Size

The collective sample size is 150 i.e., 30 for each of the credit card issuing bank for the entire research. The reasons for opting in for a smaller size are the following:

• The whole idea of tracking stood on the basis of prior scheduling and in absence of a relatively smaller sample size the scheduling for lengthy study would have gone haphazard.
• The study required to meet the respondents at least 3 times during the entire study for the three different phases, therefore, amounting to a total contact of 450 (3*150) times.

• A smaller sample size allowed better interaction and an in depth probing of the sample units.

Demographic details of the respondents are discussed below:

<table>
<thead>
<tr>
<th>Table 3.1 Age-wise Descriptions of Respondents.</th>
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<tbody>
<tr>
<td>Age (in yrs.)</td>
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<tr>
<td>Respondents in Numbers</td>
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<tr>
<td>Respondents in %</td>
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</table>

Source: Fieldwork

The table 3.1 depicts that .7 percent of respondents were in the age group of less than 25 yrs; 23 percent were in the age group of 25-35 yrs; 48 percent were in the age group of 36-45 yrs, 21 percentage were in the age group of 46-55 yrs and 6.7 percent were in the age group of 55 above yrs.

<table>
<thead>
<tr>
<th>Table 3.2 Education-wise Descriptions of Respondents.</th>
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<tbody>
<tr>
<td>Education Qualification</td>
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<tr>
<td>Respondents in Numbers</td>
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<tr>
<td>Respondents in %</td>
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</table>

Source: Fieldwork
The table 3.2 depicts that 8.7 percent of respondents are metrics to undergraduates; 48 percent are graduates; 26.7 percent are post-graduates, 10 percent are doctorates and 6.7 percent are vocationally qualified.

<table>
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<tr>
<th>Table 3.3 Income-wise Description of Respondents</th>
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<tr>
<td>Income (in INR)</td>
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<tr>
<td>Respondents in Numbers</td>
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<td>Respondents in %</td>
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</table>

Source: Fieldwork

The table 3.3 depicts that 10 percent respondents are in the income group of 60,000-1,00,000 INR; 56.7 percent are in the income group of 1,00,000-2,50,000 INR; 25.3 percent are in the income group of 2,50,000-5,00,000 INR and 8 percent in the income group of 5,00,000 INR and above.

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<th>Table 3.4 Occupation-wise Descriptions of Respondents.</th>
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<tr>
<td>Occupation</td>
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<tr>
<td>Respondents in Numbers</td>
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<td>Respondents in %</td>
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</tbody>
</table>

Source: Fieldwork

The table 3.4 depicts 6.7 percent respondents are in the occupation of business; 64 percent respondents are working in the salaried public sector; 24.7 percent respondents are working with the salaried private sector and 4.7 percent are self employed professionals.
• DATA COLLECTION

The data was collected by personally interviewing 150 respondents (30 for each bank) for three different phases with the help of pre-tested, non-disguised structured questionnaires given in the Annexure-I. The purpose of the research was disclosed to the respondents and hence, it was a non-disguised research. For each phase, each time, the questionnaires were pre-tested on a set of 15 respondents. The respondents were required to respond to different attributes on a Likert scale of 1-5 (1 refers to strongly disagree and 5 refers to strongly agree) and other aspects, were also taken into account. After pre-testing, changes were made accordingly to suit the needs of both the researcher & the respondents.

3.3 THE RESEARCH INSTRUMENT (QUESTIONNAIRES)

For various items of the questionnaire, for the consumers, previous research, literature, intuition and discussion with experts in the field were undertaken. The questionnaires contained closed ended questions. (Questionnaires for three different phases are given in the Annexure-I).

