CHAPTER – 3

RESEARCH METHODOLOGY
CHAPTER 3

RESEARCH METHODOLOGY AND DESIGN

This chapter introduces the objectives of the study and research methods adapted, sheds light on the Hypotheses and criteria for the selection of Company’s Facebook pages, sampling and data collection methods, the survey instrument and the statistical analysis process.

3.1 OBJECTIVES OF THE STUDY

The objectives of the present study are to

(a) Investigate the effect of demographic characteristics (i.e., gender, age, income level and education level) on the social media variable, relationship marketing variables and Purchase and loyalty intentions.

(b) Examine the relationships between the factors of social media variables and brand trust, brand commitment, responsibility bonding, Purchase and loyalty intentions.

(c) To examine the mediating role of relationship marketing variables between social media variables and Purchase and loyalty intentions.

(d) To find whether there is a significant model fit among dimensions of Social media marketing variables, intervening variables and customer intentions in four industrial segments vis a vis Clothing, Jewellery, Mobile phones and Mutual funds.

3.2 FORMULATION OF HYPOTHESES

Based on the objectives, hypotheses are formulated. Hypotheses are further divided to sub hypotheses to enable statistical testing.
H1 There is a significant influence of Demographic variables on Social media variables, Relationship marketing variables and Purchase and Loyalty intention

H1.1.1 There is a significant influence of age on Social media variables

H1.1.1.1 There is significant variation in perception of content offering entertainment among different age groups on an average.

H1.1.1.2 There is significant variation in perception of content offering customisation among different age groups on an average.

H1.1.1.3 There is significant variation in perception of content offering interaction among different age groups on an average.

H1.1.1.4 There is significant variation in perception of content offering word-of-mouth communication among different age groups on an average.

H1.1.1.5 There is significant variation in perception of content perceived as trendy among different age groups on an average.

H1.1.1.6 There is significant variation in perception on social media marketing variables (content of company facebook page) and its dimensions among different age groups.

H1.1.2 There is a significant influence of age on Relationship marketing variables

H1.1.2.1 There is significant variation in trust induced by viewing company facebook pages among different age groups on an average.

H1.1.2.2 There is significant variation in commitment induced by viewing company facebook pages among different age groups on an average.

H1.1.2.3 There is significant variation in bonding induced by viewing company facebook pages among different age groups on an average.

H1.1.2.4 There is significant variation in responsibility induced by viewing company facebook pages among different age groups on an average.
H1.1.3 There is significant influence of age on Purchase and Loyalty intentions

H1.1.3.1 There is significant variation in Purchase intention induced by viewing company Facebook pages among different age groups on an average.

H1.1.3.2 There is significant variation in loyalty intention induced by viewing company Facebook pages among different age groups on an average.

H1.2 There is significant influence of Gender of the Respondents versus Social media marketing pages and its dimensions, Relationship marketing variables and Purchase and loyalty intention

H1.2.1 There is significant influence of gender on Social media variables

H1.2.1.1 There is significant variation in perception of content offering entertainment among different genders on an average.

H1.2.1.2 There is significant variation in perception of content offering customisation among different genders on an average.

H1.2.1.3 There is significant variation in perception of content offering interaction among different genders on an average.

H1.2.1.4 There is significant variation in perception of content offering word-of-mouth communication among different genders on an average.

H1.2.1.5 There is significant variation in perception of content perceived as trendy among different genders on an average.

H1.2.1.6 There is significant variation in perception on social media marketing variables (content of company Facebook page) and its dimensions among different genders.

H1.2.2 There is a significant influence of gender on Relationship marketing variables

H1.2.2.1 There is significant variation in trust induced by viewing company Facebook pages among different genders on an average.
H1.2.2.2 There is significant variation in commitment induced by viewing company facebook pages among different genders on an average.

H1.2.2.3 There is significant variation in bonding induced by viewing company facebook pages among different genders on an average.

H1.2.2.4 There is significant variation in responsibility induced by viewing company facebook pages among different genders on an average.

H1.2.3 There is a significant influence of gender on Purchase and loyalty intention variables

H1.2.3.1 There is significant variation in Purchase intention induced by viewing company facebook pages among different genders on an average.

H1.2.3.4 There is significant variation in loyalty intention induced by viewing company facebook pages among different genders on an average.

H1.3 There is significant influence of income of the Respondents on Social media marketing pages and its dimensions, Relationship marketing variables and Purchase and loyalty intention

H1.3.1 There is significant influence of income groups on Social media variables

H1.3.1.1 There is significant variation in perception of content offering entertainment among different income groups on an average.

