## CHAPTER – 5

### RESEARCH METHODOLOGY

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“A study of Awareness, Opportunities & Problems for Retail Investors with Reference to Mutual Funds In Gujarat State”

Ganpat University
5.1 Introduction

Research is a tool that is a building block and a sustaining pillar of every discipline. Research is a systematic and structured procedure to arrive at the conclusion of a defined problem. Grinnel (1993) has simplified the debate and stated “The word research is composed of two syllables, re and search”. The dictionary defines the former as a prefix meaning again, a new or over again and the latter as a verb meaning to examine closely and carefully, to test and try, or to probe. Together they form a noun describing a careful, systematic, patient study and investigation in some field of knowledge, undertaken to establish facts or principles. Kothari (1999) defines research as scientific and systematic search for pertinent information on a specific topic.

Thus, drawing from the common threads of the above definitions, it can be said that management research is an unbiased, structured and sequential method of enquiry, directed towards a clear implicit or explicit business objective. This enquiry might lead to validating existing postulates or arriving at new theories and models.

Before pertaining to any study, its research methodology should be laid down accurately. A well-organized research methodology helps to complete research successfully. It includes various logical steps adopted by researcher in studying his or her research problem. According to Nargudkar (2010), major elements of research methodology includes problem statement, research design, sampling method, questionnaire design, field work plan and analysis plan. Following section of the chapter provides how systematically the study, which specifies the method of achieving the stated research objectives in the best possible manner.
5.2 Statement of the Problem

It should be noted that the “expectations” of investors play a vital role in the financial markets. They influence the price of the securities, the volume traded and various other financial operations in actual practice. These ‘expectations’ of investors are influenced by their “perception” and humans generally relate perception to action.

In general rules for investment, the analysis of investment and discussion of financial behaviour tend to assume behaviour, which is logical and internally consistent in various ways. Investor behaviour does not; however, always appear to conform to such expectation norms. Much of economic and financial theory is based on the notion that individuals act rationally and consider all available information in the decision making process. However, in the financial literature, there are no clear models, which explain the influence of “perception” and “beliefs” on “expectations” and “decision making”. No doubt, reality is so complex that trying to fit individual investor’s behaviour into a model is impossible. Investor’s behaviour may change from period to period even if other variables influencing the behaviour are held constant. Hence, with this background, this study attempts to evaluate the behavioural aspects of retail investors towards awareness, opportunities and problems and to identify the factors that are considered to be important while investing in mutual funds.

5.3 Objectives of the Study

1. To identify the factors affecting awareness, opportunities and problems for investment in mutual funds.
2. To study the significant differences between socio economic profile of retail investors and extracted factors of awareness, opportunities and problems.
3. To study the association of socio economic profile and investment pattern of retail investors’ in mutual funds.
4. To study the retail investors’ preference towards various features of mutual funds in India.
5. To study the retail investors’ preference towards various investment instruments available.
6. To put forward suggestions with a view to increase awareness and identify opportunities available and to solve problem for investment in mutual funds.
5.4 Hypotheses
Problem identification and formulation process ultimately ends in the statement or assumption that is to be authenticated through the research process. This process is termed as the research hypothesis. Kerlinger (1986) defines a hypothesis as a conjectural statement of the relationship between two or more variables. Grinnell (1993) defines hypotheses is written in such a way that it can be proven or disproven by valid and reliable data.

Hypothesis can be of two types (1 Descriptive hypothesis is a simply statement about the magnitude, trend or behaviour of a population under study. (2 relational hypotheses are the typical kind of hypotheses which state the expected relationship between two variables. If researcher uses words such as increase decrease, less than or more than while formulating hypothesis, it is stated to be directional or one tailed hypothesis. A hypothesis must be formulated in simple, clear, and declarative form. A hypothesis must be measurable and quantifiable so that the statistical authenticity of the relationship can be established. In current study hypothesis possesses the descriptive characteristics.

In present study, following hypothesis have been developed to achieve the objectives of the study.

