Chapter 3

RESEARCH METHODOLOGY

Research Methodology discusses the systematic approach adopted in the process of collecting, analyzing and interpreting information to answer research questions. The purpose of the research is to examine the relationships of store image, relationship marketing and consumer based retailer equity. An overview of the processes and methods undertaken in this thesis to attain the research objective is presented below.

3.1 Conceptualization of the Constructs, Research Model and Hypotheses

The preceding chapter provides the background of the key constructs: store image, relational bonds, relationship quality, relationship proneness, and store satisfaction and consumer based retailer equity. The following sections defines the variables used to formulate the model, the relationship among the major constructs, the hypotheses and the research model.

3.1.1 Operational Definition

The proposed conceptual model for this research was developed by incorporating key constructs and latent variables derived from the literature on store image, relationship marketing and retailer equity.

3.1.2 Conceptual Framework and Hypotheses Development

3.1.2.1 Relational Bonds on Store Image

Marketing literature neglects the relationship efforts (Hennig-Thurau & Klee, 1997; Gwinner et al., 1998) and the research pertaining to relationship marketing in consumer markets has advanced a little (O’Malley & Tynan, 2000). Matured apparel retail market makes it difficult for retailers to differentiate on merchandise selection and retailers provide
increased value through various relationship strategies (Berry & Gresham, 1986; Ghosh, 1994; Wulf & Odekerken-Schröder, 2003). Retailers offer demanded merchandise, competitive price promotions and efficient distribution systems, and treat their customers well while offering services (Berry & Gresham, 1986; Davis, 1997). This increased the importance of building relationships and led the retailers to adopt relational bonding tactics to position and create store patronage (Juttner & Wehrli, 1994; Hennig-Thurau et al., 2002).

Consumers hold images of particular stores in their minds which are the results of various salient attributes related to the retail store and its activities (Keller, 1993; Bloemer & Ruyter, 1998; Chowdhury et al., 1998; Thompson & Chen, 1998; Pappu & Quester, 2006a), while retailers offer relational benefits to engage customers with the store (Berry & Parasuraman, 1991; Yau et al., 2000; Lin et al., 2003; Wang et al., 2006; Bansod, 2011). Retailers and researchers have viewed relational bonds and store image in isolation while strategically relational bonds impact store image.

The relational bond which is an outcome of financial, social and structural bonds may enhance the store image which is the perception of consumers about the store’s merchandise, atmosphere, facilities, clientele, price and promotion and service. Driven by the general assumption that, consumers interested in relationship with stores will perceive positive store image and thereby the consumer based retailer equity, the following hypothesis is proposed.

$H_1$ - Relational Bond has a positive impact on Store Image

3.1.2.2. Store Image on Store Satisfaction

Bloemer and de Ruyter, 1998) and Koo (2003) are the two prominent authors who explored the relationship between store image and store satisfaction and have established that store image is a predictor of store
satisfaction. Customer satisfaction with the store is an important concept in retail sector (Bloemer et al., 2002).

Customer satisfaction or dissatisfaction entails a comparison of customers’ expectations against their perceptions of the product and service of the store (Hunt, 1991; Sheth, Mitall & Newman, 2004), while store image is represented as the gestalt of perceived attributes associated with the store in the consumers’ memory (Hartman & Spiro, 2005).

Convenience, quality and shopping environment, store atmosphere and customer service policies contribute to the satisfactory shopping experience (Kerin et al., 1992; Geuens et al., 2003) and hence the impact of store image on store satisfaction is hypothesized as follows

H₂ - Store Image has a positive impact on Store Satisfaction

3.1.2.3. Store Image on Relationship Quality

Contribution of relationship marketing and its influence on relationship quality is recognized (Wong & Sohal, 2006; Lee et al., 2007; Ndubisi, 2007) but the factors influencing the relationship quality in consumer markets are not clearly established (Sheth & Parvatiyar, 1995).

Successful relationship marketing depends on firms’ capacity to add value through its services and the store image is the outcome of the consumer evaluation of store attributes and services (Parasuraman et al., 1988; Morgan & Hunt, 1994). But the impact of consumers’ attitudinal and behavioural perception of store attributes on relationship quality is left unexplored in retail literature.