Three different questionnaires were used for three phase. Each phase aimed to measure one or the other aspect of credit card usage as discussed below. The three questionnaires were designed keeping in mind the SERVQUAL instrument (Parsuraman et al, 1988) with due adaptation to the credit card usage. Carman (1990) notes that it takes more than a simple adaptation of the SERVQUAL items to address service quality effectively in some situations and researches are advised to make the changes accordingly3. The perception of the respondents were measured on the various attributes on a Likert Scale of 1-5, with 1-
Strongly agree, 2 - Agree, 3 - Neutral, 4 - Disagree and 5 - Strongly disagree. Likert Scale was used as it is easy for the respondents to answer & also equally easy for the researcher to interpret. The following paragraph discusses the questionnaires for three different phases.

THE FIRST PHASE
The first phase of the study intended to seek perceptions of the respondents along the following attributes:

1. Application form
2. Sales executive
3. Service manual
4. Fee and interest structure

THE SECOND PHASE
The second phase aimed to find out the frequency of using the credit card, possible replacements of the credit card and studied the usage pattern and perceptions towards the following attributes.

1. Frequency and kind of usage associated with the credit card.
2. Benefits.

THE THIRD PHASE
The third and the final phase was an elaborate one. It aimed to find out the perceptions of respondents towards the following attributes.

1. Acceptance of & transactions with the credit card
2. Statements and payments
3. Customer service
4. Schemes

At the end of these three phases, a dichotomous question (Yes/No) regarding the renewal of their existing credit card was asked.

3.4 UNITS OF MEASUREMENT

This study has used the various attributes such as acceptance of and transactions with credit cards, customer services, etc, as units of measurement of customer satisfaction. The weighted average scores generated were used to measure the perceptions towards credit card and to conduct discriminant analysis and cluster analysis.

3.5 DATA ANALYSIS AND USE OF STATISTICAL TOOLS

Statistical tools like percentages, weighted average scores, besides different multivariate data analysis techniques were used in an attempt for better and in depth analysis. The data were analyzed and results were interpreted primarily with the help of Weighted Average Scores, Cluster Analysis and Discriminant Analysis. An explanation regarding the use of these techniques is as follows:-

3.5.1 WEIGHTED AVERAGE METHOD

In the study, Weighted Average Scores were calculated at suitable places where the respondents were asked to rate different attributes of credit card and its usage. The extent of agreement/disagreement shown to different dimensions related to credit card use were got rated on a five point Likert scale with the responses indicated in terms of ‘strongly agree,’
agree,' 'neutral,' 'disagree,' and 'strongly disagree.' The score range was from 5 point to 1 point with low scores indicating the disagreement & high scores indicating greater dimension which was of a positive nature, a weight of five was allotted to it, if he rated a factor 'agree,' a weight of four was given and so on. On the basis of frequency of ratings for each attribute, weighted average scores for each attribute were computed.

3.5.2 DISCRIMINANT ANALYSIS

In this study, Discriminant Analysis has been used to explore if there is difference in the two different categories of respondents i.e. renewals and non-renewals i.e. respondents who have renewed their credit card and respondents who have not renewed their credit card to profile the behavior of two segments based on their ratings of attributes. Secondly, it was used to explore if there are difference in the two different categories of respondents i.e. those holding the private label bank credit card and those holding the national label bank cards and to profile the behavior of two segments based on their rating of the various attributes. Discriminant Analysis is a statistical technique used to study the discriminating factors for difference between two or more groups of persons/objects with respect to several variables simultaneously. If we have 'n' person measured on 'm' variables, profile of each persons can be portrayed as a point in m dimensions. If we know the groups differ in terms of average profiles, called centroids, we might expect to find different regions in space. Discriminant analysis is a technique for analyzing data when the criterion or dependent variable is categorical in nature and the predictor or independent variables are interval in nature. It provides an objective assessment of differences between groups on a set of independent variables. For understanding group differences, discriminant analysis lends insights into the
role of individual variables as well as defining combinations of these variables that present
dimension of discriminating between groups (Hair et al., 1995 p.193).4

Discriminant Analysis multiplies each independent variable by its corresponding weight and
adds these products together. The result is a single composite discriminant score for each
individual in the analysis group mean is arrived at, by averaging the discriminant scores for
all the individuals within a particular group. This group mean is referred to as a centroid. The
study employs two group discriminant analyses i.e. when criterion variable has two
categories and this technique is called as two- group discriminant analysis.

