Chapter-III

Rationale, Scope, Objectives, and Research Methodology

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It involves the study of various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them.

It is necessary for the researcher to know not only the research methods or techniques but also the methodology. Researchers not only need to know how to develop certain indices or tests or how to apply particular research techniques, but they also need to know which of these methods or techniques are relevant and which are not, and what would they mean and indicate. Researchers also need to understand the assumptions underlying various techniques and they need to know the criteria by which they can decide that certain techniques and procedures will be applicable to certain problems and others will not. This means that it is necessary for the researcher to design a methodology suitable for his research problem as the same may differ from problem to problem.

Research methodology has many dimensions and research methods do constitute a part of the research methodology. The scope of research methodology is wider than that of research methods. Thus, research methodology includes not only the research methods but also the logic behind the chosen research methods and explains why we are using a particular method or technique and why we are not using others so that research results are capable of being evaluated either by the researcher himself or by others.

3.1 Rationale of the study

Retailing in India is at a crossroads. The Indian retail scenario is presently facing the similar situations as the ‘mom and pop’ stores in the developing nations faced at the emergence of
big box retailers. The new expansions of retail formats are adaptations of western formats fetching moderate to lukewarm success. The challenge lies in retailer’s understanding of customer’s needs and motivations, and most importantly, such parameters and perceptible dimensions of the shopping experience which are considered more important by consumers in evaluating a store.

There is a vast scope for research and analysis as the retailing environment in the country is changing rapidly, leading to changed customer expectations and choice of retail store format. This phenomenon is quite significant in the Indian retail market with the introduction of larger and more diverse retail formats by organized players. A variety of formats are being rolled out, with mixed success. Both retailers and shoppers are currently in an evaluation phase with no clear verdict as to what drives the customer to a retail store. The newly established stores are able to attract shoppers into stores due to its ambience, but they are finding conversions into purchases to be lower than expected and hence lower profitability for retailers. Evidently, there is not much of the research work done on Indian consumer behavior in retailing context. Keeping these things in mind the present study was conducted to provide important inputs to Food and Grocery retailers in particular and academicians in general.

In the Indian context, previous research studies have analysed the performance of retail formats with Data Envelopment Analysis (DEA) using data related to Financial and Operational parameters (Mishra & Patel, 2007; Sharma & Choudhary, 2010). However, a few studies have focused on evaluation of retail formats on customer based parameters (Sinha & Kansal, 2005)

It is a well documented fact that even a minor increase in customer retention rates can dramatically increase profits in retail. In order to comprehend the consumer preferences related to organized retail stores, the present study provide an understanding of key parameters affecting consumer evaluation of a retail store. It also compares the performance of selected organized retail formats dealing in Food and Grocery on the basis of identified parameters.
3.2 Objectives of the Study

The objectives of the research study are as follows:

- To identify the key parameters for the performance evaluation of retail stores by consumers.
- To analyze the preferences for various retail formats by consumers from varied demographics.
- To identify the organized retail formats perceived as best on the basis of the identified performance evaluation parameters.
- To analyze the growth and development trends of retail formats in Punjab.
- To identify key areas and shortcomings to focus in order to improve the performance of organized retail formats in Punjab.
- To analyze the future of organized retail formats in Punjab.

3.3 Hypothesis

Based on the objectives of the study, two hypotheses are formulated. These hypotheses are:

H₀₁: There is no significant difference in respondent’s perception related to performance of three chosen organised retail formats.

H₀₂: There is no significant relationship between store format and demographics of respondents visiting that format.

3.4 Scope of the Study

India is a developing country and Indian consumers spend a larger share of their income on food. ‘Food and Grocery’ is the second-largest segment of the retail industry in India. This retail segment is expected to accurately reflect the performance of organised retail and hence the scope of study is limited to organised retail formats with Food and Grocery as the major product category.
Many factors contribute to a retailer’s overall performance. Literature indicates that retail performance should be judged on multiple dimensions: based on customer perception, based on operational efficiency, and based on financial performance (Stem Neill and Gregory M. Rose, 2004; Michael and Barton, 2004). The present research study is limited to performance evaluation of organised retail formats on customer based parameters.

It was only after the partial liberalization in FDI policy for retailing in January 2006 by Foreign Investment Promotion Board (FIPB) that foreign companies were permitted to own up to 51 per cent in single-brand retail Joint Ventures (JVs). As a result of liberalization, many foreign and domestic players have entered the organized retail market in India since 2006. For this reason the time period of the study is 2006 onwards.

