CHAPTER -3
RESEARCH METHODOLOGY

In the previous chapter “literature review” helped the researcher to gain an insight regarding the Hospitality Industry. It has formed the basis to explore the dimensions of present research by framing the need, scope and objectives of the present study; therefore the objective of this chapter is to describe the methods used to carry the research. This chapter highlights the Research design, research design; Universe of study, designing of questionnaire, Selection of sample, Data collection plan and Hypothesis’s formulated. It also describes the tools and techniques used for data analysis to achieve the objectives of this study.

3.1: Research design

The methods those are applied for getting desired information’s to construct a structure which solve a research problem can be defined as a Research Design (Malhotra 2007). It guides a researcher regarding, how to collect the data and analyze it with the help of appropriate statistical tools (Nargundkar 2003). We can state research design as a master plan which involves the decision taken in advance, regarding methods, gathering data, and analyzing it for finding the objectives of research (Burns and Bush 2007). Research designs can be divided in three categories, Exploratory, Descriptive, and Causal. Exploratory Research Design emphasizes on gaining new ideas, background information’s and insight of a problem, those are helpful in describing and clarifying the problem more precisely (Churchill Jr. 2001). Descriptive Research Design is conclusive in nature (Malhotra 2007). It is undertaken to obtain answers to questions of whom, what, when, where and how. Descriptive Research Design can be of two types: Cross-Sectional and Longitudinal. A Cross-Sectional Research design is a one-shot research study at a given point of time and consists of a sample of population of interest (Nargundkar 2003). A research design which repeatedly measures the same variables of a fixed sample is called a Longitudinal Research Design; on the other hand cause and effect relationship is determined in Causal Research Design. To select the best design which is appropriate for research depends upon how much we already know about the problem and the research objectives (Burns and Bush 2007). In the present research, Exploratory and descriptive both the research design are used because the
efforts will be made to explore the research objectives like “Finding out level of awareness of consumers, regarding Marketing Mix Strategies of Hospitality Industry”, “Analyzing factors influencing consumer decision making process”, “To examine the factors affecting consumer behavior and their impact on the decision making of respondents while they avails the Hospitality Services, and to “Find out service quality and studying the relationship between service quality and loyalty”. Therefore these research designs are appropriate for the study and hence used.

3.2: Sampling design

3.2.1. Area of study:
Delhi is taken as an area to carry out this research, because of the nearness and easy approachability for researcher, and the presence of aware and knowledgeable Hospitality consumers, sampling is done proportionately in all the nine zones of Delhi which are New Delhi, North Delhi, North West Delhi, West Delhi, South West Delhi, South Delhi, South East Delhi, Central Delhi, and North East Delhi. Delhi has eleven zones but researcher have considered only nine zones for study because two more zones Shahadra and East Delhi are recently added in zones tally and the data of these zones was not available.

3.2.2. Population:
Population can be defined as a set of same events or items, those are of researcher’s interest to carry out his/her research, or experiment on these items. A group of objects those exists in real or infinite group of events or objects perceived as a generalization from experience, can be termed as a statistical population. In this study population consisted of all individuals those are above fifteen year of age and are availing the Hospitality Services in Delhi.

3.2.3. Sampling Unit:
The sampling unit is an individual of 15 yrs. and above in Delhi who is availing Hospitality services. Researcher have selected this age group as sampling unit because individuals lying in this age group are mature, aware, and using Hospitality Services, hence their replies/point of views are more authentic and reliable. Sample contained a balanced mix of people from all age groups, income groups, and included the respondents of all profession’s. Therefore sample represents all the strata’s of
population availing the Hospitality Services (Smith, Bolton and Wagner 1999; Bodey and Grace 2005; Hocutt, Bowers and Donavan 2006; 2006; Schoefer and Ennew Bonifield and Cole 2007).

3.2.4. Sample Size:

After finalizing the sampling unit, the sample size is calculated statistically, to find out the sample size, the total population of Delhi (more than 15 years) is taken from Statistical abstract of Delhi government, which came out to be 10243098, and is rounded to 10250000. This is researchers target population, from this population sample has been calculated statistically at 95% confidence level and at a confidence interval of 92-95% which gave a sample size of 1067. This sample is further divided in the nine zones of Delhi so that proportionate sampling could be done in these zones. This gave researcher a homogeneous sample for study, as the researcher intended that the study should be represented equally by gender, so the sample is further subdivided into equal strata’s of male and female gender.