As discriminant analysis distinguishes on the basis of a single categorical dependent variable
and several metric independent variables, in the present study, the dependent variable was
categorical and respondents’ perception of the various attributes was considered as a set of
independent variables.

Two computational approaches are available to derive a discriminant function- the
independents together and the stepwise. The direct method or independents together has been
used as the study required the discrimination to be based on all predictors.

3.5.3 CLUSTER ANALYSIS
In this study another analysis is used, called as cluster analysis. Cluster analysis is a class of
technique used to classify objects or cases into relatively homogeneous groups called as
cluster objects. In each cluster, objects tend to be similar to each other and dissimilar to
objects in other clusters. Though, both cluster analysis and discriminate analysis are
concerned with classification. However, discriminant analysis requires prior knowledge of the cluster or group membership for each object or case included, to develop classification rule. In contrast, for cluster analysis, there is no prior information about the group or cluster membership for any of the objects, groups of cluster is suggested by the data and not defined a prior.

The variable on which the clustering is done was based on past research, theory, or the judgment of the researcher. In this case, the variables were considered to be the ratings on the various attributes of credit card and its usage, and were used to create clusters.

As clustering procedures may be hierarchical or non-hierarchical, they can be used in tandem to generate better results. In the study, the hierarchical cluster analysis was conducted & studied. Later, the number of groups were identified and used as pre-specifications for k-means cluster analysis. The clusters so generated were interpreted in terms of cluster centroids.

3.6 STATISTICAL PACKAGE USED FOR THE STUDY
SPSS version 7.5 was used for discriminant and cluster analysis.

3.7 LIMITATIONS OF THE STUDY
Some of the limitations of the study are as follows:

- Research on Self-Generated Validity theory suggests that when responding to surveys, respondents are often induced by the measurement process to form judgments that would otherwise not be formed, that in turn influences subsequent
responses and behaviors, making them more consistent with the expressed judgments (Feldman and Lynch 1988, Simons, Bickart, and Lynch, 1993). Moreover, such measurement induced judgment, are unlikely to have formed these judgments beforehand or indeed given the issue much prior thought (Kardes 1988, Waiver, 1985). In this case, this issue holds relevance because, the respondents who would have favorably rated their perceptions on the various attributes of their credit card, could have decided to renew their credit cards & the case might hold true for respondents who have unfavorably rated their perceptions on various attributes of credit card, could have decided not to renew their cards. In the marketing literature, several studies have revealed that the process of measuring intentions, changes subsequent purchase behaviors, a phenomenon that has been called the Mere-Measurement Effect (Mortitz, Johnson, and Schmullun, 1993) and the Self-Prophecy Effect (Spangenberg and Greenwald, 1999). This effect could have come in the way of respondents, thereby renewing or non-renewing their credit cards on the basis of their ratings of the various attributes of the credit cards, given in three phases.

- Any study based on a consumer survey through a pre-designed questionnaire suffers from the basic limitation of the possibility of difference between what is recorded and what is truth, no matter how carefully the questionnaire has been constructed & the fieldwork conducted. This constraint arises due to the fact that respondents may not be willing to impart true information and even if they want to do so, differences are bound to incur because of the well known problems of fillers in communication process. However, a care has been taken to get to know the truth by developing a
rapport with the respondents but there is hardly any foolproof method for eliminating the possibility of error.

• Although, utmost care has been taken to include all the credit cards that have a good presence in the city of Baroda, many credit cards in spite of their good presence, in the city of Baroda, could not be included either because of their propriety nature or their absence in the 'silver' or 'classic' category.

• Credit card as a service industry is a relatively newer in India, and hence a lack of systematic information & statistics posed a problem for the research. The problem is compounded, as there is hardly any systematic information & statistics available for the same for the city of Baroda.
REFERENCES