Store is the key contact point where interactions that build relationships take place. The set of strategies, procedures and guiding principles under which the store operates influences store image (Ramayah & Leen, 2013) while core solutions offered to customers influence relationship marketing.
Store image and relationship marketing strategies cannot be implemented without thorough understanding of consumer perception of store and its service management (Grönroos, 1994; Storbacka, Strandvik & Grönroos, 1994) and hence, store image and relationship quality cannot be treated in isolation.

In this context, and based on the assumption that store image strategies strengthen satisfaction, trust and commitment of consumers which lead to higher relationship quality, the following hypothesis is suggested.

H₃ - Store Image has a positive impact on Relationship Quality

### 3.1.2.4. Store Satisfaction on Consumer Based Retailer Equity

Consumer-based retailer equity would vary according to consumer satisfaction levels with the retailer (Pappu & Quester, 2006b). Consumer-based retailer equity is a construct with multi-dimensions namely retailer awareness, retailer associations, retailer perceived quality and retailer loyalty. Consumers’ positive satisfactory experiences with a retailer leads to recall of the retailer more positively than those who are relatively less satisfied (Pappu & Quester, 2006b; Choi & Huddleston, 2014).

Satisfied consumers have favorable and strong associations towards a retailer (Pappu & Quester, 2006b) and have positive perception of quality (Bitner, 1990; Anderson et al., 1994; Bitner & Hubbert, 1994; Dabholkar et al., 2000; Sivadas & Baker-Prewitt, 2000). Two schools of thought on the causal ordering between perceived quality and satisfaction is reported by Babakus et al., (2004).

Satisfaction and loyalty link is one of the mostly researched literature and mixed results were found. Sivadas and Baker-Prewitt (2000) found no relationship between satisfaction and loyalty while various other authors found evidence of a positive relationship between satisfaction and loyalty (Cronin & Taylor, 1992; Bloemer & de Ruyter, 1998; Bloemer et al., 2002;
Koo, 2003) including those who conceptualized loyalty based upon attitudes or intentions (Dabholkar et al., 2000; Yang & Peterson, 2004).

Bloemer and Kasper (1995) and Henning-Thurau and Klee (1997) argue that satisfaction though necessary, but not sufficient to result in loyalty and repeat purchase while others indicate that satisfied customers are loyal and do repeat purchases (Cronin & Taylor, 1992; Homburg & Giering, 2001).

Consumer satisfaction with the in-store shopping experience is used to predict two measures of retailer loyalty- attitudinal and behavioral measure of loyalty. Satisfactory in-store shopping experience enhances cumulative or 'overall' consumer satisfaction, which in turn enhances both attitudinal loyalty and behavioural loyalty (actual sales) (Terblanche & Boshoff, 2006). Highly satisfied consumers attach more equity to retailer (Pappu & Quester, 2006b).

Based on the above, the following hypothesis is formulated.

H4 - Store Satisfaction has a positive impact on Consumer Based Retailer Equity

3.1.2.5. Relationship Marketing on Consumer Based Retailer Equity

Relationship quality as a relationship outcome is reflected in previous studies on relationship marketing (Kumar, Schcer&Steenkamp, 1995; Wulf et al., 2001). Relationship quality is one of the relational construct found to be influencing various behaviors and intentions (Macintosh & Lockshin, 1997; Geyskens, Steenkamp & Kumar, 1998; Palmatier et al., 2007).

A positive path between relationship investment and relationship quality implies that the consumer reciprocates a retailer's actions (Crosby, Evans & Cowies, 1990; Wulf et al., 2001). This is indicative that Relationship quality influences behavioral loyalty and is positioned as a consequence of
relationship investment. Hence, the framework depicts the direct and indirect effects of these three elements and their relationship is hypothesized for validation as follows.

\( H_5 \) - Relational Bonds has a positive impact on Relationship Quality

\( H_6 \) - Relationship Quality has a positive impact on Consumer Based Retailer Equity

### 3.2 Research Methods

Quantitative, qualitative and mixed/multi method research designs are evident and continue to evolve throughout the social and behavioral sciences (Tashakkori&Teddlie, 2009). This research on Causal Model of Store Image, Relationship Quality, and Consumer Based Retailer Equity adopts quantitative deductive approach referred to as hypothesis-testing research design to meet the research objectives.