H1.3.1.2 There is significant variation in perception of content offering customisation among different income groups on an average.

H1.3.1.3 There is significant variation in perception of content offering interaction among different income groups on an average.

H1.3.1.4 There is significant variation in perception of content offering word-of-mouth communication among different income groups on an average.

H1.3.1.5 There is significant variation in perception of content perceived as trendy among different income groups on an average.
H1.3.1.6 There is significant variation in perception on social media marketing variables (content of company facebook page) and its dimensions among different income groups.

H1.3.2 There is significant influence of income groups on relationship marketing variables

H1.3.2.1 There is significant variation in trust induced by viewing company facebook pages among different income groups on an average.

H1.3.2.2 There is significant variation in commitment induced by viewing company facebook pages among different income groups on an average.

H1.3.2.3 There is significant variation in bonding induced by viewing company facebook pages among different income groups on an average.

H1.3.2.4 There is significant variation in responsibility induced by viewing company facebook pages among different income groups on an average.

H1.3.3 There is significant influence of income groups on Purchase and Loyalty intention variables

H1.3.3.1 There is significant variation in Purchase intention induced by viewing company facebook pages among different income groups on an average.

H1.3.3.2 There is significant variation in loyalty intention induced by viewing company facebook pages among different income groups on an average.

H1.4 There is significant influence of Educational qualification of the Respondents on Social media marketing pages and its dimensions, Relationship marketing variables and Purchase and loyalty intention

H1.4.1 Influence of Educational qualification on Social media marketing variables

H1.4.1.1 There is significant variation in perception of content offering entertainment among different educational qualification classes on an average.
H1.4.1.2 There is significant variation in perception of content offering customisation among different educational qualification classes on an average.

H1.4.1.3 There is significant variation in perception of content offering interaction among different educational qualification classes on an average.

H1.4.1.4 There is significant variation in perception of content offering word-of-mouth communication among different educational qualification classes on an average.

H1.4.1.5 There is significant variation in perception of content perceived as trendy among different educational qualification classes on an average.

H1.4.1.5 There is significant variation in perception on social media marketing variables (content of company facebook page) and its dimensions among different educational qualification classes.

H1.4.2 There is significant influence of educational qualification on relationship marketing variables

H1.4.2.1 There is significant variation in trust induced by viewing company facebook pages among different educational qualification classes on an average.

H1.4.2.2 There is significant variation in commitment induced by viewing company facebook pages among different educational qualification classes on an average.

H1.4.2.3 There is significant variation in bonding induced by viewing company facebook pages among different educational qualification classes on an average.

H1.4.2.4 There is significant variation in responsibility induced by viewing company facebook pages among different educational qualification classes on an average.
H1.4.3  Influence of educational qualification on Purchase and Loyalty intention variables

H1.4.3.1 There is significant variation in Purchase intention induced by viewing company facebook pages among different educational qualification classes on an average.

H1.4.3.2 There is significant variation in loyalty intention induced by viewing company facebook pages among different educational qualification classes on an average.

H2  There is a significant association of Social media variables on Relationship marketing variables, relationship marketing variables on customer intentions and social media variables on Customer intentions

H2.1.1 There is a significant association of Social media variables on Trust

H2.1.1.1 There is a significant and positive relationship between Entertainment and trust.

H2.1.1.2 There is a significant and positive relationship between customisation and trust.

H2.1.1.3 There is a significant and positive relationship between Interaction and trust.

H2.1.1.4 There is a significant and positive relationship between word-of-mouth and trust.

H2.1.1.5 There is a significant and positive relationship between trend and trust.

H2.1.2 There is a significant association of Social media variables on commitment

H2.1.2.1 There is a significant and positive relationship between Entertainment and Commitment.
H2.1.2.2 There is a significant and positive relationship between customisation and Commitment.

H2.1.2.3 There is a significant and positive relationship between Interaction and Commitment.

H2.1.2.4 There is a significant and positive relationship between word-of-mouth and Commitment.

H2.1.2.5 There is a significant and positive relationship between trend and Commitment.

H2.1.3 There is a significant association of Social media variables on Bonding

H2.1.3.1 There is a significant and positive relationship between Entertainment and Bonding.

H2.1.3.2 There is a significant and positive relationship between customisation and Bonding.

H2.1.3.3 There is a significant and positive relationship between Interaction and Bonding.

