CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

3. INTRODUCTION

A study on retail business is all about the study of the relationship of customer satisfaction, loyalty, and profitability. Today, customer being provided with an array of choices, is the king. He can choose what to buy, what not to buy and from where. So, a good retailer will always strive to achieve maximum consumer satisfaction. After customer satisfaction comes loyalty which plays a major role in bonding and cementing the relationship of the retailer with the consumer. Last but not the least is the profit part. It is the most important aspect of any business.

Consumer behaviour has direct influence on consumer satisfaction. Consumer behaviour is affected by four psychological factors including perception. This being the case, the researcher believes that factors in the perceiver, factors in the target and factors in the situation influence the perception of the consumer towards an outlet. This study attempts to find consumer perception towards factors of outlet. This study also attempts to find whether consumer perception influences consumer satisfaction and store loyalty. Further it will study the relationship that exists among consumer perception, consumer satisfaction and store loyalty.

The formulation of research question and null hypotheses of research is introduced here. It also includes the selection of sample for the study and the methods adopted to analyze the data collected. The instrument used and the reliability and validity results of the instruments for the study are also presented. The sampling frame for the study is discussed here in. Limitations of the study are also mentioned in the end of the section.

3.1. RESEARCH QUESTION

The research questions are raised based on the research gap and directions identified through the literature review. They are

- While selecting an outlet for purchase is there any association between demographic and psychographic factors of consumers and importance given to marketing mix of outlet.
- Will there be any difference in the perception amongst consumers grouped on the basis of demographic and psycho graphic variables.

- Will there be any difference in the consumer satisfaction amongst consumers grouped on the basis of demographic and psycho graphic variables.

- Will there be any difference in the store loyalty amongst consumers grouped on the basis of demographic and psycho graphic variables.

- Is there any correlation between consumer perception and consumer satisfaction.

- Is there any correlation between consumer perception and store loyalty.

- Is there any relationship among consumer perception, consumer satisfaction and store loyalty.

3.2. FORMULATION OF HYPOTHESES

Hypotheses are formed with a clear understanding about the problem to steer through the research. Hypothesis guides and directs the research. Hypotheses provide a frame work for organizing the conclusions and results. Thus the researcher has framed the following hypothesis after the necessary literature survey and discussion with the experts.

Hypotheses 1: There is no association between demographic and psychographic factors of consumers and importance given to marketing mix of the outlet in selection of outlet.

a. There is no association between age and importance given to marketing mix of the outlet in selection of the outlet.

b. There is no association between gender and importance given to marketing mix of the outlet in selection of the outlet.

c. There is no association between occupation and importance given to marketing mix of the outlet in selection of the outlet.

d. There is no association between marital status and importance given to marketing mix of the outlet in selection of the outlet.
e. There is no association between income and importance given to factors of the outlet in selection of the outlet.

f. There is no association between amount spent per month in the outlet and importance given to factors of the outlet in selection of the outlet.

g. There is no association between proximity of the outlet and importance given to factors of the outlet in selection of the outlet.

Hypotheses 2: The perception of consumers grouped on the basis of demographic and psycho graphic variables towards factors of the outlet is homogeneous.

a. The perception of single and married respondents’ towards factors of the outlet is homogeneous.

b. The perception of different age group respondents’ towards factors of the outlet is homogeneous.

c. The perception of different occupation group respondents’ towards factors of the outlet is homogeneous.

d. The perception of different amount spent per month in organized retail outlet group respondents’ towards factors of the outlet is homogeneous.

e. The perception of different proximity group respondents’ towards factors of the outlet is homogeneous.

Hypotheses 3: The consumer satisfaction of consumers grouped on the basis of demographic and psycho graphic variables towards outlet is homogeneous.

a. Consumer satisfaction of single and married respondent is homogeneous.

b. Consumer satisfaction of respondents of different age group is homogeneous.

c. Consumer satisfaction of respondents of different occupation group is homogeneous.
d. Consumer satisfaction of respondents of different income group is homogeneous.

e. Consumer satisfaction of respondents of different amount spent per month group is homogeneous.

f. Consumer satisfaction of respondents of different proximity group is homogeneous.

