CHAPTER 3
RESEARCH OBJECTIVES, RESEARCH HYPOTHESIS &
RESEARCH METHODOLOGY

3.1: Research Methodology: -
Research Methodology is a systematic and scientific approach for acquiring information on a specific topic. It helps in searching the facts by using different methodologies. The purpose of this chapter is to concentrate on methodology used for research by using the right methods and applying right tools to process to provide conclusion with solutions.

The outline of this chapter includes research methodology, research designs with sample size and procedures, type of questionnaire, methods of data collection of sources, data analysis, data findings and report writing etc. studied with scope of research work. The study is focused on both qualitative and quantitative research techniques. The study uses both Primary & Secondary Data collection methods, processes of data and interpretation of data.

This chapter focuses on research methodology for the systematic and theoretical analysis of research for the present study. It explains the suitable methodology to achieve the objective of the study. The main objectives of the study were to understand the impact of social media marketing on online purchases of consumers. To understand the factors which are influencing for social media marketing and online purchases of consumers. To study the customer satisfaction and role of after sale services of online consumers in cities of Mumbai, Pune, Nashik and Amaravati from Maharashtra state and Chennai from Tamil Nadu state. For this a complete study of demographic factors like age, gender, income, social networking sties mostly used by consumers, frequency of log on SNS, frequency of online shopping, duration of shopping, product category mostly purchased by consumers has been studied. The responses of online consumers those who have account on SNS is collected to study the objectives. Through field survey methods, structured questionnaire data has been collected. The demographic factors and other variable were studied through Chi-square method in order to minimize the errors in data collection and interpretation. This chapter describes study area, research design, pilot study, selection of samples and data collection methods.
3.2 Study Area:
The Research accompanied involved online consumers those who shop online and have access to social networking sites from cities of Mumbai, Pune, Nashik and Amaravati from Maharashtra state and Chennai from Tamil Nadu state. The purpose of the study cities like Mumbai, Pune, Nashik, Amaravati and Chennai is considered for research because it revealed that online marketing is well penetrated in these cities.

3.3 Research Design:
Research design is a plan, structure and strategy for doing investigation of study. Research design chosen for this study is Descriptive research design. Descriptive studies involve characteristics of users of a given product and degree to which the product use varies with demographic factors like gender, age, income etc. which demonstrates the relationship and helps to describe results. The present study used descriptive research. It involved surveys, observations and literature support. It covered variables which comes in two different categories such as social media marketing and online shopping behavior and the demographics of online consumers.

Understanding the issue:
The study is being started to understand the importance of social media for online purchases. This is due to succession of social networking sites that provides platform for e-marketers to get an exposures for their brands in online market with aim to maximize profit and expand their businesses with customer satisfaction. More on Social media strategies has more impact of online marketing. So it is important to understand the impact of social media marketing on online purchases of consumers. The study is used both Primary and Secondary sources of data to investigate the factors of social media marketing and online shopping for studying impact of social media marketing on online purchases of consumers in respect to FMCG- Personal products category in selected cities of India.

Instrumentation:-
Survey method is most extensively used for collecting the data from online customers through online and offline mode. The structural questionnaire is prepared based on the objectives of study for seeking relevant information directly from online respondents about demographic characteristics, consumer behaviour, knowledge, opinions and feelings about online purchases. By considering parameters such as Information related to factors of social media marketing and online purchases and its impact, Information related to demographic of people like gender, age, income etc. using social media marketing and online marketing and Information related to satisfaction levels of consumers and after sales services of online shopping.

The structural questionnaire had Nine sections the details are as follows:-

- Contains questions on demographic profile of respondent like gender, age, place, Income and social media mostly used.
- Second section contains questions regarding frequency of log in on social networking sites, average time spends on social networking sites and uses of no of social networking sites.
- Third section includes understanding of factors influencing for social media marketing.
- Fourth section covered the questions on impact of social media marketing for building relationship with customers.
- Fifth section of questionnaire contains about Frequency of online shopping and product categories mostly purchased by shoppers.
- Sixth section contains the questions on online shopping websites mostly used for shopping.
- Seventh section contains the questions on factors influencing for online shopping sites.
- Eighth section contains questions on uses of social networking sites.
- Ninth section contains question on online shopping customer satisfaction and after sales services satisfaction.