H2.1.3.4 There is a significant and positive relationship between word-of-mouth and Bonding.

H2.1.3.5 There is a significant and positive relationship between trend and Bonding.

H2.1.4 There is a significant association of Social media variables on Responsibility

H2.1.4.1 There is a significant and positive relationship between Entertainment and Responsibility.

H2.1.4.2 There is a significant and positive relationship between customisation and Responsibility.

H2.1.4.3 There is a significant and positive relationship between Interaction and Responsibility.
H2.1.4.4 There is a significant and positive relationship between word-of-mouth and Responsibility.

H2.1.4.5 There is a significant and positive relationship between trend and Responsibility.

H2.2 There is a significant association of Relationship marketing variables on Purchase and loyalty intentions

H2.2.1 There is a significant association of Relationship marketing variables on Purchase intentions

H2.2.1.1 There is a significant and positive relationship between Trust and Purchase Intention.

H2.2.1.2 There is a significant and positive relationship between Commitment and Purchase Intention.

H2.2.1.3 There is a significant and positive relationship between Bonding and Purchase Intention.

H2.2.1.4 There is a significant and positive relationship between responsibility, and Purchase Intention.

H2.2.2 There is a significant association of Relationship marketing variables on loyalty intentions

H2.2.2.1 There is a significant and positive relationship between Trust and Loyalty Intention.

H2.2.2.2 There is a significant and positive relationship between Commitment and Loyalty Intention.

H2.2.2.3 There is a significant and positive relationship between Bonding and Loyalty Intention.

H2.2.2.4 There is a significant and positive relationship between responsibility, and Loyalty Intention.
H2.3 There is a significant association of Social media variables on purchase and loyalty intentions

H2.3.1 There is a significant association of Social media variables on Purchase intention

H2.3.1.1 There is a significant and positive relationship between Entertainment and Purchase intention.

H2.3.1.2 There is a significant and positive relationship between customisation and Purchase intention.

H2.3.1.3 There is a significant and positive relationship between Interaction and Purchase intention.

H2.3.1.4 There is a significant and positive relationship between word-of-mouth and Purchase intention.

H2.3.1.5 There is a significant and positive relationship between trend and Purchase intention.

H2.3.2 There is a significant association of Social media variables on Loyalty intention

H2.3.2.1 There is a significant and positive relationship between Entertainment and Loyalty intention.

H2.3.2.2 There is a significant and positive relationship between customisation and Loyalty intention.

H2.3.2.3 There is a significant and positive relationship between Interaction and Loyalty intention.

H2.3.2.4 There is a significant and positive relationship between word-of-mouth and Loyalty intention.

H2.3.2.5 There is a significant and positive relationship between trend and Loyalty intention.
H3 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and customer intentions in Clothing, Jewellery, Mobile phones and Mutual fund segments

H3.1 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and customer intentions in Clothing (Westside Facebook page) segment

H3.1.1 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and Purchase intention in Clothing segment (Westside Facebook page).

H3.1.2 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and Loyalty intention in Clothing segment (Westside Facebook page).

H3.2 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and customer intentions in Jewellery (Kalyan Jewellery Facebook page) segment

H3.2.1 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and Purchase intention in Jewellery segment (Kalyan Jewellery Facebook page).

H3.2.2 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and Loyalty intention in Jewellery segment (Kalyan Facebook page).
H3.3 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and customer intentions in Mobile phone segment (Samsung mobile phone Facebook page)

H3.3.1 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and Purchase intention in Mobile phone segment (Samsung Facebook page).

H3.3.2 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and Loyalty intention in Mobile phone segment (Samsung Facebook page).

H3.4 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and customer intentions in Mutual fund segment (Reliance mutual fund Facebook page) segment

H3.4.1 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and Purchase intention in Mutual fund segment (Reliance mutual fund Facebook page).

H3.4.2 Relationship marketing variables vis a vis trust, commitment, bonding and perceived responsibility serially mediate the relationship between Social media marketing variables and Loyalty intention in mutual fund segment (Reliance mutual fund Facebook page).