**Hypotheses 4: The store loyalty of consumers grouped on the basis of demographic and psycho graphic variables towards outlet is homogeneous.**

a. Store loyalty of single and married respondents is homogeneous

b. Store loyalty of respondents of different age group is homogeneous.

c. Store loyalty of respondents of different occupation group is homogeneous.

d. Store loyalty of respondents of different income group is homogeneous.

e. Store loyalty of respondents of different amount spent per month group is homogeneous.

f. Store loyalty of respondents of different proximity group is homogeneous.

**3.3. INSTRUMENTATION**

This section gives details of the research instrument used for the study. There are three major dimensions considered in the study.

1. Perception towards organized retail outlet.

2. Consumer satisfaction towards organized retail outlet.

3. Store loyalty towards organized retail outlet.

The details regarding the items in each dimension, the pattern of scoring, the reliability of the questionnaire used for data collection and the validity of data collected are discussed below in detail.
3.3.1 Perception towards outlet

A new instrument was constructed to study consumer perception towards organized retail outlet. Based on the review of literature, six factors of outlet were identified as major contributors to consumer perception towards outlet. A one hundred and twenty four sentence pool representing perception towards factors of outlet was created.

After pilot study since the instrument was found to be very long by consumers, the number of statements was reduced to seventy nine, grouped under four headings namely product and price, store atmosphere, sales personnel and service and promotion,

The first dimension is perception towards outlet. It means perception towards factors of outlet. So, it is further subdivided into 4 dimensions

i. Perception towards product and price
ii. Perception towards store atmosphere
iii. Perception towards sales personnel and service
iv. Perception towards promotion

i. Perception towards product and price of the outlet

Statements representing the consumer perception with respect to different aspects of product and price such as product quality, quantity, brand, variety, availability, expiry date, offers are framed. Consumers are asked to represent their perception by rating on a five point scale for each statement. The five point scale used are, strongly agree (SA), agree (A), neither agree nor disagree (N), disagree (DA) and strongly disagree (SD). For strongly agree, agree, neither agree nor dis-agree, disagree and strongly disagree the numerical value 5,4,3,2 and 1 respectively are given. The minimum value that can be obtained is 19 and the maximum value that can be obtained is 95. On the basis of the values, perceptions are classified as follows: between 19 and 38 is very low perception, between 38 and 57 is low perception, between 57 and 76 is high perception and between 76 and 95 is having very high perception.
ii. Perception towards Store Atmosphere of the outlet

Statements representing the consumer perception with respect to different aspects of store atmosphere such as, search convenience, display convenience, neatness, window display, layout, presentation, air condition, music, fragrance, colour and shopping experience are framed. Consumers are asked to represent their perception by rating on a five point scale for each statement. The five point scale used are, strongly agree (SA), agree (A), neither agree nor disagree (N), disagree (DA) and strongly disagree (SD). For strongly agree, agree, neither agree nor dis-agree, dis-agree and strongly disagree the numerical value 5,4,3,2 and 1 respectively are given. The minimum value that can be obtained is 17 and the maximum value that can be obtained is 85. On the basis of the values, perceptions are classified as follows: between 17 and 34 is very low perception, between 34 and 51 is low perception, between 51 and 68 is high perception and between 68 and 85 is having very high perception.

iii. Perception towards sales personnel and service of the outlet

Statements representing the consumer perception with respect to different aspects of sales personnel and service such as, sales personnel greet, fixing the problem, readiness, assistance, manner, willingness, appearance and different aspects of services such as billing, kids zone, home delivery, payment option and exchange are framed. Consumers are asked to represent their perception by rating on a five point scale for each statement. The five point scale used are, strongly agree (SA), agree (A), neither agree nor disagree (N), disagree (DA) and strongly disagree (SD). For strongly agree, agree, neither agree nor dis-agree, dis-agree and strongly disagree the numerical value 5,4,3,2 and 1 respectively are given. The minimum value that can be obtained is 28 and the maximum value that can be obtained is 140. On the basis of the values, perceptions are classified as follows: between 28 and 56 is very low perception, between 56 and 84 is low perception, between 84 and 112 is high perception and between 112 and 140 is having very high perception.

iv. Perception towards promotion of the outlet

Statements representing the consumer perception with respect to different aspects of promotion such as, advertisement, festival decoration, price offer and product offer are
framed. Consumers are asked to represent their perception by rating on a five point scale for each statement. The five point scale used are, strongly agree (SA), agree (A), neither agree nor disagree (N), disagree (DA) and strongly disagree (SD). For strongly agree, agree, neither agree nor dis-agree, dis-agree and strongly disagree the numerical value 5,4,3,2 and 1 respectively are given. The minimum value that can be obtained is 15 and the maximum value that can be obtained is 75. On the basis of the values, perceptions are classified as follows: between 15 and 30 is very low perception, between 30 and 45 is low perception, between 45 and 60 is high perception and between 60 and 75 is having very high perception.