3.2.5. Sampling Technique:

The present study used multistage followed by convenience sampling, the sampling was done in the following stages:

1ST STAGE: Dividing the targeted population zone wise:

In this stage the calculated sample size which is 1067 is divided in nine zones of Delhi selected for study. The allocation is done on the basis of proportion of population living in these zones. The purpose of taking the sample from all the zones was to get a homogeneous sample for the study.

2ND STAGE: Dividing the zonal population in two strata's (Gender-wise):

In this stage the zonal population/sample is further subdivided in two strata’s/parts on the basis of gender, this is done because researcher wants to carry the research on the basis of gender.

3RD STAGE: From these strata's convenience sampling is done from each zone. Services marketing research also supports the use of convenience sampling (Davidow 2000; Spake et al 2003; Walsh and Mitchell 2005; Hocutt, Bowers and Donavan 2006). The data collection plan is depicted in table no.3.1
Table 3.1: Data collection plan zone wise

<table>
<thead>
<tr>
<th>Zones</th>
<th>Population</th>
<th>% of total population</th>
<th>Sample size</th>
<th>Male respondents</th>
<th>Female respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORTH-WEST</td>
<td>2230400</td>
<td>21.76</td>
<td>232</td>
<td>116</td>
<td>116</td>
</tr>
<tr>
<td>NORTH DELHI</td>
<td>541200</td>
<td>5.28</td>
<td>56</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>NORTH-EAST</td>
<td>1367350</td>
<td>13.34</td>
<td>142</td>
<td>71</td>
<td>71</td>
</tr>
<tr>
<td>EAST</td>
<td>1042425</td>
<td>10.17</td>
<td>109</td>
<td>54</td>
<td>55</td>
</tr>
<tr>
<td>NEW DELHI</td>
<td>86100</td>
<td>0.84</td>
<td>9</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>CENTRAL DELHI</td>
<td>366950</td>
<td>3.58</td>
<td>37</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>WEST DELHI</td>
<td>1550825</td>
<td>15.13</td>
<td>162</td>
<td>81</td>
<td>81</td>
</tr>
<tr>
<td>SOUTH DELHI</td>
<td>1666650</td>
<td>16.26</td>
<td>174</td>
<td>87</td>
<td>87</td>
</tr>
<tr>
<td>SOUTH-WEST</td>
<td>1398100</td>
<td>13.64</td>
<td>146</td>
<td>73</td>
<td>73</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10250000</td>
<td>100</td>
<td>1067</td>
<td>533</td>
<td>534</td>
</tr>
</tbody>
</table>

Source: Statistical survey of Delhi 2014

3.2.6. Sources of data: The study has been mainly carried on the basis of primary data which is collected from the consumers availing Hospitality Services in Delhi. Besides this the secondary data is also used which included the Published literature, Hospitality journals, Government publications, Text and reference books and previous researches in the field of present study.

3.2.7. Data collection tools: Data is collected through structured questionnaires; those were mailed and administered personally.

3.2.8. Questionnaire Development:

Data for the present study is collected using self-administered questionnaires. The questionnaire is drafted after carrying out an extensive literature survey and summarizing opinions of a few selected consumers of Hospitality Services. The questionnaire is then judged by few Marketing academicians who are experts in this area of research.

They evaluated the content and wording of items. On the basis of suggestions given by these experts, some statements were rephrased and a few vague and ambiguous items were deleted. The questionnaire consisted of 2 sections. Section A contains question no.1 to 13 those deals with the general information’s regarding the demographic profiles of respondents availing Hospitality services. In Section B question no.1 to 12 deals with awareness and preferences of respondents regarding Hospitality industry, question no. 13-18 deals with awareness of respondents regarding Marketing Mix
strategies of Hospitality industry, question no. 19 n 20 deals with “Influence of business and market environmental factors on the consumer behavior of respondents”, and “Analysis of consumer behavior factors”, question no.21 deals with “Measuring the service quality through SERVQUAL scales, and question no. 22, 23 and 24, deals with finding out the level of satisfaction, recommendation and loyalty in Hospitality consumers. The statements are measured on Likert (Five point scales), and SERVQUAL (Seven Point scale). Each questionnaire had a cover letter which stated the importance and purpose of the study and encouraged respondents to participate and thanked them for participation.