3.4 Pilot Study: Pilot study has been conducted to decide the parameters for influencing factors for using social media and online purchases based on that a structural questionnaire is prepared. The sample size for pilot study was taken from 124 customers who does online shopping and have access to social networking sites. Based on the sample, the reliability test is conducted. The
following table is shown reliability test for 53 parameters which is studied. The result of overall parameters is .908 which is greater than 0.7. Therefore test is satisfied.

<table>
<thead>
<tr>
<th>Reliability Statistics Over All for pilot study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's Alpha</td>
</tr>
<tr>
<td>0.908</td>
</tr>
</tbody>
</table>

Table No. 3.4:1 Reliability statistics for pilot study

3.5 Selection of sample:-
The sample size of the study is 815 which includes respondent who uses social networking sites and does online shopping in cities like Mumbai, Pune, Nashik and Amravati from Maharashtra state and Chennai from Tamil Nadu state. The convenience sampling technique is used to for study that comprises of large population of online sample group.

The sample size of the study is determined by using the following formula:-

\[ n = \left( \frac{Z \cdot \sigma}{E} \right)^2 \]

\[ Z = \text{Level of confidence} = 1.96 \text{ (it is standard for 95\% Level of confidence)} \]

\[ \sigma = \text{Standard deviation} = 10.75 \]

\[ E = \text{Permissible error} = 0.75 \]

\[ \text{Sample Size} = \left[ \frac{1.96 \cdot 10.75}{0.75} \right]^2 = 789 \text{ (approximate)} \]

(Therefore Minimum requirement of data sample for study is 800 respondents)

A total of around 1000 questionnaire was distributed out of which 815 valid as reliable questionnaire researcher received for analysis purpose. For this researcher has approached to friends, relatives and colleagues through formal routes of communication. Some of respondents were promptly replied whereas some took more time. Getting a responses from out of Mumbai areas were time consuming process.

Sample Size Distribution comprises of the following: -
The Total 815 online customers was studied from cities like Mumbai, Pune, Nashik and Amravati from Maharashtra states and Chennai from Tamil Nadu. Following is the brief:-

<table>
<thead>
<tr>
<th>State</th>
<th>Cities</th>
<th>Sample Size of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maharashtra</td>
<td>Mumbai 428</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pune 114</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nashik 86</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amravati 77</td>
<td></td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>Chennai 110</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>815</td>
<td></td>
</tr>
</tbody>
</table>

**Table No 3.5:1 Sample size of respondents**

After the data collection, test of reliability for 5 set of questions has been conducted. The overall alpha value of the question 61 questions is 0.915, which is greater than 0.7 which states that test of reliability is satisfied. Following table give the brief about test of reliability.

**Test of Reliability:-**

<table>
<thead>
<tr>
<th>Question No</th>
<th>No. of Questions</th>
<th>Reference</th>
<th>Alpha Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question No. 10</td>
<td>12</td>
<td>Factors which are influencing for Social Media Marketing</td>
<td>0.772</td>
</tr>
<tr>
<td>Question No. 11</td>
<td>06</td>
<td>Impact of Social Media Marketing for Building Relationship</td>
<td>0.742</td>
</tr>
<tr>
<td>Question No. 18</td>
<td>17</td>
<td>Factors Which are influencing to go for online shopping</td>
<td>0.817</td>
</tr>
<tr>
<td>Question No. 19</td>
<td>09</td>
<td>Important uses of social networking sites</td>
<td>0.808</td>
</tr>
<tr>
<td>Question No. 20</td>
<td>17</td>
<td>Customer Satisfaction of online shopping</td>
<td>0.769</td>
</tr>
<tr>
<td>Overall</td>
<td>61</td>
<td>Overall</td>
<td><strong>0.915</strong></td>
</tr>
</tbody>
</table>

**Table No 3.5:2 Test of Reliability**
3.6 Methods of Data Collection:

**Primary Data:**
The Primary data is consist of collection of original data from respondents that has an insight in studying secondary data. Primary data is collected by using questionnaire method. The structural questionnaire is prepared based on the objectives for studying relevant information directly from online respondents who frequently does online purchases from shopping sites and have access to social networking sites. Demographic characteristics like age, gender, Income of the family members and place is studied. Data is collected from online and offline routes from cities like Mumbai, Pune, Amravati, Nashik and Chennai from states Maharashtra and Tamil Nadu.