3.5 Research Methodology

A brief account of various aspects of research methodology is as follows:

3.5.1 Organized Retail formats

Organized retail can be defined as any organized form of retail or wholesale activity (both food and non-food under multiple formats), which is typically a multi-outlet chain of stores or distribution centres run by professional management (Michael and Barton, 2008).

Every business has its distinctive way of organising the activities that are involved in delivering its products and service to the end customer. In retail parlance, it is termed as retail format. The term retail format has been used under several contexts in the retailing literature. From a more general perspective it would simply mean the offer of a retailer manifested in terms of the public presentation of its offered goods and services. A more usable definition of retail format is that of a physical embodiment of a retail business model – the framework that relates the firm’s activities to its business context and strategy (Reynolds et al., 2007). Such business model would entail the retailer’s key resource and process mix aligned with his segmentation, targeting and positioning strategies. A store format is also defined as the mix of variables that retailers use to develop their business strategies and constitute the mix as assortment, price, and transactional convenience and experience (Messinger and Narsimhan,
A retail format is also denoted as a type of retail mix used by a set of retailers (Levy and Weitz, 2007).

These retail formats are classified on the basis of amount of square feet of floor space they use, the level of services offer, the width and depth of products they offer or other criteria (Warren and Mark, 2005).

In Indian context, Sinha and Kansal, 2005 have defined retail formats on seven parameters: Categories of merchandise, variety of brands held in the store for each type of merchandise, number of SKU’S held in the store under each brand, price of merchandise, service offered in the store, accessibility, and ambience. Choudhary and Sharma, 2009 in a study conducted in Chandigarh Tricity region of Punjab have classified the retail formats on the basis of retail area in sq. ft.

The present study covered three retail formats viz. Convenience stores, Supermarkets and Hypermarkets. These formats are selected because an observation of existing retail formats indicated that these formats had Food and Grocery as the major product category. These formats are defined on the basis of their area in sq. ft. as proposed by Choudhary and Sharma (2005):

**Table 3.1: Definition of Retail formats**

<table>
<thead>
<tr>
<th>Retail Format</th>
<th>Area (sq ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience stores</td>
<td>500 – 1,000 sq ft</td>
</tr>
<tr>
<td>Supermarkets</td>
<td>1,000 – 10,000 sq ft</td>
</tr>
<tr>
<td>Hypermarkets</td>
<td>Above 10,000 sq ft</td>
</tr>
</tbody>
</table>

Table 3.2: Selected retail stores (city-wise)

<table>
<thead>
<tr>
<th>City</th>
<th>Format</th>
<th>Convenience store</th>
<th>Supermarket</th>
<th>Hypermartk</th>
<th>Amartex Shoppers World</th>
<th>Big Bazaar</th>
<th>Vishal Mega mart</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6-TEN</td>
<td>Reliance Fresh</td>
<td>More</td>
<td>Easy Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amritsar</td>
<td></td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>No store</td>
<td>No store</td>
</tr>
<tr>
<td>Jalandhar</td>
<td></td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>No store</td>
<td>1</td>
</tr>
<tr>
<td>Mohali</td>
<td></td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>No store</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Patiala</td>
<td></td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>No store</td>
</tr>
<tr>
<td>Ludhiana</td>
<td></td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>Convenience stores=16</td>
<td>Supermarkets = 39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled from details of location of stores given in Appendix IX

The organized retail brands covered under this definition included:

**Convenience stores**
- 6 – Ten (REI Agro)

**Supermarkets**
- Reliance fresh (Reliance Retail)
- MORE store (Aditya Birla Retail)
o Easy day (Bharti Retail)

Hypermarkets
  o Big Bazaar (Future Group)
  o Vishal Mega mart (Vishal Retail)
  o Amartex shoppers world (Amartex Industries)

A list of retail stores of selected retail brands belonging to the selected formats in the selected cities was prepared. A total of 39 supermarkets, 12 hypermarkets and 16 convenience stores (total 67 stores) were taken for data collection in five selected cities of Punjab.

3.6 Sampling

The study was conducted in two stages. In stage one, a field survey was carried out in selected cities of Punjab to identify key parameters affecting consumer preference related to Food and Grocery shopping. In the next stage, exit interviews using structured interviews were carried out at selected stores in order to rate the performance of respective stores on the basis of identified parameters.