**Reliability**

Reliability refers to the extent to which a scale produces consistent results when repeated measurements are made. The reliability test was done on a sample of 60 consumers, considering 10 consumers from each of corporate chain outlet; Reliance Fresh, Aditya More, Nilgiri’s’, Heritage Fresh, Spencer’s Daily and Food Bazaar of Big Bazaar considered in the study. Reliability co-efficient was calculated using the Cronbach’s alpha formula for each factor of outlet. Reliability is obtained and the same is given in following table:

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Factors of outlet</th>
<th>Reliability co-efficient Cronbach’s Alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perception towards Product and Price</td>
<td>0.780</td>
</tr>
<tr>
<td>2</td>
<td>Perception towards Store atmosphere</td>
<td>0.798</td>
</tr>
<tr>
<td>3</td>
<td>Perception towards Sales personnel and Services</td>
<td>0.790</td>
</tr>
<tr>
<td>4</td>
<td>Perception towards Promotion</td>
<td>0.791</td>
</tr>
</tbody>
</table>

Prasanna and Venkatapathy (1999) reported reliability co-efficient of the scale used using the Guttman’s split half method. The reliability co-efficient attained by them is
Chapter III

reported as 0.6. Hariharan and Venkatapathy (2004) reported the reliability co-efficient as 0.53 using statistical method. The Guttman split-half coefficient with respect to perception towards store atmosphere is 0.798; perception towards promotion value is 0.791, perception towards sales personnel and services 0.790, towards product and price 0.780. All are having reliability value greater than or equal to 0.53. Therefore the instrument used for the study i.e. questionnaire is accepted.

Validity

The scale has been found to have adequate face validity.

3.3.2. CONSUMER SATISFACTION TOWARDS THE OUTLET

Statements representing the consumer satisfaction with respect to different aspects of outlet such as, product, price, store atmosphere, sales personnel, service and promotion are framed. Consumers are asked to represent their consumer satisfaction by rating on a five point scale for each statement. The five point scale used are, Highly Satisfied (HS), Satisfied (S), neither satisfied nor dissatisfied (N), dissatisfied (DS) and highly dissatisfied (HDS). For highly satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied and highly dissatisfied the numerical value 5,4,3,2 and 1 respectively are given. The minimum value that can be obtained is 13 and the maximum value that can be obtained is 65. On the basis of the values, perceptions is classified as follows: between 13 and 26 is very low satisfaction, between 26 and 39 are having low satisfaction, between 39 and 52 is high satisfaction and between 52 and 65 is having very high satisfaction.

Reliability

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Reliability co-efficient Cronbach’s Alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer satisfaction towards outlet</td>
<td>0.725</td>
</tr>
</tbody>
</table>

The reliability value (0.725) greater than 0.53 so, the dimension used in the instrument for the study is accepted.
Validity

The scale has been found to have adequate face validity.

3.3.3. STORE LOYALTY TOWARDS THE OUTLET

Statements representing store loyalty with respect to different loyalty towards outlet such as commitment loyalty, monopoly loyalty and other influencers like friends, promotion of other outlet are framed. Consumers are asked to represent their store loyalty by rating on a five point scale for each statement. The five point scale used are, strongly agree (SA), agree (A), neither agree nor disagree (N), disagree (DA) and strongly disagree (SD). For strongly agree, agree, neither agree nor dis-agree, dis-agree and strongly disagree the numerical value 5,4,3,2 and 1 respectively are given. The minimum value that can be obtained is 8 and the maximum value that can be obtained is 40. On the basis of the values, perceptions is classified as follows: between 8 and 16 is very low loyalty, between 16 and 24 are having low loyalty, between 24 and 32 is high loyalty and between 32 and 40 is having very high loyalty.

Reliability

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Reliability co-efficient Cronbach’s Alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store loyalty towards outlet</td>
<td>0.610</td>
</tr>
</tbody>
</table>

The reliability value (0.610) greater than 0.53 so, the dimension used in the instrument for the study is accepted.

