CHAPTER 3: Research Methodology

This chapter explains in detail the methodology used in gathering the information necessary in this study. It highlights the sources of data and the survey design, which includes the sampling plan and data analysis method employed. The steps involved were elaborated in details and have been carried out systematically in order to achieve a high degree of reliability and validity.

The term methodology is a system of explicit rules and procedure in which research is based and against which claims of knowledge are evaluated (Ojo, 2003).

The methodology used in a study is integral to the reliability of the findings and the validity of the study. Therefore, this section focuses on the research technique adopted and used for this study with the aim of achieving the research objectives. This section of the document also contains description of the instruments used to measure various constructs applicable to this study.

3.1 Research Purpose: Exploratory/Descriptive/Explanatory

The word research is derived from the Latin word meaning to know. It is systematic and replicable process, which identifies and defines problems, within specified boundaries. It employs well-designed method to collect the data and analysis the results. It disseminates the findings to contribute for generalizing knowledge.

There are three types of research, exploratory research, descriptive and explanatory research that are explained below:

Exploratory Research

It is a study of new phenomenon. Exploratory research is characterized by its flexibility. When a problem is broad and not specifically defined, the researchers use exploratory research as a beginning step. Exploratory studies are a valuable means of understanding what is happening; to seek new insights; to ask questions and to assess phenomenon in a new light (Yin, 1994).
Exploratory research has the goal of formulating problems more precisely, clarifying concepts, gathering explanations, gaining insight, eliminating impractical ideas and forming hypotheses. Literature research, survey, focus group and case studies are usually used to carry out exploratory research. An exploratory research may develop hypotheses, but it does not seek to test them (Darabi, 2007).

**Descriptive Research**

When a particular phenomenon is under study, the research is needed to describe it, to clarify and explain its inner relationships and properties (Huczynski and Buchana, 1991). The descriptive research will portray an accurate profile of people, events or situations (Robson, 1993). Descriptive research in contrast with exploratory research defines questions, people surveyed and the method of analysis prior to beginning of data collection. In other words, descriptive research defines the research aspects viz., who, what, where, when, why and sometimes how of the research. Such preparation allows one the opportunity to make any required changes before the process of data collection has begun. However, descriptive research should be thought of as a mean to an end rather than an end, itself (Yin, 1994).

**Explanatory Research**

When the focus is on cause-effect relationships, the study can be explanatory explaining which causes produce which effects (Yin, 1994). Our concern in casual analysis is how one variable affects, or is ‘responsible for’, changes in another variable. The stricter interpretation of causation is that some external factor produces a change in the dependent variable.

Explanatory research which is grounded in theory is another research purpose type, and the theory is created to answer why and how questions. We are more interested in understanding, explaining, predicting and controlling relationships between variables than we are in detecting causes. Explanatory studies go beyond description and attempts to explain the reasons for the phenomenon that the descriptive study only observed. In an explanatory study, the researcher uses theories or hypotheses to represent the forces that caused a certain phenomenon to occur.
Yin (1994) highlights that the boundaries between the categories are not always clear. The research purpose and research questions indicate that this study is mainly descriptive and explanatory, yet as exploratory in pilot test; this means that we are going to answer a ‘what’ question and also find out how casual relationship between variables in our conceptual framework will be established. As mentioned earlier, an exploratory research is used in pilot study phase and helped us to modify the research model if it is needed.

This study is an Exploratory Research study in order to study on buying decision process from mall. For research both primary and secondary data was collected. We have also explored the demographic characteristics of responded and then effecting degree of factors influencing purchase of product was measured.

A convenience sample of approximate 300 respondents will be taken for ascertaining and giving ranking to the factors influencing purchase of products from different malls.

3.2 Research Approach

The research approach is deductive when the theory and hypothesis are developed and a research strategy is designed to test the hypothesis, or it can be inductive when the data is collected and theory is developed as a result of data analysis. The deductive approach owes more to positivism and inductive approach owes more to phenomenology (Saunders 2000).

In this study the research questions are developed. Research strategies are designed and research questions are answered accordingly. So, it can be concluded that the research approach is deductive.

