CHAPTER III
RESEARCH METHODOLOGY

3.1 Introduction

The intention of this chapter is to explain the methodology adopted for testing the hypotheses proposed in Chapter II. These hypotheses were framed on the basis of a thorough review of the existing literature. The exogenous (independent) variables in the study are the utilitarian and hedonic shopping value. The endogenous (dependent) variables include consumer satisfaction, consumer loyalty, consumer WOM communication, and consumer’s intention to switch. The measures used in the present study have been adopted from previously existing measures. In order to establish reliability and validity of the adapted measures, confirmatory factor analysis (CFA) has been performed. Due to the covariate nature of the proposed research model, structural equation modelling (SEM) has been employed to evaluate the research hypotheses.

The remainder of the chapter is organised into five sections. First, the theoretical model presented in Chapter I is re-specified as a structural equation model that consists of the latent variables examined in the study. Next, the research design is described in detail, followed by a discussion of the measures used in the study. Finally, CFA and SEM are discussed as the analysis method of choice for the study.

3.2 The Structural Equation Model

The purpose of this section is to convert the theoretical model presented in Chapter II into the form of a structural equation model. The new model, presented in Figure 3.1, consists of two exogenous variables and four endogenous variables. The exogenous variables are the
utilitarian shopping value \((\xi_1)\) and hedonic shopping value \((\xi_2)\). The endogenous variables include consumer satisfaction \((\eta_1)\), consumer loyalty \((\eta_2)\), consumer WOM communication \((\eta_3)\), and consumer’s intention to switch \((\eta_4)\). It also intends to analyse the moderating effect of socio demographic variables (i.e., gender, age, and income) and product category (food and grocery, apparel, and consumer durables) on the whole relationship.

The theoretical model is developed from the six hypotheses presented in Chapter Two. The research hypotheses are summarised below:

**H1:** The consumer’s perception of utilitarian shopping value is positively associated with the consumer’s satisfaction.

**H2:** The consumer’s perception of hedonic shopping value is positively associated with the consumer’s satisfaction.

**H3:** The consumer’s satisfaction is positively associated with the consumer’s loyalty.

**H4:** Consumer’s attitudinal loyalty would mediate the positive relationship between consumer’s satisfaction and consumer’s word of mouth communication.

**H5:** The consumer’s satisfaction is positively associated with the consumer’s word of mouth communication.

**H6:** The consumer’s satisfaction is negatively associated with the consumer’s intention to switch.

**H7:** The relationships among consumer’s shopping value (i.e. utilitarian and hedonic values), consumer’s satisfaction and its behavioural outcomes (i.e. consumer’s loyalty, consumer’s word of mouth communication and the consumer’s intention to switch) is significantly moderated by the gender of the consumers.
H₈: The relationships among consumer’s shopping value (i.e. utilitarian and hedonic values), consumer’s satisfaction and its behavioural outcomes (i.e. consumer’s loyalty, consumer’s word of mouth communication and the consumer’s intention to switch) is significantly moderated by the age of the consumers.

H₉: The relationships among consumer’s shopping value (i.e. utilitarian and hedonic values), consumer’s satisfaction and its behavioural outcomes (i.e. consumer’s loyalty, consumer’s word of mouth communication and the consumer’s intention to switch) is significantly moderated by the income of the consumers.

H₁₀: The relationships among consumer’s shopping value (i.e. utilitarian and hedonic values), consumer’s satisfaction and its behavioural outcomes (i.e. consumer’s loyalty, consumer’s word of mouth communication and the consumer’s intention to switch) is significantly moderated by the category of PLB product.
Figure 3.1: The Structural Equation Model
3.3 Research Design

The present study has made use of a non-experimental survey to gather the data necessary to test the relationships among the constructs. A survey research design is appropriate for quite a few reasons; (1) the use of a survey is beneficial for collecting perceptual data from a large and varied population; (2) the data collected from a survey are easily quantifiable; and (3) the existing measures adopted for the study have been developed by previous studies for the survey design.

All the constructs have been assessed through the respondents’ perceptual assessment and their recounting of specific beliefs, attitudes, and behaviours.

3.4 Product Category Selection

The present study has examined the relationships among the constructs in three different product categories of PLBs. As quoted in Marketing Whitebook (2009-10), a research conducted by Ernst and Young in the retail sector in India has ascertained the market share to be the highest for food and grocery at US$ 152 billion for a market share of 54% (See Figure 3.2). Skipping the next largest but undefined category of others, the third most selling product category is a tie between consumer durables at US$ 20 billion and apparel at US$ 19.15 billion for a market share of 7% each. Therefore, food and grocery, consumer durables and apparel were chosen as the three product categories to be studied in the context of PLBs.
Figure 3.2: Market Share of the Selected Product Categories
3.5 PLB Retailer Selection

According to Images Retail Report 2009, as quoted in ‘Indian Retail: Time to Change Lanes’ by KPMG, PLBs constitute about 10-12% of organised retail in India. Of this, the highest penetration of PLBs is by Trent at 90%, followed by Reliance at 80%, and Pantaloon Retail at 75%. Big retailers such as Shoppers Stop and Spencer’s have a penetration of 20% and 10% respectively (See Figure 3.3). Globally, PLBs constitute nearly 17% of the total retail sales. In fact, international retailers such as Wal-Mart and Tesco have 40% and 50% of PLBs in their stores.