Validity

The scale has been found to have adequate face validity.
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3.4. ADMINISTRATION OF DATA COLLECTION

The present study was carried out in Chennai District. Chennai district, formerly known as Madras district, is a district in the state of Tamil Nadu, in India. It is the smallest of all the districts in the state, but has the highest human density. The site was chosen, since it constitutes many organized retail outlets and also Chennai is the pioneer in adoption of modern retail in India. For the purpose of the study only the corporate retail chain format in food and grocery organized retail segment namely Nilgiri’s, Reliance Fresh, Heritage Fresh, Aditya More, Spencer’s Daily and Food Bazaar of Big Bazaar are considered.

3.5. PILOT STUDY

The tools for the collection of primary data were constructed by the researcher after properly reviewing the area of study. The questionnaire method was administered on a sub-sample of the respondents drawn out of the ultimate sample. 60 consumers were selected for pilot study. The questionnaire has been pre-tested and validated so as to meet the accuracy and reliability. In the light of the experience gained, the questionnaire was revised suitably and finalized after a suitable scrutiny. Prior to data collection the instrument was translated into Tamil by a professional translator. This helped the researcher to elicit the responses easily by explaining the question and statement clearly.

3.5.1. Results of pilot study

The reliability was calculated using Cronbach’s Alpha value. The analysis was done using the SPSS program. Total time taken to collect data from each respondent was approximately 10 to 15 minutes. Time was taken to explain the motive behind this research and other details. On the basis of pilot study, the necessary modifications were made in the instruments before proceeding to collect data for the final study. After incorporation of the results and modifications generated through the pilot study, the sample for the final study was selected.
Table No. 3.4. Reliability for the instrument of the study

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Dimension in the Instrument</th>
<th>Reliability coefficient Cronbach’s Alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>i. Perception towards Product and Price</td>
<td>0.780</td>
</tr>
<tr>
<td></td>
<td>ii. Perception towards Store atmosphere</td>
<td>0.798</td>
</tr>
<tr>
<td></td>
<td>iii. Perception towards Sales personnel and Services</td>
<td>0.790</td>
</tr>
<tr>
<td></td>
<td>iv. Perception towards Promotion</td>
<td>0.791</td>
</tr>
<tr>
<td>2</td>
<td>Consumer satisfaction towards outlet</td>
<td>0.725</td>
</tr>
<tr>
<td>3</td>
<td>Store loyalty towards outlet</td>
<td>0.610</td>
</tr>
</tbody>
</table>

The Guttman split-half coefficient with respect to perception towards store atmosphere is 0.798, perception towards promotion value is 0.791, perception towards sales personnel and services 0.790, towards product and price 0.780, followed by level of consumer satisfaction having 0.725 and level of store loyalty 0.610. All the dimensions have a reliability value greater than or equal to 0.53. So, the instrument used for data collection used for the study is accepted.

3.6. SAMPLE AND SAMPLING CHARACTERISTICS

For the purpose of the study, out of different segments of organized retailing, food and grocery segment is selected. Food and grocery segment occupies the first major portion of unorganized retailing and second major portion in organized retailing. There are different types of retailers in food and grocery organized retailing. Corporate retail chain type of retail outlet is considered for the purpose of the study, as it is found throughout India. Further corporate retail chain types of retail exist in various segments of organized retailing in India. Six corporate chain retail outlets of food and grocery namely: Aditya More, Big Bazaar’s Food Bazaar, Heritage Fresh, Nilgiri’s, Reliance Fresh and Spencers’ Daily were considered for the purpose of the study. The questionnaires were distributed to 150 consumers of each corporate chain in organized retail outlets located in different parts of Chennai by convenience sampling method. Omitting the incomplete
responses, 608 responses were considered for the study. The sample considered from each organized retail outlet is given in the table below

Table No: 3.5.