Based on the study of Guba and Lincoln (1994), there are two approaches or methods of research i.e. Quantitative and Qualitative that are available to researchers. The most important difference between the two approaches is the use of numbers and statistics. The choice of research approach naturally depends on the defined research problems and the data needed for solving these problems.
The qualitative approach emphasizes on processes and meanings that are not measured in terms of quantity, amount, intensity or frequency. The qualitative approach provides a deeper understanding of the phenomenon within context (Guba and Lincoln, 1994). Moreover, qualitative researchers stress the socially constructed nature of reality that states the relationship between the researcher and the phenomenon under investigation. On the other hand, quantitative researchers emphasize the measurement and analysis of casual relationships between variables. According to Cochran and Dolan (1984) that relate the differences between qualitative and quantitative research to the distinction between exploratory (qualitative) and confirmatory (quantitative) analysis. When there is little theoretical support for a phenomenon, it may be impossible to develop precise hypotheses, research questions, or operational definitions. In such cases qualitative research is appropriate because it can be more exploratory in nature (Sullivan, 2001; Cited by Darabi et al.)

Qualitative research involves conducting interviews during the explanatory stage of a research project with the aim of uncovering factors that play a role in the marketing problem. The interviews should aim to uncover new qualitative information rather than gather quantifiable results. As a result, exploratory interviews are open – ended so as to stimulate respondents to share their thoughts and feelings. Qualitative research can be used to probe deeply into consumers’ underlying needs, perceptions, preferences and level of satisfaction. In addition, such research can be used to gain greater familiarity with and understanding of marketing problems whose causes are unknown. Furthermore, ideas can be developed that can be further investigated through quantitative research.

According to Malhotra and Birks (2003), quantitative research is suitable for measuring both attitudes and behavior. Quantitative research can be used to create models that predict whether or not someone holds a particular opinion or would act in a certain way based on an observable characteristic. Quantitative research techniques search for quantify data by applying some form of statistical analysis.

After comparing two research approaches in this study, both quantitative approach and qualitative approach has been chosen.
The current study considers many issues related to buying decision process in Indian shopping malls in Indore and flexibility of research design but on the other hand, it requires accurate description of association of some variable. Hence the study was also descriptive in nature so that many different facets of problem have been considered as and when they arise.

3.3 Research Strategy

As Saunders et al. (2000) pointed out that there are several research strategies that can be employed in the research such as: experiment, survey, case study, grounded theory, ethnography and action research. The most important step is that the appropriate strategy for the research question(s) and objectives be chosen. These strategies should not be thought of as being mutually exclusive. Some of these strategies are described in brief below:

**Experiment:** Experiment is a classical form of research that owes much to the natural sciences, social sciences, especially psychology. It involves the definition of a theoretical hypothesis, selection of samples and allocation of them to different experimental conditions, introduction of planned changes, measurement on some variables and control of other variables.

**Survey:** Survey is a popular method and common strategy in business research. The Survey Method allows the collection of a large amount of data from a large population. A survey allows for standardization of data which allows easy comparisons. In addition, since this method is easily understood by the respondents, it is perceived as authoritative. Furthermore, the survey method gives more control over the research process. The principle instrument is a questionnaire, on which each person (respondent) is asked to respond to the same set of questions in a predetermined order. However, the survey strategy does have disadvantages such as the time needed to design and pilot the questionnaire, and to analyse the data. In addition, the data collected may not be as wide ranging as that collected by other methods as there is a limit to the number of questions that can be asked.

**Case Study:** A case study is defined by Robson (2002) as ‘a strategy for doing research which involves an empirical investigation of a particular contemporary
phenomenon within its real life context using multiple sources of evidence. *Saunders et al. (2000)* define case study as the progress in detailed, intensive knowledge about a single case, or a small number of related cases. A case study is a detailed study based on the observation of the intrinsic details of individuals or organizations that is not suitable as much of the required sources of evidence do not exist, for example documentary analysis and suitable events for observation. The case study approach has considerable ability to generate answers to the questions ‘why’ as well as ‘what’ and ‘how’.

**Grounded Theory:** Grounded theory is the greatest example of the inductive approach. It is better to think of it as a mixture of induction and deduction. In this theory the data collection begins without initial theoretical framework formation. Theory is developed from data generated by a series of observations. These data lead to generation of predictions that are then tested in further observations.