3.2.9: Hypothesis formed: Following Hypothesis are formed and tested:

H1: Demographic profile has no significance towards consumer preferences of respondents

H2: Consumers have no awareness about Marketing Mix Strategies of Hospitality Industry.

H3: The Business, Market and Environmental factors do not affect the consumer’s decision for availing Hospitality Services.

H4: The service quality and loyalty bears no relationship.

3.3: Data Analysis Techniques: This section explains the various tools and techniques used to analyze the data. SPSS statistics 20.0 is used for this purpose. Following are the statistical tools used to analyze the data:

3.3.1: Measurement of internal consistency:
To measure the internal consistency of data Cronbach’s alpha is used, it is a reliability test conducted within SPSS to measure the internal consistency of data, i.e. reliability of measuring instruments (questionnaires). This tool is most commonly used when the questionnaire is developed using multiple Likert scale statements, and therefore to determine if the scale is reliable or not. Cronbach’s alpha generally an increase as inter correlation among test items increase, and thus is also known as “Internal consistency estimate of reliability of test scores” (Devellis R.F., 2012).

3.3.2. Frequencies analysis:
Researcher used frequency analysis to answer the first research question. Frequency analysis is a Descriptive statistical method that shows the number of occurrences of
each response chosen by the respondents. For analyzing frequencies researcher first made a frequency distribution. A convenient method of putting and looking at variables different values can be defined as a frequency distribution. The values further can be represented in the form of Histogram, or Bar Charts. Researcher used the most commonly statistics associated with frequencies like Mean, Standard deviation, Skewness and Kurtosis (Malhotra Naresh, 2016).

3.3.3. Mean:

For a data set, the terms arithmetic mean, mathematical expectation, and sometimes average are used synonymously to refer to a central value of a discrete set of numbers: specifically, the sum of the values divided by the number of values. The arithmetic mean of a set of numbers $x_1, x_2, \ldots, x_n$ is typically denoted by "$x$ bar". If the data set were based on a series of observations obtained by sampling from a statistical population, the arithmetic mean is termed the sample mean. For a finite population, the population mean of a property is equal to the arithmetic mean of the given property while considering every member of the population. For example, the population means height is equal to the sum of the heights of every individual divided by the total number of individuals. The sample mean may differ from the population mean, especially for small samples. The law of large numbers dictates that the larger the size of the sample, the more likely it is that the sample mean will be close to the population mean (Malhotra Naresh, 2016).

3.3.4. Standard deviation:

Standard deviation is the measure of variability. The main advantage of Standard Deviation is that it helps in measuring the dispersion of data i.e. it find out how near to the Mean the data lies. Measurement of Standard deviation plays an important role in analyzing the confidence in data. The difference between the Mean and observed value is called the deviation from the Mean. The Variance is the Mean squared deviation from the Mean. The Standard deviation is the square root of the Variance. If data is clustered around the Mean then Standard deviation is small, but if data is scattered the Standard deviation is large (Malhotra Naresh, 2016).
3.3.5. Skewness and Kurtosis:
Measurement of shape is very essential besides measuring the variability in data. The Skewness and Kurtosis is useful in measuring the distribution shape. Data distribution may be skewed or symmetrical. In case of symmetrical distribution, the data values are same on both the sides of distribution, and Mean, Mode and Median values are same. Skewed distributions are of two types one is Positive Skewness and other is Negative Skewness, i.e. data is lumped to right of X-axis in case of positive Skewness and it is lumped to left of X-axis in case of negative Skewness. Kurtosis on the other hand can be defined as the curve flatness which is determined by the data distribution. Distribution gets more peaked if Kurtosis is positive and if it is negative then distribution is more flat in comparison to normal distribution. Measure of shapes are important because if a distribution is highly skewed or peaked or flat than statistical procedures that assumes normality should be used with caution (Malhotra Naresh, 2016).

3.3.6. Level of significance:
Researchers always have a risk of drawing an incorrect conclusion about a population because of Type 1 and Type 2 errors. Level of significance can be defined as the probability of committing Type 1 error. Type 1 error can be controlled by setting up a tolerable limit of risk of Null Hypothesis rejection. The setting up the level of risk will depend on the seriousness of committing Type 1 error (Kotler Philip, 2015).