3.6.1 Sample Size

The target population for stage one of the study was the modern retail consumer of Food and Grocery in five selected cities of Punjab viz. Ludhiana, Mohali, Patiala, Amritsar, and Jalandhar. These cities were selected because of strong presence of organized retailers in these cities. A total of 50 respondents were interviewed using structured questionnaire from each of five selected cities of Punjab.

The target population for stage two of the study was consumer who prefers to do shopping of Food and Grocery from specific retail formats viz. Convenience stores, Supermarkets and Hypermarkets in selected cities of Punjab. A total of 39 Supermarkets, 12 Hypermarkets and 16 Convenience stores were taken for data collection. 10 respondents were interviewed from each of the 67 selected retail stores.
3.6.2 Sampling Technique Used

For stage one of the study, respondents were selected on the basis of Non-probability convenience sampling. Convenience sampling is a non-probability sampling technique in which respondents are selected because of their convenient accessibility and proximity to the researcher. This method seemed acceptable and appropriate taking into account the exploratory nature of the study. However, efforts were made to select consumers from all cross-sections of population.

During the second stage of study, respondents were interviewed from each sampled organized retail outlet. Systematic random sampling technique was adopted for the purpose. This technique was used because it is simple and results are representative of the population.

3.7 Data collection

Both primary and secondary data were collected for the study.

Secondary data related to the growth of organized retail were collected from retail related publications published by Deloitte, Retail Authority of India (RAI), KPMG, Images, Technopak Advisors, Confederation of Indian Industries (CII), and Knight Frank.

Primary data were collected using structured interviews and questionnaires. Interviews of retailers and experts were conducted in the selected cities of Punjab. For collection of data from consumers, two sets of structured questionnaires were used (Annexure I).

For first stage of the study, data were collected from respondents representing modern retail consumers who purchased Food and Grocery from organised retail stores. The objective was to identify the key parameters affecting consumer perception of performance of organised retail formats. The data collection method used was personal interview. The researcher visited each of the 5 selected cities viz. Ludhaina, Mohali, Jalandhar, Patiala, & Mohali and conducted structured interviews of 250 respondents whom the researcher considered modern retail consumers using structured questionnaire (schedule). All the questionnaires were found to be valid and complete because the responses were personally recorded by the researcher.
For stage two, data were collected from respondents at selected organised retail formats in selected cities using exit interviews. The objective was to rate the performance of format on the basis of identified parameters. Exit interviews were preferred over household surveys as it was difficult to locate households who make purchases from the sampled organized retail outlets. In order to gather adequate information about the purchases, only respondents who had spent at least Rs. 200/- at the organized outlet in their current visit were included in the sample. The respondents were consumers who had completed their shopping in retail store and were willing to respond to the questions. All the questionnaires were found to be valid and complete because the responses were personally recorded by the researcher. The data were collected over a period of two months in July-August 2009.

3.8 Research Instrument

Two sets of structured questionnaires (Annexure I) were developed on the basis of the foregoing review of the literature for data collection from consumers.

For the purpose of pre-testing the questionnaires, a pilot survey was conducted in the city of Mohali. As an outcome of the pilot study, some of the statements were amended and improved. The modified versions of questionnaires were finally administered on the respondents.

The final questionnaire used for data collection for stage one of the study comprised of thirty statements on consumer preferences of Food and Grocery shopping. These statements were derived from the review of literature (Mittal & Mittal, 2008; Sinha, Banerjee and Uniyal, 2002; Alhemoud (2008), Mittal (2009), Martínez-Ruiz et al. (2009), Kamath (2009), Hemalatha et. al (2010), Dabholkar, Thorpe & Rentz (1996), Huddleston et. al (2009) etc.) and also on the basis of discussion with some retailers. All the responses on variables related to the study were obtained on 5-point Likert scale. According to Burns and Bush (1998), the value of the Likert scale format lies in the fact that respondents are asked to indicate how much they agree or disagree with the statement. In this survey, respondents were asked to indicate as to what extent they agree or disagree with the listed statements relating to the preferences of Food and Grocery shopping. The scale, therefore, recorded the intensity of their preference related to shopping of Food and Grocery.
The final questionnaire used for data collection for stage two of the study was structured in four parts. Part I contained a set of questions to obtain information about shopping pattern (frequency of purchase, average bill amount, type of purchase) and demographic characteristics of the respondents (age, gender, level of education, occupation, marital status, family size, and monthly income). Part II comprised of statements on identified parameters related to performance of store. A 5-point Likert scale was used to rate each of the identified parameter. Part III included statements on shortcomings or areas of improvement related to the specific store. A 5-point Likert scale based on extent of each shortcoming experienced by the respondent while shopping at store, ranging from ‘Not at all’ (1) to ‘Large Extent’ (5) was used for each shortcoming. Part IV comprised of statement to indicate the future purchase intention from store on a 5-point Likert scale.