However, it was found that Trent did not have retail stores in all the three product categories in one of the selected cities of data collection i.e., Chennai. Therefore, the current study has collected the responses from the consumers of the next two most prominent retailers having the largest depth of PLBs in India. Thus, retail stores of Reliance and Pantaloon were selected in the three product categories. Please refer to Table 3.1 for an elaboration.

**Table 3.1: Selected PLB Retail Stores**

<table>
<thead>
<tr>
<th>Product Category</th>
<th>PLB Retail Store</th>
<th>Total No. of Stores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NCR</td>
</tr>
<tr>
<td>Food and Grocery</td>
<td>Reliance Fresh</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Food Bazaar (Pantaloon Retail)</td>
<td>23</td>
</tr>
<tr>
<td>Consumer Durables</td>
<td>Reliance Digital</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>E Zone (Pantaloon Retail)</td>
<td>9</td>
</tr>
<tr>
<td>Apparel</td>
<td>Reliance Trends</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Pantaloons</td>
<td>9</td>
</tr>
</tbody>
</table>
The study was conducted in two metropolitan cities, namely, the National Capital Territory of Delhi (situated in the North Central region of India) and Chennai (situated in the Southern region of India) so as to have a representative sample that has respondents from different geographical locations of India, a country with a very large and culturally diverse population. National Capital Territory of Delhi consisting of the cities of New Delhi and Old Delhi, Noida, Gurgaon and Faridabad can be said to have a very large population consisting of people from all walks of life and also from different geographical states. Similarly, Chennai, the oldest and largest metropolitan of Southern India, can be said to be home to people from all the southern geographical states.
3.7 Target Population

It is proposed that the target population of this study will consist of all the consumers of all the above mentioned retailers in the two selected metropolitan regions.

3.8 Sample Element

A sample is a portion of the population and is formed by selecting some members from a population (Cavana, Delahaye, and Sekaran 2001). A perfect representative sample would be a microcosm of the population from which it is drawn and reflects all the characteristics of the population in every way. This would enable inferences to be made about any aspect of the population from the sample in a scientific way (Collis and Hussey 2009). Hence, the selected respondents represented a balanced mix of various socio demographic factors (age, gender, marital status, education levels, employment status, and income groups).

3.9 Sampling and Data Collection

A two-step process was undertaken to reach at the target sample. The first step was to identify the total number of selected PLB retail stores in each city. From this list, 8 PLB retail stores were selected on the basis of simple random sampling in each of the three product categories located in the four geographical areas (North, East, South, and West) of the two selected cities. For example, 4 PLB retail stores of Reliance Fresh (food and grocery category) and 4 PLB retail stores of Food Bazaar (food and grocery category) were selected in the four geographical locations of NCR. Similarly, 4 PLB retail stores of Reliance Digital (consumer durables category) and 4 PLB retail stores of E Zone (consumer durables category) were selected in the four geographical locations of NCR. This lead to the selection of 24 PLB retail stores in each city (4 PLB retail stores in the four geographical locations X 3 product categories consisting of 2 different PLB retailers).
In these identified PLB retail stores, the data were collected from a mall-intercept survey. This approach of data collection has many advantages like the ease of establishing rapport with the consumers, the ability to clarify responses to survey questions and the immediate collection of survey responses. Additionally, Sudman (1980) has stated that sampling participants at the mall entrances will be likely to result in an unbiased sample. Every third consumer was approached by the researcher himself to solicit their perceptions. After introducing himself, the subjects were requested to participate in the survey. They were assured that no attempt would be made to personally identify them or to match them in any way with the responses given by them, thus ensuring their confidentiality. No attempt was made to coerce them to participate if they felt uncomfortable. No monetary incentive was offered for their participation. They were then reassured that the questionnaire would not take a long time to complete, and also that their participation was highly appreciated. Pretest of the survey instrument had shown that most subjects were able to complete the entire questionnaire in ten minutes or less. All those willing to participate were screened to ensure that only those consumers who had actually made a PLB product purchase from that particular PLB retailer in the past six months. They were also instructed to answer the questions in keeping in mind their most recent PLB product purchase from that particular PLB retailer. After the questionnaire was completed, the respondents were debriefed about the purpose of the study. The researcher also attended to their queries and thanked them for their co-operation.