Quantitative approach referred to as hypothesis-testing research is adopted when the research begins with theory and confirms or disconfirms hypothesis, search for causal explanations to accept or modify the theory (Kerlinger, 1964; Easterby-Smith, 1991; Newman & Benz, 1998). In line with this, quantitative approach was found suitable for this research because this research begins with the conceptual frameworks and aims to explain causal relationships by confirming or disconfirming the hypotheses formulated.

Quantitative research helps to establish statistical evidence on the strengths of relationships between both exogenous and endogenous constructs (Amaratunga et al., 2002). The objective of this thesis is to empirically investigate causal relationships among the underlying constructs, hence quantitative deductive approach is appropriate.
3.2.1 Population and Sampling

Retailer equity levels vary across categories (Pappu & Quester, 2008) and hence this research focused on apparel retail category and retail stores dealing with full range of traditional family clothing and apparel situated in either the High Street or Malls of Coimbatore city.

The traditional family clothing and apparel retail stores were selected as consumers’ apparel purchases exhibit individual identity and socio-economic and cultural class (Erdem & Swait, 1998; Manikandan, 2012; Bodimeade, 2013).

The traditional family clothing and apparel retail stores situated in either the High Street or Malls of Coimbatore city were selected based on the City Competitiveness Report (2011) which shows that 1. Coimbatore referred to as Manchester of Southern India- is one of the Tier-II cities in India has a potential for strong market growth and aspirational, brand oriented customer base 2. Preferred format for the fashion and apparel retail stores are high street and malls (CII & CBRE).

The unit of analysis for this research is female consumer who visit the selected seven traditional family clothing and apparel retail stores situated in either the High Street or Malls of Coimbatore city. The selection of women as sample is justifiable as indicated by various authors: 1. Shopping is a gendered activity heavily skewed toward female consumers (Fram & Axelrod, 1990; South & Spitze, 1994; Dholakia, 1999) 2. Women share responsibility for shopping for clothing and influence household spending (Keiser & Garner, 2005). 3. Female consumers are oriented towards shopping enjoyment look for broader range of values and spend more time in retail stores (Cleaver, 2004). 4. Female shoppers are focused because of women’s: decision making, financial powers, loyalty, and recommendation powers (Minahan & Beverland, 2007).
Hence, the sample frame consisted of female consumers aged above 20 years who visited the selected seven traditional family clothing and apparel retail stores situated in either the High Street or Malls of Coimbatore city. A survey was undertaken using a convenience sample of selected seven retail stores consumers in Coimbatore city. Female customers were filtered based on their exposure and willingness. Mall intercept method was employed to contact the customers as it helps to identify and screen the respondents for appropriateness.

Sample of 800-1000 was targeted and 969 usable responses were obtained. Sample adequacy can be determined by the statistical tool employed. The research focused on validating two models using structural equation modeling. According to structural equation modeling, sample size should be within the acceptable limits which requires minimum of 10-15 respondents per observed variables and per parameter to be estimated (Hair et al., 1998, 2006; Westland, 2010). The maximum number of observed variables (25) and the maximum number of estimated parameters (51) states that anything above 765 is acceptable and hence the 969 sample was found to be adequate.

3.2.2 Data Collection

Primary method of data collection has been used. Survey method was found to be appropriate to achieve the objectives of the research. As this method is systematic gathering of information from respondents for the purpose of understanding and/or predicting some aspect of the behaviour of the population (Tull & Hawkins, 1990). A customer survey with aided questionnaire was employed to collect data. This method is appropriate for the current study due to the efficiency and ease of using the method for obtaining access to a representative group of respondents (Loudon & Della Bitta, 1993; Dillion et al., 1994).
However, this method has a number of advantages as: 1) it is designed to deal directly with the nature of respondents’ thoughts, opinions, and feelings and collect information on belief, attitudes, and motives (Shaughnessy & Zechmeister, 1997; Burns, 1992); 2) it is an effective tool, especially when the investigator does not require, or has little control over behavior events (Yin, 1994); 3) it provides an accurate means of assessing information about the sample and enables the researcher to draw conclusions about generalizing the findings from a sample responses to a population; 4) it is more concerned about causal research situations (Hair et al., 2006); and 5) it is quick, inexpensive, efficient, and can be administered to a large sample (Zikmund, 2003).