3.9 Data Analysis

For analysing the data, factor analysis was applied through the principal component and Varimax with Kaiser Rotation. The data were further analysed using ‘Analysis of Variance’ (ANOVA) and ‘Chi-Square test’. Data analysis was done using SPSS 14.

3.9.1 Factor analysis

Factor analysis is a general name denoting a class of procedures primarily used for data reduction and summarization. In research, there may be a large number of variables, most of which are correlated and which must be reduced to a manageable level. In this process, relationships among sets of many interrelated variables are examined and represented in terms of a few underlying factors.

Types of factor analysis

- **Principal component analysis**: This method provides a unique solution, so that the original data can be reconstructed from the results. It looks at the total variance among the variables, so the solution generated will include as many factors as there are variables, although it is unlikely that they will all meet the criteria for retention.
Common factor analysis: This family of techniques uses an estimate of common variance among the original variables to generate the factor solution. Because of this, the number of factors will always be less than the number of original variables.

Steps in conducting factor analysis

There are four basic factor analysis steps involved in conducting factor analysis:
- Data collection and generation of the correlation matrix
- Extraction of initial factor solution
- Rotation and interpretation
- Construction of scales or factor scores to use in further analyses

Factor analysis was used to group the 30 items (Questionnaire-I) into meaningful, manageable factors representing the parameters affecting consumer perception of performance of organized retail formats. Prior to running the factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were performed. The generated score of KMO was 0.71 (>0.5), reasonably supporting the appropriateness of using factor analysis to explore the underlying parameters affecting consumer perception of performance of organized retail formats. The Bartlett's test of sphericity was highly significant (p<0.000), rejecting the null hypothesis that the 30 items were not correlated in the population.

It was ensured that the questionnaires were compiled with the prerequisites of validity and reliability. Burns and Bush (1998) and Cooper and Schinder (1998) had suggested various methods of assessing reliability (the degree that a measure supplies consistent results), such as test-retest, split-half reliability and Cronbach’s alpha. Cronbach’s alpha is useful in indicating the degree to which instrument items are homogenous and reflect the same underlying construct(s). The value of Cronbach’s alpha of the scale was found to be 0.89 for questionnaire I and 0.78 for questionnaire II, which is considered to be satisfactory.

3.9.2 Analysis of variance (ANOVA) and Chi-square test

The Analysis of Variance (or ANOVA) is a powerful and common statistical procedure in the social sciences. One-way analysis of variance is a technique used to compare means of two or
more samples. The present research study used a One-way analysis of variance (ANOVA) tests to explore the difference in consumers’ perception related to performance of selected organised retail formats.

Chi-square tests were conducted to explore the association between store format and demographics of consumer visiting the format.

3.10 Limitations of study

Limitations help us to understand the proper perspective of the study. This helps in generalizing the study in an appropriate manner, considering the reliability of the study. As every study has certain limitations, this research work was also not free from limitations which are as follows:

- The scope of study was limited to organized retail formats dealing in Food and Grocery. The retail formats dealing in other categories like clothing, electronics etc. were out of scope of study.
- The present research study was limited to a customer based performance evaluation of organized retail formats dealing in Food and Grocery. Other dimensions of performance like operation based and financial based were out of the scope of study.
- The sample selection was judgmental and convenience based and this might not be perfectly representative of the retail scenario.
- The study covered shopping only in the context of physical retail formats thus the findings might not apply to non-store retailing (e.g. online retailing).
- Limited sample size was also a limitation of the study.
- As no primary data collected through the sample survey is free from bias and inaccuracy in one respect or the other, the data collected and used in the study might not be free from certain errors due to limited knowledge of respondents.
References