3.3.7. Chi-square statistics:
This statistics is used to test the significance of association of two variables in Cross tabulation. In Chi square statistic two or more variables are simultaneously interpreted in cross tabulation table (Baggozi and Yi 1988) and two or more than two variables frequency distribution is merged with each other in a single table, which helped researcher to find out whether any relationship exists in between or among variables or not. Cell frequencies are calculated and the test is conducted. The observed cell frequencies are compared with actual frequencies. The greater the difference in between these two frequencies, the larger will be the value of this statistics.
3.3.8. Cross-tabulation:
Cross tabulation is widely used in business researches, and is a very useful statistical tool, it is estimated that Cross tabulation analysis and Single variable frequency analysis are being used in almost all business researches. Cross tabulation is also called as Contingency table analysis and is frequently used to analyze the data taken with the help of Nominal measurement scales. Cross Tabulation is a table which contains the frequencies those have specific attributes mentioned in the cells of table. Cross tabulation gives us number or information’s about the association between the variables (Kotler Philip, 2015).

3.3.9. Factor analysis:
Factor analysis is a general name denoting a class of procedures primarily used for data reduction and summarizing (Hair et al. 2006). Business researches involves the analysis of variables those can be very large in numbers. These variables may be correlated with each other and in order to study them they have to be reduced to a level where they can easily be studied and analyzed. Factor analysis, finds out the relationship among many variables those are interrelated, and highlight them with respect to particular attributes. This analysis is a technique which is interdependent and in which, association among variables is investigated. Factor analysis has been proved to be very useful when researchers wanted to study the patterns of relationship among many dependent variables with the goal of discovering something about the nature of independent variables that affect them (Darlington 1973). This is a procedure that takes a large number of variables or objects and searches to see whether they have a small number of factors in common which account for their correlation (Kinnear et al. 1997). The use of factor analysis helps in identifying the underlying dimensions known as factors and finding extent to which each component or dimension can explain the variables (Hair et al 2006, Malhotra 2007).

3.3.10: Regression Analysis:
Regression Analysis can be stated as a statistical technique, which is applied for finding out the relationship in between two variables or among many variables. The techniques used in Regression analysis are modeling and analysis of variables; it is applied when researchers wanted to find out the relationship in between independent and dependent variables. In other words we can say that Regression analysis helps researchers in
assessing how criteria variable (Dependent variable) changes when independent (Predictors) variable or variables changes. In simple words Regression analysis, analyze the expectations (conditional) of dependent variable with respect to independent variables, which means when independent variable is fixed, than finding the average value of dependent variables. While analyzing the data researchers form a Regression function, which is constructed with the help of independent variable, and it is important for researchers to analyze the variation in dependent variable with respect to regression function and which can be explained with the help of probability distribution (Malhotra Naresh, 2016).

3.3.11: Analysis of variance (ANOVA):
Anova is a statistical tool which is applied, when researchers wanted to analyze the difference among Mean of groups, and procedures associated with it for example “variation”. Anova was developed by Ronald Fisher who was a biologist. In Anova, the variance which is observed is divided in various components those can be attributed to various variation sources. In simpler words Anova can be stated as a method which tests whether Means of different groups are equal or they vary, and hence it generalize the T-test of groups those are more than two (Malhotra Naresh, 2016). Anova are very helpful to compare the Means of three or more groups, therefore it is very useful for analyzing number of business research problems.

3.4. Summary
This chapter explain the research methodology used for the present study. It discusses the Research design, which included the Exploratory and Descriptive designs. The chapter also discusses sampling design which included the area of study, population, sampling unit, sources of data, sampling techniques, sample size, development and validation of the questionnaire and the hypothesis those are constructed and tested by the researcher. This chapter also discussed the statistical tools used to analyze the data which included the techniques like Measurement of internal consistency, Frequencies analysis, Mean, Standard deviation, Skewness and Kurtosis, Level of significance, Chi-square statistics, Correlation, Cross tabulation, Factor analysis Regression and Anova. The next chapter analyzes the awareness of consumers towards Marketing Mix Strategies of Hospitality industry and Cross tabulation of Marketing Mix with demographic variables of respondents.