3.2.3 Research Instrument

An extensive literature review in the area of brand equity literature and retailer equity literature revealed important key constructs—store image (merchandise, atmosphere, facilities, clientele, price and promotion, sales personnel, service), relational bonds (financial, social, structural), relationship quality (relationship satisfaction, trust, commitment), consumer relationship proneness, store satisfaction, and consumer based retailer equity (retailer awareness, retailer associations, retailer perceived quality, retailer loyalty).

All of the questions in the questionnaire were designed in a closed form. Parametric statistical analysis can be used for data obtained using an interval scale (Hair et al., 2006) and is appropriate for measuring attitudes, beliefs or feelings (Singleton & Straits, 1999). Respondents were asked to rate the extent of their agreement or disagreement with the statements on a five-point rating scale, ranging from 1 = strongly disagree, 2 = disagree, 3 = neither disagree, 4 = agree and 5 = strongly agree. Categorical scales were used for the questions regarding the demographic profile of the sample respondents.
3.3 Validity and Reliability

Measurements focus on the crucial relationship between the observable response (indicator) and the underlying unobservable concepts(s) (Carmines & Zeller, 1979). Reliability and validity are the two basic properties of empirical measurement (McDaniel Jr. & Gates, 1996). Reliability relates to the accuracy and consistency of the measure (Hair et al., 2010; Collis & Hussey, 2013), whereas validity ensures the ability of a scale to measure the intended concept (Sekaran, 2003).

To increase reliability and decrease measurement error and improve validity all the measures were pre-tested with the opinions of the store managers and opinion leaders. The face and content validity was conducted with 12 experts and all the items met the content criteria. Data from the pilot survey of 60 respondents was subjected to reliability test and the Cronbach’s alpha indicated reliability of the constructs.

3.3.1 Reliability

Reliability is the degree to which a set of scale items measuring a construct can produce consistent results across time (Hair et al., 2010). The internal reliability measures whether or not the indicators that make up the scale or index are consistent— in other words, whether or not respondents’ scores on any one indicator tend to be related to their scores on the other indicators (Bryman & Bell, 2015).

Reliability tests the consistency of respondents’ answers to all the items in a measure. Cronbach’s coefficient alpha reports the interitem consistency reliability for multipoint-scaled items. The higher the coefficients, the better the measuring instrument (Sekaran, 2003). Cronbach’s alpha coefficient is presented in the table 3.3.1.
### Table 3.3.1 Cronbach's alpha coefficient

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Construct</th>
<th>Alpha coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Store Image</td>
<td>0.894</td>
</tr>
<tr>
<td>2</td>
<td>Store Satisfaction</td>
<td>0.752</td>
</tr>
<tr>
<td>3</td>
<td>Consumer Relationship Proneness</td>
<td>0.749</td>
</tr>
<tr>
<td>4</td>
<td>Relational Bonds</td>
<td>0.865</td>
</tr>
<tr>
<td>5</td>
<td>Relationship Quality</td>
<td>0.899</td>
</tr>
<tr>
<td>6</td>
<td>Retailer Equity</td>
<td>0.865</td>
</tr>
</tbody>
</table>

Generally, researchers agree that an alpha value of at least 0.7 is considered acceptable for reliability (De Vaus, 2002; Sekaran, 2003). The Cronbach’s Alpha coefficient values confirm the internal consistency of the items in the scale as representatives of the constructs being measured.

### 3.3.2 Validity

Validity along with reliability establishes goodness of a measure. Validity is assessed through content or face validity and construct validity (Sekaran, 2003; Cooper & Schindler, 2008; Saunders, Lewis & Thornhill, 2009; Collis & Hussey, 2013; Bryman & Bell, 2015).