5.4.1 Chi-Square Test
H0 There is no significant association between socio economic profile and method of investment in mutual funds.
H0 There is no significant association between socio economic profile and type of mutual funds preferred.
H0 There is no significant association between socio economic profile and type of risk preferred.
H0 There is no significant association between socio economic profile and duration of investment in mutual funds.
5.4.2 Friedman ANOVA Test

H0 There is no significant difference in mean score of preferences given by respondents for different source of information about mutual funds.

H0 There is no significant difference in mean score of preferences given by respondents for different schemes of mutual funds.

H0 There is no significant difference in mean score of preferences given by respondents for different sponsors of mutual funds.

H0 There is no significant difference in mean score of preferences given by respondents for different investment avenues.

5.4.3 ANOVA Test

Awareness
H0 Awareness is not significantly difference across different demographic variables of the respondents.

Opportunities
H0 Perceived opportunities are not significantly different across different demographic variables of the respondents.

Problems
H0 Perceived problems are not significantly different across different demographic variables of the respondents.

5.5 Research Design

After establishing the what form; objective of the study i.e., the research problem, next step is the how form of the study (Research Design), which specifies the method of achieving the stated research objectives in the best possible manner. Thyer (1993) states that, ‘A traditional research design is a blueprint or detailed plan for how a research study is to be completed. Research design ensures that the study is relevant to the problem and will use economical procedures (Churchill et al., 2002).

Researcher has number of designs available to him for investigating the research problem. There are various typologies that can be adopted for classifying research design. The classification that is universally followed and is simple to comprehend is the one based upon the objective or the purpose of the study such as exploratory, descriptive and causal research design.

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Exploratory designs are the simplest and most loosely structured designs. As the name suggests, the basic objective of the study is to explore and obtain clarity about the problem situation. Exploratory research study is used when researcher wants to gain background information to define terms, to clarify problems or hypotheses and to explore a new topic. It is flexible in its approach and mostly involves a qualitative investigation. There are various methods or techniques for conducting exploratory research such as secondary data sources, pilot survey, structured or unstructured observations, case study, expert interview and focus group discussion. Through exploration researcher can develop concepts more clearly, establishes priorities, develops operational definition and improve the final research design (Cooper, 2008).

The second set of research designs is more structured and formal in nature. These are termed as the descriptive designs. As the name implies, the objective of these studies is to provide a comprehensive and detailed explanation of the phenomena under study. The descriptive study is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation (Sekaran, 2006). The objective of a descriptive study is to learn who, what, when, where, and how of a topic under study (Cooper, 2008). This study is used for the following purposes.

- Descriptions of phenomena or characteristics associated with a subject population (who, what, when, where, and how).
- Estimates the proportions of a population that have these characteristics.
- Discovery of associations among different variables.

Descriptive research is further subdivided into two categories (1 Cross sectional study; is carried out at a single moment of time and on a section of respondents from the population units under study thus the applicability is most relevant for a specific period (Chawla et. al., 2011). In multiple cross sectional designs, there are two or more samples of respondents, and information from each sample is obtained only once (Malhotra, 2009). (2 Longitudinal designs where a fixed sample or samples of population elements is measured repeatedly on the same variables. A longitudinal design differs from a cross sectional design in that the sample or samples remain the same over time. In other words, the same people are studied over time and the same variables are measured (Malhotra, 2009).
Causal research is used to obtain evidence of cause and effect relationships. (Malhotra, 2009). It is also termed as experimental research design. In an experiment, a researcher actively manipulates one or more causal variables and measures their effect on the dependent variables of interest (Chawla et. al., 2011). Causal studies typically take the form of experiments because experiments are best suited to determine cause and effect (Churchil et al., 2002).

In this study, researcher has adopted two stage research approaches. In the first instance, exploratory research was used to explore and obtain clarity about the problem situation. Exploratory research has been conducted by using following methods. 1) Qualitative research was done by conducting in-depth focus group interview of senior level experienced and expert persons in mutual funds industry. 2) Secondary data which is fast and inexpensive way of collecting information was used. Authenticated and published data were collected from journals, internet, magazines, books, newspapers, published reports of SEBI, AMFI, RBI etc., Computerized database such as Proquest, JSTOR, Emerald, Capitaline, Prowess, were also used.