3.10 Sample Size

A total of 1248 consumers (approximately 52 consumers in each PLB retail stores) were approached to participate in the survey. However, owing to several constraints and reservations of the consumers, a total of 565 consumers agreed to respond. Out of these 565
responses, 500 responses from both the cities (NCR = 327 and Chennai = 173) were considered to be usable. This procedure returned a response rate of 40%, which is considered to be decent in these exploratory studies.

3.11 Measurement

A one-off cross-sectional quantitative research has been employed for this research. A survey questionnaire to measure the relationships among the variables of this study and also to collect demographic characteristics of the respondents has been designed from the measures used in previous studies dealing with consumer shopping value (i.e., utilitarian and hedonic value), consumer satisfaction and its behavioural outcomes (i.e., loyalty, word of mouth communication, and intention to switch). A multi-item five point Likert type scale was used to gather the responses. The indicators of the scale ranged from strongly disagree to strongly agree. The anchors and values were strongly disagree = 1, disagree = 2, neither agree nor disagree = 3, agree = 4, and strongly agree = 5. Furthermore, existing and established measures have been modified and adopted for this study (Churchill 1979).

3.11.1 Existing Scales

To measure consumer perceived shopping value (i.e., utilitarian and hedonic value), Babin, Darden and Griffin’s (1994) Consumer Perceived Shopping Value Scale was used. Four items measured utilitarian value and 11 items measured hedonic value. Some minor customization in the wording was required. Consumer satisfaction with the PLB products was adapted from Reynolds and Beatty’s (1999) multi-item measure of consumer satisfaction. It consisted of four items. The questions in the scale were modified for this study by using product in place of salesperson.
Similarly, the scale for attitudinal loyalty to the PLB product was also adapted from Reynolds and Beatty’s (1999) multi-item measure of loyalty to the salesperson. It consisted of six items. The questions in the scale were modified for this study by using product in place of salesperson. The scale to measure WOM was adapted from Harrison-Walker (2001). The original measures were modified to fit the PLB context. It consisted of six items. The questions in the scale were modified for this study by using product in place of service organization. While consumer’s intention to switch was measured by adapting the scales used by Athanassopoulos, Gounaris and Stathakopoulos (2001). It consisted of three items. The questions in the scale were modified for this study by using product in place of bank. The multi-item scales for these constructs are included in Appendix III.

3.12 Pretest of the Survey Instrument

In order to gain objective views and guard against faulty assumptions, and detect any shortcomings in the questionnaire, a pretest was conducted. A group of seven management research scholars were entrusted to look into face validity (the degree that respondents judge that the items are appropriate to the targeted construct) and content validity (the degree to which items correctly represent the theoretical content of the construct) issues. Face and content validity were tested through a variation of the Zaichkowsky method (1985). Each item of the questionnaire was qualified by a panel of experts (seven management research scholars) as ‘‘clearly representative’’, ‘‘somewhat representative’’ or ‘‘not representative’’ of the construct of interest. Along the lines of Lichtenstein, Netemeyer, and Burton (1990), the final items were retained only after a high level of consensus was observed among the experts. Thereafter, a total of 41 surveys were collected from a non-probability sample of undergraduate students who had an experience of purchasing PLB products. The analysis of the pretest included an examination of the descriptive statistics, internal consistency analysis
and exploratory factor analysis. The respondents understood the survey and therefore, no changes were deemed necessary. Exploratory factor analysis revealed that the items loaded onto their respective constructs and no cross loading was evident. Although the scales had demonstrated high levels of reliability in the past studies, all the items were tested for the study by using Cronbach’s alpha.

### 3.13 Method of Analysis

Using the final data set, normal probability plots, skewness and kurtosis were examined so as to test the assumptions of normality. The data analysis was directed to investigate the existense of the proposed relationship. The raw data were then analyzed using the two-step procedure suggested by Anderson and Gerbing (1988). First, confirmatory factor analysis (CFA) was performed to test the measurement model and establish the unidimensionality of the constructs. Reliabilities were evaluated on the results of the CFA. Once the scales were confirmed, a structural model was constructed and tested. Thereafter, the proposed structural model was estimated by employing two different statistical methods so as to make sure that the structural model was robust following Kujala and Johnson’s (1993) recommendations. The primary estimation method was partial least squares structural equation modeling (PLS SEM) (Wold 1982). The statistical software application, SmartPLS 2.0 (Ringle, Wende, and Will 2005) was used to compute the PLS path model. Subsequently, a covariance based structural equation modeling (CB SEM) analysis using the maximum likelihood estimation was performed with the help of Analysis of Moment Structures (AMOS) 16.0 statistical software. Utilitarian and hedonic values were the predictor variables and consumer satisfaction and behavioral intentions were the criterion variables in the analysis. Sobel’s test was also performed to test the mediating effect of loyalty on consumer
satisfaction and WOM. Furthermore, a multi-group SEM was performed to assess the moderating effect of the demographic variables and product categories.