#### 3.3.2.1 Content Validity

Content validity ensures that the measures used do actually measure what they are supposed to measure (McDaniel Jr. & Gates, 1996; Hair et al., 1998; Collis & Hussey, 2013).

The content validity was conducted in two stages. In the first stage, it was conducted with 12 experts (Sekaran, 2013). The experts scrutinised the items, according to the definition generated against the constructs of store image, store satisfaction, consumer relationship proneness, relational bonds, relationship quality and retailer equity which were identified through extensive literature review, keeping in mind the objectives and the need for
the study and offered their feedback on each of the items as ‘essential’, ‘useful but not essential’ or ‘not necessary’ (Saunders et al., 2009). Based on their feedback, few items were slightly modified, reworded, repositioned to make them appropriate for use.

3.3.2.2 Construct Validity

Construct validity is the extent to which a set of measured variables actually represent the theoretical latent construct they are designed to measure (Hair et al., 2010). The statistical approaches for assessing construct validity which is extremely important to marketing scientists are convergent and discriminant validity (McDaniel & Gates, 1996; Sekaran, 2003). Validity is established for the instrument through correlational analysis and factor analysis (Sekaran, 2003).

Correlation analysis implies that items that are indicators of a specific construct should converge or share a high proportion of variance in common (Hair et al., 2006). The total average variance extracted (AVE) is used as an indicator for supporting convergent validity (Fornell & Larcker, 1981).

Discriminant validity refers to the extent to which a construct differs from other constructs (Hair et al., 2006). A measure has discriminant validity when there is a low correlation with measures of dissimilar concepts (Zikmund, 2003). For the purpose of this thesis, convergent and discriminant validity have been assessed by using correlation and performing confirmatory factor analysis (CFA) and reported in Chapter 4.

Discriminant validity has been assessed by AVE analysis. If the AVE for each construct is greater than its shared variance with any other construct, discriminant validity is supported (Fornell and Larcker, 1981).
3.4 Data analysis

The analysis of the data addressed the objectives of the research. The analysis was carried out in two phases:

1. In the first phase, the researcher understands empirically the level of store image, store satisfaction, consumer relationship proneness, relational bonds, relationship quality and consumer based retailer equity through mean values.

2. In the second phase, Structural Equation Modeling (SEM) is used to test the hypotheses and validate the proposed models. SEM enables the researcher to examine a series of interrelated dependence relationships simultaneously (Hair et al., 2006, 2010). SEM techniques explicitly take measurement error into account when statistically analyzing data which is of major concern. Further AMOS 22.0 was used to conduct the SEM analysis to test the relationship between study constructs.

The various data analysis tools used in the research are as follows:

<table>
<thead>
<tr>
<th>Model</th>
<th>Objective</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Statistics</td>
<td>To assess the consumer perception on the study constructs</td>
<td>Mean &amp; Standard Deviation</td>
</tr>
<tr>
<td><strong>Model I</strong>: Causal model of Retail Relationships and Consumer Based Retailer Equity</td>
<td>To model the influence of customer relationship proneness on relational bonds, relationship quality and consumer based retailer equity</td>
<td>SEM</td>
</tr>
<tr>
<td><strong>Model II</strong>: Integrated Consumer Based Retailer Equity (CBRE) Framework</td>
<td>Investigate the causal relationship among the constructs store image, relational bonds, relationship quality, store satisfaction and consumer based retailer equity.</td>
<td>SEM</td>
</tr>
</tbody>
</table>

The detailed methodology for Structural analysis is presented in the forthcoming sessions.
3.4.1 Structural Equation Modelling

In SEM analysis, the two-stage approach, aims to process the measurement model first and then fix this measurement model in the second stage when the structural model is estimated. Analyzing the causal relationships in the structural model requires performing the measurement model first by assessing the unidimensionality, and reliability and validity of each individual construct, due to the latter representing a condition that must be satisfied as a matter of logical necessity (Anderson & Gerbing, 1988). SEM provides an overall test of model fit and individual parameter estimate tests simultaneously, thus, providing the best model fits to the data adequately.