In the second stage, conclusive – descriptive – single cross sectional research was conducted for gathering data for testing the research hypotheses. This design used to validate the hypothesis generated from exploratory research. Descriptive research is most suitable form for this research as it enables researcher to identify and quantify key variables under study and provides measurable output that helps to validate hypothesis and helps to achieve objectives under study.
5.6 Sampling Design/Plan

An explicit plan for obtaining samples from given population is known as sampling design. It is an overall plan for selecting objects from the universe before survey is undertaken. Sample designing process requires following items to be define clearly because they are closely interrelated and relevant to all aspects of research, from problem definition to the presentation of the results.

5.6.1 Universe (Population of Interest)

Population refers to any group of people or objects that form the subject of study in a particular survey and are similar in one or more ways (Chawla et. al., 2011). Target population is defined as a specific group of people or objects for which the data can be gathered or observations made to develop required data structure and information. In present study, those retail investors from Gujarat state who invest in mutual funds are comprise the universe of the study.

5.6.2 Sampling Element

An element comprises a single member of the population. For present study, retail mutual funds investors are considered as sampling element.

5.6.3 Sampling Frame

Sampling frame encompass all the elements of a population with proper identification that is available to researcher for selection at any stage of sampling. Where the population size is very large, it becomes virtually impossible to form a sampling frame. In present study also, as population of retail investors of mutual funds is very large and not possible to identify clearly, it is very difficult to form sampling frame for the same.

5.6.4 Sample

It is a subset of the population. It comprises only some elements of the population. It is that part of total population which is selected for further research. For this study, sample consists of 463 retail mutual funds investors who are selected for further analysis.
5.6.5 Sampling Method / Sampling Technique
Sampling is a process of selecting an adequate number of elements from the population so that the study of the samples will not only help in understanding the characteristics of the population but will also enable to generalize the results. Broadly, sampling methods can be classified in two groups; 1) Probability and 2) Non-probability sampling. For this study, non-probability convenience sampling method is used. Those retail investors who have invested in mutual funds were selected and requested to participate in the survey.

5.6.6 Sample Size Determination
The size of sample depends upon the basic characteristics of the population, the type of information required from the survey and the cost involved. The most commonly used approach for determining the size of sample is the confidence interval approach covered under inferential statistics. The confidence interval approach to sample size determination is based on the construction of confidence intervals around the sample means or proportions using the standard error formula. As the population mean is not known and as the statistic of interest is a proportion rather than mean, the proportions method of estimating sample size is used in this study. Following criteria have been considered for calculating sample size.

5.6.6.1 Level of Precision or Tolerable Error (D)
This is the maximum permissible error or difference between the sample statistic and the population parameter. Based on previous study, for this research allowable error is estimated at 0.05.

5.6.6.2 Confidence Level (z)
The confidence level is the probability that a confidence interval will include the population parameter. Based on past research, researcher has decided to keep 95 percent confidence level for estimating sample size. The z value associated with the desired confidence level is 1.96.
5.6.6.3 Standard Deviation of the Population (π)

The estimated standard deviation of the population is to be decided based on past research. Researcher is interested in knowing the population proportion of retail investors who are investing in mutual funds, it is estimated that the true proportion would be within the limit of +/- 50 percent. It means that 50 percent retail investors may not be aware about the mutual funds.

Based on above criteria, sample size has been decided as follows. (Malhotra N, 2011)

\[ n = \frac{\pi (1 - \pi)z^2}{D^2} \]

Where,
- \( n \) = Sample Size
- \( \pi \) = Population proportion
- \( z \) = Value associated with confidence level
- \( D \) = Tolerable error or level of precision

\[ n = \frac{.50(1-.50)1.96^2}{0.05^2} \]
\[ n = 384.16 \approx 385 \]

5.6.7 Justification of Sample Size

As per above calculation, sample size required is 385. While in this survey researcher has collected 463 respondents, which implies that the sample size is more than sufficient to estimate the population proportions with 95 percent confidence level and allowable tolerable limit of 0.05.