**Questionnaire Administration:**
A set of structural questionnaire is prepared to get the data from online consumers looking for relevant information directly from online respondents about demographic characteristics, consumer behaviour, knowledge, opinions and feelings about online purchases. Five Scale Likert scale is used for questions like strongly agree to strongly disagree and from not important to extremely important scale. Ranking method is used to know the preferences. Questionnaire consists of both open and close ended questions which is used to get an opinion or suggestions from respondents.

**Demographic factors:** - Respondent includes consumers varying age group from below 25 to above 35 age both male and female, whose family monthly income is in scales of Rs. below 25000 to Rs. above 50,000/- from cities like Mumbai, Pune, Nashik, Amravati and Chennai. Frequency of log on social networking site, SNS mostly used, average time spend on SNS, frequency of online shopping, duration of shopping, category of products mostly shop by online consumers.

The other parameters such as:-
1. Information related to influencing factors of social media marketing and online purchases.
2. Information related to building relationship with customers.
3. Information related to satisfaction levels of consumers
4. Information related to after sales services of online shopping.
Secondary Research:-
Secondary data is also important for research. On the basis of the secondary research can make the conceptual structure of the research. Secondary research is collected through various section of research like e-library, literature survey etc. to find the gap for research. The secondary data of the study is collected through published as well as unpublished secondary source like various journals, magazines, reports, books, articles, research papers, websites, various online database like inflibnet or N-list, ebseco, pro-quest, J-Gate, crisil and others were used to access the information online.

3.7 Data Analysis, Data findings & Report Writing:
Data analysis is a process of gathering, modelling and transforming data with the useful information and suggesting conclusions and supporting decision marking. The analysed data was finally interpreted to draw inferences, to prove hypothesis and report. The data was collected through structured questionnaire from respondents. Online google form was used to collect responses from online customers. The collected data was coded and entered into Microsoft Excel used as a basic tool for tabulation of data. The ranking method is used to understand the most preferences given for social networking sites. Weighted average mean is used to calculate the preference for product category.

Analysis of data was done with the help of SPSS version 20 (statistical package for social sciences) which is a standard software. The SPSS analyzed both open and closed ended questions. The SPSS package used to determine the Mean, Frequencies Analysis, Percentage (valid percentage & cumulative percentage) and Standard deviation to analyze the number of respondents belonging to each variables of social media and online shopping and also to analyze the demographic of online respondents. The graphs and tables were analyzed through SPSS.

To understand the association between two variables and to understand the association between demographics factors with social media variables and online shopping variables. Chi square method is used to get the results. Chi square test for goodness of fit. This test is used to find out whether two or more attributes are associated or not that is finding the association or independence of two or more attributes. It is simplest and commonly used non-parametric tests
for independence. There are seven independent variables like Influencing factors for online shopping, level of quantity purchased, frequency of shopping, building relationship, customer satisfaction, level of satisfaction of after sale services and Social Media Marketing will considered as dependent variables in the study.

The hypothesis testing was conducted with the help of chi square test. It calculates value of test, degree of freedom, two sided sign value at 5% level of significance.

- If the Chi-square calculated value is greater than table value, in that case test is rejected which means Null hypothesis is rejected and alternate hypothesis is accepted.
- If the Chi-square calculated value is less than table value, in that case test is accepted which means Null hypothesis is accepted and alternate hypothesis is rejected.

The test can be proved with these assumptions to understand the association between the variables and demographic factors.

3.8 Scope of the Study: -

Social media marketing helps for consumers as well as companies for online purchases. A Company effectively uses social media to connect not only with existing customers but also with prospective customers and promote their offers. The roles of social media in industries are secure and more reliable. The study is limited to FMCG Sector- Personal products like apparels, shoes and accessories. It covers only urban area of Maharashtra and Tamil Nadu states.