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Organized retail outlet</th>
<th>No. of questionnaire distributed</th>
<th>No. of response considered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nilgiri’s</td>
<td>150</td>
<td>93</td>
</tr>
<tr>
<td>2</td>
<td>Reliance Fresh</td>
<td>150</td>
<td>129</td>
</tr>
<tr>
<td>3</td>
<td>Heritage Fresh</td>
<td>150</td>
<td>98</td>
</tr>
<tr>
<td>4</td>
<td>Aditya More</td>
<td>150</td>
<td>97</td>
</tr>
<tr>
<td>5</td>
<td>Spencers’ Daily</td>
<td>150</td>
<td>97</td>
</tr>
<tr>
<td>6</td>
<td>Food bazaar(Big Bazaar)</td>
<td>150</td>
<td>94</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>900</strong></td>
<td><strong>608</strong></td>
</tr>
</tbody>
</table>

The sample collected from each retail chain was checked for completion and qualified for the analysis. Out of 150 samples collected from each corporate retail chain (Nilgiri’s, Reliance Fresh, Heritage Fresh, Aditya More, Spencers’ Daily and Food Bazaar), 57, 21, 52, 53, 53 and 56 respectively were in complete. Hence all the incomplete samples and those not meeting the sample criterion were eliminated to arrive at a sample of 93 from Nilgiri’s’, 129 sample from Reliance Fresh, 98 from Heritage Fresh, 97 sample from Aditya More, 97 sample from Spencers’ Daily and 94 sample from Big Bazaar (Food Bazaar).

3.7. ANALYSIS OF DATA

The collected data were analyzed with reference to each of the objectives of the study. Conventional tools like descriptive analysis (percentage analysis) confirmatory tools such as split half method and inferential tools such as z-test, one way analysis of variance (ANOVA), post-hoc test, chi-Square, coefficient of correlation and multiple
regressions were made use of for the study. The SEM (Structural Equation Model) is used to establish relationship between the dimensions. The statistical tools applied in the study are:

- **Z- test**

  Z- test is used to compare two groups based on their mean value of the scores. It is based on ‘Z’ distribution assumption. The test is based on normal distribution. Here the test is applied to test whether the samples grouped based on gender and marital status are homogeneous or not.

- **One Way Analysis of Variance (ANOVA)**

  When, three or more number of groups to be compared on the basis of their mean values, the ANOVA technique is used. One – Way ANOVA is applied when data are classified into various groups on the basis of one factor. In such case to compare and to find out whether the groups are homogeneous or not One-Way, ANOVA technique is used.

- **Post Hoc Test**

  Post Hoc test is used to find relationship between sub groups of samples that is to study the groups of respondents having different opinion from the other.

- **Chi Square**

  Chi square is used to find while selecting an outlet for purchase is there any association between demographic and psychographic factors of consumers and importance given to marketing mix of outlet.

- **Co-efficient of Correlation**

  Correlation co-efficient gives the relationship between two variables. In this study, correlation is applied to find whether there is any correlation between consumer perception and consumer satisfaction and whether there is any correlation between consumer perception and store loyalty.
Multiple Regression Analysis

Multiple regressions give the dependence of one variable on the other variables. Also it helps to identify that variable(s) which influences the dependent variable. In this study the researcher has used regression to find out the dimensions that influence the consumer satisfaction and store loyalty of organized retail outlet.

Structural equation model

There may be some occasions where there are several independent and dependent variables. Dependent variables at one stage may become independent variable at next stage. In this situation structural equation model is applied to establish the relationship between the variables.

3.7.1. Period of the study

The period of the research study is 4 years and 11 months, starting from September 2008 and ending in July 2013. The researcher took first eight months to review literature and to identify the research gap. Another six months were spent to draft the research design, to prepare data collection instrument. Four months were spent to conduct the pilot study and for finalizing the questionnaire. Two years have been spent to collect the data from the target respondents. The researcher took nine months to analyze and interpret the collected data and eight months to prepare the thesis.

3.8. LIMITATIONS OF STUDY.

- Due to the time pressure of the consumers it was difficult for the researcher to collect data from the respondents.

- The research was carried out with the sample size of 608 respondents from 6 food and grocery organized retail chains in Chennai District. So this study cannot be generalized to other organized retail outlets.

- Personal bias and prejudices of the respondents could have affected the result of the study.

- The researcher had certain difficulties in obtaining data from the consumers because of their reluctance to respond.
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SUMMARY

The research methodology applied enables to frame the instrument used for the research after conducting pilot study. Data are collected using the instrument and samples are selected by convenience sampling method. The data collected from 608 consumers are analysed using relevant statistical tools to obtain the objectives of the research. The analysis and discussions are presented in Chapter IV.