H4 There is a significant model fit between dimensions of Social media variable relationship marketing variables and customer intentions

H4.1 There is a significant model fit between dimensions of Social media variable relationship marketing variables and customer intentions in Westside facebook page
H4.2 There is a significant model fit between dimensions of Social media variables, relationship marketing variables and customer intentions in Kalyan jewellers facebook page

H4.3 There is a significant model fit between dimensions of Social media variables, relationship marketing variables and customer intentions in Samsung mobile facebook page

H4.4 There is a significant model fit between dimensions of Social media variables, relationship marketing variables and customer intentions in Reliance mutual fund facebook page

3.3 SELECTION OF COMPANY FACEBOOK PAGES ON FACEBOOK

The present study investigates Company’s Facebook pages. Many Facebook pages for Company have incorporated unique features (e.g., promotions) in order to encourage member participation. Among the numerous fan pages on the site, four Company’s Facebook pages were chosen one each from fashion retail showroom, one from Jewellery, One from Mobile phones and one from mutual funds.

3.4 PRELIMINARY TEST, SAMPLING, AND DATA COLLECTION

In advance of the final development of survey questionnaires, a preliminary test was conducted among fifteen students majoring in MBA marketing in order to draw a sample of Company Facebook pages for this study. Participants were asked to list three most popular fashion retail showrooms, three most popular Mobile Phone brands, Three Jewellery showrooms and three mutual funds. After a frequency test using SPSS 20.0, the fashion retail showroom mentioned most often was Westside, the most popular mobile brand was Samsung Mobiles, the most mentioned Jewellery showroom was Kalyan Jewellers and the most mentioned mutual fund Company was Reliance mutual fund. The pages were tested in Facebook for the number of likes. Westside Facebook page had 327,704 number of likes Samsung Mobiles had 42,220,325 likes, Kalyan Jewellers had 423,871 likes and Reliance mutual fund Facebook page had 1,258,370 likes as on January 15th, 2014. Further, they were one among the top 20 Facebook pages in their respective categories as listed by http://www.socialbakers.com/statistics/facebook/pages/So these companies were chosen to represent their categories.
3.4.1 Determination of Sample Size

There are a few methods to calculate the sample size in research. One of the most widely used formula for sample size calculation is given below.

\[ N = \frac{Z^2 p q}{S.E^2} \]

Where \( z \) represents the \( z \) value for corresponding confidence interval, \( P \) represents the probability of occurrence of the event \( Q \) represents the probability of non occurrence of the event \( (q=1-p) \), \( SE \) is the desired margin of error.

In this research, 95% confidence interval is preferred. The corresponding \( z \) value for that confidence interval is 1.96. When the probability of occurrence of the event is unknown, it is assumed to be 0.5. This is a conservative assumption where we assume that the chance of occurrence of event is 50% and the margin of error is to be limited to ± 5% of the original value, then the sample size is calculated as

\[ = \frac{(1.96*1.96*0.5*0.5)}{(0.05*0.05)} = 384.16. \]

Hence the desired sample size should be atleast 385 for this research.

3.4.2 Sample

Data were collected from a convenience sample in the Chennai Metropolitan area. Self-administrated questionnaires were distributed to around 1000 people of which 929 responded and, after excluding incomplete answers, 817 questionnaires were finally employed for statistical analysis.

3.4.3 Measures

The questionnaires consisted of three parts, with the first part measuring the brand’s SMM activities. In order to do this, a visual stimulus of the Company facebook pages on the most commonly used social media, Facebook was developed (See Figure 1, figure 2, figure 3 and figure 4). Participants were asked to review the proposed visual stimulus and answer 18 measurement items, which were developed from previous literature related to brand’s social media marketing (i.e., Kim, 2010).
Figure 3.1 Figure showing the screenshot of facebook page of Westside

Figure 3.2 Figure showing the screenshot of facebook page of Kalyan Jewellers
Figure 3.3 Figure showing the screenshot of facebook page of Samsung mobiles

Figure 3.4 Figure showing the screenshot of facebook page of Reliance mutual fund
The second part of the questionnaire included six items to measure trust developed from **Delegado Ballister’s scale (2004)**. Three items were added to the scale based on expert opinion to adapt the scale to social media context. Reliability and validity tests were done which showed a good fit to the data. Commitment scale was adopted from **Morgan and Hunt’s scale (1994)**, Perceived responsibility was adopted from **Bagelle.S (2007)** and Bonding scale was adopted from **Ju and Chung (2002)**. Here also two items were added based on expert opinion to adapt to social media context. Purchase intention from **Dodds, Monroe, and Grewal (1991)**, Loyalty intention from **Zeithaml, Berry and Parasuraman (1996)**. The measurement items used to measure the variables are listed as under.