*Yin (1994)* has also recognized five strategies; experiments, survey, analysis of archival information, histories and case studies. Each of these strategies is a different way of collecting and analyzing empirical evidence. *Yin* has differentiated strategies according to three conditions. These conditions which have shown in following table are the type of research questions, the extent of control an investigator has over actual behavioral events and also the degree of focus on contemporary as opposed to historical events.
## Table 3.1: Relevant Situations for Different Research Strategies

<table>
<thead>
<tr>
<th>Research Strategy</th>
<th>Research Questions</th>
<th>Required Control over Behavioral Event</th>
<th>Focus on Contemporary Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>How, Why</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Survey</td>
<td>Who, What, Where, How Much, How Many</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Archival Analysis</td>
<td>Who, What, Where, How Much, How Many</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>History</td>
<td>How, Why</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Case Study</td>
<td>How, Why</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

In this study, the research questions start with ‘what’. Also this study is on contemporary events and without any control on the behaviors. So, survey strategy is appropriate for this study. Survey method will be employed to find the employees’ retention strategies in academic sector.

### 3.4 Research Design

A research design describes the procedures for conducting the study, including when, from whom, and under what conditions the data will be obtained and analysed for required information. It is thus design in the following ways to increase the validity of the questionnaire and gain more responses.
According to Kerlinger and Lee (2000), research design has the purpose of providing answers to research questions and controlling variance, when the research design must enable researchers to answer research questions as validity, objectively, accurately and economically as possible. Therefore, it is important to select the research design that would best satisfy the research questions as identified.

Sekaran (1992) noted that social as well as business research is a systematic attempt to provide answers to questions. Research design is by definition the plan devised by the researcher that will guide the research process from A to Z, in other words choosing the topic, conceptualizing, studying and absorbing similar studies, then

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assembling, organizing and integrating information (data) and it results in a specific end product (research findings). It is within these parameters that key questions are to be asked and answered such as the nature of research questions posed; the degree of control an investigator desires on events to be studied; the nature and particularities of the subjects under investigation and the extent of focus on contemporary phenomena and their relationships to present realities (Moser & Kalton, 1971).

The Nature of the Present Research Design

The research design of the present study is based on the understanding that because of the paucity of research on this particular topic it is an exploratory study utilising a combination of quantitative and qualitative techniques. Exploratory studies are those examining phenomena, attitudes, perceptions, and ideas of specific social groups that have not really been examined as consistently and intensely as other groups (Walizer, 2006). This type of research design can aid in measuring those dimensions of retention practices that contributes to the organizational effectiveness.

3.5 Objectives of the Study

The objectives of this study were to investigate the consumer decision process for purchasing in malls and to study variations in the consumer decision process across different demographic variables.

Major objectives of this study include:

- To study decision process of Indian shoppers in shopping malls of Indore.
- To study variations in the buying decision process of consumer across different demographic variables.
- To study the effect of quality and brand of a product on Indian shoppers that helps consumer for taking decision in buying process.
- To study preference for mall in general and retail market (specifically).
- To analyze the opinions and beliefs of consumers toward buying decision process from mall.
- To suggest an appropriate measure to improve the buying decision making of Indian shoppers.
3.6 Survey Research

The purpose of survey research is to generalize from a sample to a population so that inferences can be made about some characteristics, attitudes or behavior of this population (Cresswell, 2003). Survey research is regarded by Babbie (2001), as the best method of data collection, when the researcher is interested in collecting original data for a population that is too big to test directly. This type of research usually focuses on people, the vital facts of people, their beliefs, opinions, attitudes, motivations and behavior (Kerlinger & Lee, 2000).

In this study, survey research design is adopted. Survey research design was chosen because the sampled elements and the variables that are being studied are simply being observed as they are without making any attempt to control and manipulate them.

A mall intercept self structured questionnaire was surveyed where by respondents are intercepted in shopping in malls. So, according to mall intercept survey data was collected from shopping malls. The target population for this study consisted of active mall shoppers.