Both the measurement model and structural model were estimated based on a covariance matrix (Cudeck, 1989), employing the maximum likelihood estimation method (Chou & Bentler, 1995; Hoyle & Panter, 1995). Before using any multivariate analysis it is necessary to check for the validation of the data.

3.4.2 Preliminary Data Analysis

Data from the total sample of 969 respondents were examined prior to the data analysis. The data was tested for normality, multicollinearity and common method variance.

3.4.2.1 Normality

The causal model estimation techniques require data which follow a multivariate normal distribution (Hulland et al., 1996). The problems associated with non-normality can be reduced and eliminated using larger samples (Browne, 1982).

Kurtosis affects the tests of covariance (DeCarlo, 1997). As SEM is based on the analysis of covariance structures, it is important to assess the
multivariate kurtosis, as it is known to be exceptionally detrimental in SEM analyses. The normality of the data is assessed through univariate and multivariate kurtosis. The data is non-normal when the univariate kurtosis is 7.0 and Mardia’s Z statistic- (i.e. the critical ratio (C.R.) value) is greater than 5.00 (Bentler, 2005; Arbuckle, 2013).

3.4.2.2 Multicollinearity

Multicollinearity is the extent to which a construct can be explained by the other constructs in the analysis (Hair et al., 2006). Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are strong which tend to either inflate or deflate the results. The existence of multicollinearity affects the estimation of the model as well as the interpretation of the results. Multicollinearity refers to high correlation among the independent variables. As multicollinearity increases, it complicates the interpretation of relationships because it is more difficult to ascertain the effect of any single construct owing to their interrelationships (Hair et al., 2010). The presence of multicollinearity is assessed through correlation coefficients.

3.4.2.3 Common Method Variance

Common method variance is referred to as, the amount of spurious covariance shared among variables because of the common method used in collecting data (Buckley et al., 1990; Podsakoff et al., 2003). Common method variance (CMV) shows if there exist any skewed correlations between constructs in a model (Campbell & Fiske, 1959). To remove the CMV effect, the following techniques were used (Podsakoff et al., 2003): a) Procedural Remedies which involves psychological and methodological separation of predictor and criterion variables and improvement of scale items b) Statistical Remedies includes Harman’s single factor test and Marker variable technique.
In this study, no attempt has been made to identify the sources of common method variance or the process through which method biases influence the respondent behaviour or results, however, a statistical remedy has been employed to identify the issue of common method variance, which the researcher was interested to know.

Harman single-factor test is considered as a diagnostic technique that “actually does nothing to statistically control for (or partial out) method effects” (Podsakoff et al., 2003). It is implemented by loading all the variables in the study into an exploratory factor analysis and the unrotated factor solution was examined to determine the number of factors that are necessary to account for the variance in the variables.

Alternatively, as implemented by Mossholder et al., (1998), Confirmatory Factor Analysis (CFA) was used. In this method, the fit of a model in which all indicators loaded on one factor, addressing common method variance concerns regarding measures used in the study is examined. The logic underlying the “single factor procedure” (Podsakoff & Organ, 1986) is that if method variance is largely responsible for the covariation among the measures, a confirmatory factor analysis should indicate that a single (method) factor fits the data.

Various statistical tools employed in this research are shown in table 3.4.2.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>Cronbach’s Alpha</td>
</tr>
<tr>
<td>Validity</td>
<td>Confirmatory Factor Analysis</td>
</tr>
<tr>
<td>Multicollinearity</td>
<td>Correlation Matrix</td>
</tr>
<tr>
<td>Common Method Bias</td>
<td>Harmon’s one factor test</td>
</tr>
<tr>
<td>Validate the Model</td>
<td>SEM</td>
</tr>
</tbody>
</table>
3.4.4. Structural Equation Model Validation

The structural model examines causal relationships among study constructs as hypothesized. Once the measurement model is validated and satisfactory fit achieved, the structural model which aims to explore the causal effects and the direct and indirect influences of latent construct is tested. Model is validated by assessing the fit indices as reported above. The causal model and hypothesis testing is analysed using the parameter estimates including standardized and unstandardized regression coefficients, error variances and covariances, squared multiple correlations, direct, indirect and total effects.

Further Chapter 4, presents and discusses the results of the analysis related to the objectives of this research.