All items for the seven constructs were measured using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The third part of the survey elicited demographic information such as education, biological gender, and age. Age ranges were adapted from **Wang and Fesenmaier’s (2004a)**: (1) younger than 21, (2) between 21 and 30, (3) between 31 and 40, (4) between 41 and 55 and (5) over 55. Several open-ended questions were also included in this part of the survey: (1) Do you have a Facebook account? (2) If yes, Have you currently liked the Company facebook page? (3) Approximately How many friends do you have on facebook? (4) How many hours a day you estimate you spend on facebook? (5) How do you check your facebook account? (6) Are you currently a Company customer?

A pilot test was undertaken by distributing the survey to a total of 30 graduate students majoring in MBA to determine whether wording changes were needed to enhance clarity. Based on the feedback gathered, minor changes were made to ensure that participants would have no difficulty in understanding or answering questions.
### Table 3.1 Table showing the constructs employed in the study

<table>
<thead>
<tr>
<th>Construct</th>
<th>Measurement items</th>
<th>Scale by</th>
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</table>
| SMM factor 1     | **Entertainment**  
- The contents found on Company’s facebook page seem to be interesting.  
- It is exciting to use Company’s facebook page.  
- It is fun to collect information on Jewellery using Company’s facebook page.  
- It is easy to kill time using Company’s facebook page.                                                                                           | Kim 2010 |
| SMM factor 2     | **Customisation**  
- It is possible to get customized (information relevant to you) on Company’s facebook page.  
- Company’s facebook page provide customized services.  
- Company’s facebook page provide lively feed information, that I am interested in.  
- It is easy to use Company’s facebook page.  
- Company’s facebook page can be used anytime anywhere.                                                                                      | Kim 2010 |
| SMM factor 3     | **Interaction**    
- It is easy to convey my opinion through Company’s facebook page.  
- It is possible to exchange opinions with others using Company’s facebook page.  
- It is possible to do two way interaction through Company’s facebook page.  
- It is possible to share information with other users through Company’s facebook page.                                                      | Kim 2010 |
| SMM factor 4     | **Word-of-mouth**  
- I would like to pass information on Jewellery from Company’s facebook page.  
- I would like to upload contents from Company’s facebook page on my blog or microblog.  
- I would like to share opinions on Jewellery or services acquired from Company’s facebook page with my acquaintances.                       | Kim 2010 |
| SMM factor 5     | **trend**          
- It is leading fashion to use Company’s facebook page.  
- Contents found on Company’s facebook page are upto date.                                                                                      | Kim 2010 |
<table>
<thead>
<tr>
<th>Construct</th>
<th>Measurement items</th>
<th>Scale by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media Trust</td>
<td>• I believe the content in Company’s facebook page.</td>
<td>(self)</td>
</tr>
<tr>
<td></td>
<td>• I feel that the content given in Company’s facebook page is accurate.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel that content in Company’s facebook page is fair.</td>
<td></td>
</tr>
<tr>
<td>Brand Trust</td>
<td>• I feel that Company is the store which will meet my expectation.</td>
<td>Delegado Ballister (2004)</td>
</tr>
<tr>
<td></td>
<td>• I feel confident about the Company.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel Company will never disappoint me.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel that Company would be honest and sincere in addressing my concerns.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel that Company would make any effort to satisfy me.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel that Company would compensate me in some way to solve the problem if at all I have with my purchase.</td>
<td></td>
</tr>
<tr>
<td>Brand Commitment</td>
<td>• I feel that if I become a customer, the relationship that Company will have with me will be very much important to them.</td>
<td>Morgan and hunt scale (1994)</td>
</tr>
<tr>
<td></td>
<td>• I feel that if I become a customer, the relationship that Company will have with me will be something that would be of very little significance to them.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel that if I become a customer, the relationship that Company will have with me would be something that they intend to maintain indefinitely.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel that if I become a customer, the relationship that Company will have with me would be very much like being family.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel that if I become a customer, the relationship that Company will have with me would be something Westside really care about.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I feel that if I become a customer, the relationship that Company will have with me would deserve my maximum effort to maintain.</td>
<td></td>
</tr>
<tr>
<td>Construct</td>
<td>Measurement items</td>
<td>Scale by</td>
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<td>--------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| Bonding            | • I am a true fan of the Company.  
• I feel intimacy towards the Company.  
• I feel I know Company well.  
• I would like to keep in touch constantly with Company via the Company facebook page.  
• I would like to have a long-term relationship with the Company. | Ju and Chung (2002)                                                       |
| Responsibility     | • This Company does what they say are going to do.  
• Company will value my feedback.  
• Company will take responsibility to fix the problem even if it is not their fault.  
• Company will anticipate my needs.  
• If I become their customer Company will really understand me. | Begalle, Mary S 2008                                                   |
| Purchase intention | • If I intend to purchase. I will purchase from the company.  
• Company’s facebook page induces me to go to the nearest store.  
• Company’s facebook page makes me visit their website and order online.  
• If I were shopping for -----, the likelihood that I purchase from Company is high.  
• I am willing to buy from the Company.  
• The probability that I would consider buying from Company is high. | Dodds, Monroe, and Grewal (1991)                                         |
| Loyalty intention  | • I will seldom consider buying products from other Companies.  
• As long as the standard and design of product are maintained I doubt that I would buy from other stores.  
• I will always consult information on Company’s facebook page before making a Purchase.  
• When I need to make a purchase this Company would be my first choice.  
• I like to use products purchased from Company.  
• I believe that the Company is my favourite.  
• To use the company’s product is the best possible thing to do. | Zeithaml, Berry, and Parasuraman 1996 and Gremler 1995                   |
3.5 PILOT STUDY