5.7 Method of Data Collection

For this research primary as well as secondary data have been used for further analysis. Secondary data used to develop theoretical framework and to get insight into the research problem. Secondary data have been collected from published authenticated material such as magazines, journals, newspapers, internet, books and company annual reports. Computerized database such as Proquest, Emerald, Capitaline and Prowess were also used to collect secondary data. In present study, secondary data for the period from 2006-07 to 2010-11 have been used.

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Primary data is original, problem or project specific and collected for the specific objectives and needs spelt out by the researcher. Primary data might be qualitative or quantitative in nature. Primary qualitative data collection is in-depth and collected through a more interactive and unstructured approach. Qualitative data collection method includes observation, focus groups study, in-depth interviews, content analysis etc., For this study, researcher has conducted focused-group interview with experts in mutual funds industry to get insight into the problem.

To collect quantitative primary data, structured questionnaire was developed. Questionnaire has been divided into four parts. First part of questionnaire consist background information of retail investors and general information related with mutual funds. Second part deals with questions related to mutual funds awareness among retail investors. Third and fourth part deals with questions related to opportunities and problems for investment in mutual funds respectively. While filling-up the questionnaires, it was personally administered and explained to respondents to ensure accurate collection of data.

As the population is very high and practically it is not possible to collect data from every parts of the state and each retail investors, to ensure proper representation of the samples, researcher has decided to collect data from four major cities of Gujarat viz. are Ahmedabad, Baroda, Surat and Rajkot. Data were collected by visiting different investment management offices such as NJ investment, Sharekhan limited, Angle investment, Reliance mutual funds, HDFC securities limited to name a few. Data were also collected through friends and family contacts. Data were collected during the period from June to September, 2012. Following is the bifurcation of samples selected from four cities.

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>City</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ahmedabad</td>
<td>124</td>
</tr>
<tr>
<td>2</td>
<td>Surat</td>
<td>109</td>
</tr>
<tr>
<td>3</td>
<td>Baroda</td>
<td>117</td>
</tr>
<tr>
<td>4</td>
<td>Rajkot</td>
<td>113</td>
</tr>
</tbody>
</table>

"A study of Awareness, Opportunities & Problems for Retail Investors with Reference to Mutual Funds In Gujarat State"
5.8 Instrument Development

To satisfy objectives of the research, an instrument in the form of structured questionnaire was developed. It satisfies research objectives through measurement of dependent and independent variables under study. In order to prepare instrument, different variables have been identified from literature survey. A description of variable, type of measurement and scale used to measure these variables is described in below table.

Table – 5.2 – Description of Measurement and Scale

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type of Measurement</th>
<th>Scale used to measure variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Dichotomous question</td>
<td>Nominal Scale</td>
</tr>
<tr>
<td>Age</td>
<td>Multiple choice question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Multiple choice question</td>
<td>Nominal Scale</td>
</tr>
<tr>
<td>Education</td>
<td>Multiple choice question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Family Size</td>
<td>Multiple choice question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Employment Status</td>
<td>Multiple choice question</td>
<td>Nominal Scale</td>
</tr>
<tr>
<td>Type of House Own</td>
<td>Dichotomous question</td>
<td>Nominal Scale</td>
</tr>
<tr>
<td>Investment in Mutual Funds</td>
<td>Dichotomous question</td>
<td>Nominal Scale</td>
</tr>
<tr>
<td>Monthly Income</td>
<td>Multiple choice question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Monthly Investment in Mutual Funds</td>
<td>Multiple choice question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Method of Investment</td>
<td>Multiple choice question</td>
<td>Nominal Scale</td>
</tr>
<tr>
<td>Type of Mutual Funds Preference</td>
<td>Multiple choice question</td>
<td>Nominal Scale</td>
</tr>
<tr>
<td>Level of Risk</td>
<td>Multiple choice question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Duration of Investment</td>
<td>Multiple choice question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Source of Information</td>
<td>Rank order question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Preference of Mutual Funds Scheme</td>
<td>Rank order question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Sponsorship of Mutual Funds Prefer</td>
<td>Rank order question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Preference of Mutual Funds</td>
<td>Rank order question</td>
<td>Ordinal Scale</td>
</tr>
<tr>
<td>Awareness questions (01 to 22)</td>
<td>Five point rating likert scale question</td>
<td>Interval Scale</td>
</tr>
<tr>
<td>Opportunities questions (01 to 20)</td>
<td>Five point rating likert scale question</td>
<td>Interval Scale</td>
</tr>
<tr>
<td>Problems questions (01 to 21)</td>
<td>Five point rating likert scale question</td>
<td>Interval Scale</td>
</tr>
</tbody>
</table>
5.9 Data Processing