3.7 Sampling Techniques

The sample can be selected from a larger group of persons, identified as the population, or can simply refer to the group of subjects from whom the data are collected. Sampling techniques offer a range of methods to reduce the quantity of data that needs to be collected by considering only data from a subgroup rather than all possible cases. If data is collected and analysed from every possible case or group, it is a census. However, it is not necessarily true that a census survey would produce more useful results than a well planned sample survey. Sampling offers a valid alternative to a census when: it would be impractical to survey the full set of cases (the population), the cost would be too high, not enough time is available and /or results are needed quickly from already gathered data.
There are two types of sampling techniques: probability or representative sampling and non-probability or judgmental sampling. The chance of probability of each case being selected from the population is known with the former which makes it possible to estimate statistically the characteristics of the population from the sample. For effective coverage and lower cost, random sampling technique was used to select the respondents. A systematic sampling technique was used to select a total of 300 Mall Shoppers that constituted our sample size. It should be pointed out that limited financial resources at the researcher’s disposal could not permit or allow for a greater sample size.

Sample Size

The sample size is determined by three factors: the level of certainty that the characteristics of the data collected represent the population, the margin of error that can be tolerated, and the type of analyses to be performed. The final sample size is often a matter of judgment as of calculation due to the constraints above.

Due to time constraints, a sampling procedure was used. The total sample size for the study is 300 respondents.

3.8 Data Collection Instrument

The researcher felt that there was a need to follow a number of flexible guidelines as he was aware that the construction of the questionnaire needs to be determined by a number of important factors such as content, format, type, wording and the social composition of the subjects and orders.

Primary Data

A structured questionnaire will be developed to measure the buying decision process of Indian shoppers in the shopping malls. The questionnaire consisted of questions concerning customer decision process and demographic information of respondents. For this study some items will be adapted from Consumer Style Inventory (CSI) developed by Sproles and Kendall.
Secondary Data

Detailed review of literature from secondary sources would provide the base for identifying the domain, selection, designing and inclusion of various measuring variables in the questionnaire for the study. We would be also used various sources of secondary data which include:


Tool Measured

The collected data will be analyzed by ms-office software in which the ms-excel was used for the different charts types and for tabulation of the data with the help of percentage analysis. The Collected data was also analyzed using SPSS software. The software was further used for probable statistical techniques which will be applied are described as follows:
To assess the impact of consumers’ decision introducing the emerging buying concept secondary data was collected and Factor Analysis, Correlation Analysis, Regression Analysis, Frequency Method and Levine’s Test were applied.

3.9 Data Collection Plan

A proposal that explained the aim and possible value of this research was presented to the executive of Human Resource Department of the target organization, with a formal request for approval to conduct this research. The questionnaires were distributed by the researcher, clear instructions were provided. The purpose of the study and the benefits for both the participants and the organization was highlighted. To ensure confidentiality and enhance reliability, the study was conducted anonymously.
3.10 Reliability and Validity Analysis

Reliability can be defined as the degree to which measurements are free from error and, therefore, give in consistent results. In other words, reliability concerns the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials (Carmines and Zeller, 1979).

Internal consistency involves correlating the responses to each question in the questionnaire with those to other questions in the questionnaire (Saunders, 2000). Although there are variety of methods for calculating internal consistency, of which one of the most frequently used is Cronbach’s Alpha, which is the degree of inter correlations among the items that constitute a scale. The reliability of the measuring instruments was assessed with the use of Cronbach Alpha Coefficient (Clark & Watson, 1995). A reliability 0.60 and 0.70 or above is considered to be the criteria for demonstrating internal consistency of new scales and established scales respectively (Nunnally, 1988; cited by Gounaris, 2005).

Split half reliability of the questionnaire was reported to be 0.89. Alpha coefficient was found to be 0.90.

3.11 Assumptions

An assumption is “a condition that is taken for granted, without which the research project would be pointless” (Leedy & Ormrod, in Sage 2009). Several basic assumptions underlie the proposed research study. As such, it was assumed that:

- The population is literate, fluent in English and will be able to complete the questionnaires
- The ability of the professional workforce due to time constraints and willingness to provide the data required for the study
- Participants will provide correct and truthful answers to the questions asked in the survey due to the acknowledgement of confidentiality
- Quantitative research is an appropriate means to explore the organizational behavior
- All participants are computer literate.
3.12 Hypotheses

Hypotheses are predictions that can be tested empirically for internal consistency in a systematic and controlled way. These are basic tool of scientific research that aims to explain phenomenon. They specify relations among variables with the purpose of explaining and predicting phenomena, and reflect the proper scepticism of scientific inquiry about claimed relationships between phenomena by accepting only results that have a statistically low probability (5% or less) of occurring by chance.