The pilot study was conducted with 60 questionnaires, 15 respondents each were exposed to the visual stimulus of Westside facebook page, Kalyan Jewellers facebook page, Samsung mobile facebook page and Reliance mutual fund facebook page. The questionnaires were distributed to students and college faculty as they were easily accessible by the researcher. Feed back was sought by the respondents and their suggestions were implemented for a better understanding of the respondents. Reliability tests were conducted to determine whether the scales were reliable to the data sample. After making necessary changes, the questionnaire was finalized.

3.6 DATA ANALYSIS

In the data analysis process, descriptive statistics, including frequencies and Percentages, were used for demographic data. Furthermore, the mean values and standard deviation were calculated for each of the items.

Hypotheses H1.1.1.1 to H1.4.3.2 tests the influence of Demographic variables such as age income group, educational qualification and gender on Social media variables, Relationship marketing variables and Purchase and Loyalty intentions. This is achieved by one way ANOVA at 0.05 level of significance.

Hypotheses H2.1.1.1 to H2.3.2.5 tests the association of Social media variables on Relationship marketing variables, the association of Relationship marketing variables on Purchase and loyalty intentions, and the association of Social media variables on Purchase and loyalty intentions. All these are achieved through multiple regression analysis.

The present study employed the two-step structural equation modelling (SEM) approach suggested by Anderson and Gerbing (1988). The first step involved confirmatory factor analysis (CFA) to validate the scales for the measurement of specific constructs proposed in the research model (Hair, Anderson, Tatham and Black, 1998). The second step involved examination of the structural model through SEM in order to evaluate the validity of the proposed
model. The maximum likelihood procedure was used to estimate the measurement model and structural model (Namkung and Jang, 2007) in Amos 6.0.

CFA was utilized to evaluate the overall measurement quality (Anderson and Gerbing, 1992), while a reliability test (Cronbach’s alpha) was conducted to assess the internal consistency of each construct. The cut-off value of .70 for Cronbach’s alpha (Nunnally, 1978) was used. A significant conventional chi-square test ($\chi^2$) statistic indicated a poor fit. The cut-off point of $\chi^2$/df was set at 3:1 (Joreskog and Sorbom, 1988). In other words, if the ratio ($\chi^2$/df) fell between 1 and 3, the model fit was perceived as acceptable (McIver and Carmines, 1981). GFI and CFI values greater than .90 indicated a satisfactory model fit (Hair et al., 2006; Yuan and Jang, 2008; He and Song, 2009). These two indices can be influenced by the average size of the correlations in the data. RMSEA with a value below .08 was recommended (Byrne, 1998; Diamantopoulos and Siguaw, 2000). The scales were also tested for content, discriminant and nomological validity.

Hypotheses H3.1.1 to H3.4.2 was tested using Serial mediation analysis. This was done by installing process macro by for Spss 20. It utilises ordinary least squares or logistic regression based path analytical framework to estimate direct and indirect effects in mediator models.

Structural models were tested for each of the sectors vis a vis Clothing, Jewellery, Mobile phones and mutual funds. All sectors were assessed for the proposed causal relationships between Social media marketing variables, Relationship marketing Variables (Trust, Commitment, Responsibility and Bonding), which reflected hypotheses H4.1 through H4.4.

This chapter deals in detail the research methods used in the course of this study. The next chapter discusses the Analysis and Interpretation.