The hypotheses in this study were expressed as null hypothesis. The null hypothesis is a succinct way to express the testing of obtained data, against chance expectations. It expresses the chance expectation. (Kerlinger, 1976, p. 203). Null hypothesis are tested by subjecting them to statistical tests that measure the probability of the event occurring by the ratio of the favourable cases to the whole number of cases possible. It then becomes possible to make appropriate inferences. In the description that follows, the conventional abbreviation for listing hypotheses is used. Much of the interests of the researcher were in the frequency of responses in various categories, and the null hypothesis expression therefore is not considered quite correct. Nevertheless it was considered to be a convenient mode of expression. For this study, the following hypotheses were formulated:

\(H_01\): There is no significant effect of Gender on buying decision process in malls.

\(H_02\): There is no significant effect of Age on buying decision process in malls.

\(H_03\): There is no significant effect of Education on buying decision process in malls.

\(H_04\): There is no significant effect of Occupation on buying decision process in malls.

\(H_05\): There is no significant effect of Monthly Income on buying decision process in malls.

\(H_06\): There is no significant association between Price Conscious and buying decision process in malls.

\(H_07\): There is no significant association between Quality Conscious and buying decision process in malls.
H_{08}:- There is no significant association between Brand Conscious and buying decision process in malls.

H_{09}:- There is no significant association between Fashion and Life Style Conscious and buying decision process in malls.

H_{010}:- There is no significant association between Social Ambience and buying decision process in malls.

H_{011}:- There is no significant association between Novelty and Recreational and buying decision process in malls.

3.13 Factor Analysis

Factor analysis is a generic name given to a class of multivariate statistical methods whose primary purpose is to define the underlying structure in a data matrix. In other words, it addresses the problem of analyzing the structure of the interrelationships among a larger number of variables. Once these dimensions and the explanation of each variable are determined, the two primary uses of factor-analysis-summarization and data reduction can be achieved (Hair et. al., 1998).

The appropriateness of factor analysis was assessed by checking the significance of Bartlett’s test of sphericity and by examining sampling adequacy through Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) at an overall and individual item level (Hair et. al., 2006).

This data focuses on the identification of potential, underlying perceptions of the respondents towards retention strategies. The responses for the variables are subjected to factor analysis method. Before applying factor analysis, testing of the reliability of the scale is very much important as it shows the extent to which a scale produces consistent result if measurements are made repeatedly. This is done by determining the association in between scores obtained from different administrations of the scale. If the association is high, the scale yields consistent result, thus is reliable. Cronbach’s alpha is most widely used method. It may be mentioned that its value from 0 to 1 but, satisfactory value is required to be more than 0.6 for the scale to be reliable.
(Malhotra 2002; Cronbach, 1951). I, therefore, used Cronbach’s alpha scale as a measure of reliability. Its value is estimated to be 0.900. If, reliability value is compared with the standard value alpha of 0.6 advocated by Cronbach (1951), it has been found that the scales used by us are highly reliable for factor analysis.

In this connection, Kaiser- Meyer-Olkin (KMO) measure of sampling adequacy is useful method to show the appropriateness of data for factor analysis. The KMO statistics varies between 0 and 1. Kaiser (1974) recommends that values greater than 0.5 are acceptable. Between 0.5 and 0.7 are mediocre, between 0.7 and 0.8 are good, between 0.8 and 0.9 are superb (Field, 2000).

The appropriateness of factor analysis is dependent upon the sample size. In this connection, MacCallum, et al., (1999) have shown that the minimum sample size depends upon other aspects of the design of the study. According to them, as communalities become lower the importance of sample size increases. They have advocated that if all communalities are above 0.6 relatively small samples (less than 100) may be perfectly adequate.