5.9.1 Field Validating

The first step in the data processing begins post the questionnaire survey, is field validating. Researcher has taken proper care to check whether the execution of the study was handled properly.

5.9.2 Data Editing

After completion of field validating process, the next step in the process followed is data editing. In this stage, all detectable errors and omission have been examined and the necessary actions have been taken. Editing was done at two tiers, during field survey and during centralized in-house editing.

5.9.3 Coding the Questionnaire

Post data editing process, next step is coding the questionnaire. It is the process of identifying and denoting a numeric value to the responses given by a respondent (Chawla et al., 2011). Below table shows the coding of the questions used in this study.

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Variable</th>
<th>Coding Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
<td>Male = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female = 2</td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
<td>21 – 30 = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31 – 40 = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41 – 50 = 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>51 – 60 = 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More than 60 = 5</td>
</tr>
<tr>
<td>3</td>
<td>Marital Status</td>
<td>Single = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Married = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Others = 3</td>
</tr>
<tr>
<td>4</td>
<td>Education</td>
<td>School = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post-Graduate = 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professional = 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doctorate = 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other = 6</td>
</tr>
<tr>
<td>5</td>
<td>Family Size</td>
<td>1 Person = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-3 Persons = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-5 Persons = 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More than 5 Persons = 4</td>
</tr>
</tbody>
</table>

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<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 6 | Employment Status | Salaried = 1  
Businessman/Self Employed = 2  
Housewife = 3  
Student = 4  
Retired = 5  
Unemployed = 6 |
| 7 | Type of House | Own = 1  
Rented = 2 |
| 8 | Investment in Mutual funds | Yes = 1  
No = 2 |
| 9 | Monthly Income | Less than 10000 = 1  
10001 to 15000 = 2  
15001 to 20000 = 3  
20001 to 25000 = 4  
More than 25000 = 5 |
| 10 | Monthly Investment | Less than 5000 = 1  
5001 to 10000 = 2  
10001 to 15000 = 3  
15001 to 20000 = 4  
More than 20000 = 5 |
| 11 | Method of Investment | Online = 1  
Offline = 2  
Both = 3 |
| 12 | Mutual funds Preference | Open Ended = 1  
Close Ended = 2  
Both = 3 |
| 13 | Preference of Risk | High Risk = 1  
Medium Risk = 2  
Low Risk = 3 |
| 14 | Duration of Investment | Less than 1 year = 1  
1 – 3 years = 2  
3 – 5 years = 3  
5 – 7 years = 4  
More than 7 years = 5 |
| 15 | Source of Information | Newspaper Advertisement  
Agent  
Financial Advisor  
Stock Broker  
Internet  
Friends  
Relatives  
Television |
| 16 | Preference of Schemes | Regular Income / Debt Schemes  
Growth Schemes  
Balanced Schemes  
Liquid Schemes  
Tax Saving Schemes |
<table>
<thead>
<tr>
<th>17</th>
<th>Sponsor Preference</th>
<th>Sponsored by Corporate House, Sponsored by Financial Institutions, Sponsored by Public Sector Banks, Sponsored by Private Sector Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Preference of Investment</td>
<td>Shares, Debentures and Bonds, Government Bills and Bonds, Bank Deposits, Post Office Deposits, Provident Fund, Insurance Schemes, Mutual funds, Commodity and FOREX Market, Real Estate, Gold and Silver</td>
</tr>
</tbody>
</table>

Q = 01 to 22 Awareness
- Strongly Disagree = 1
- Disagree = 2
- Neutral = 3
- Agree = 4
- Strongly Agree = 5

Q = 01 to 20 Opportunities
- Strongly Disagree = 1
- Disagree = 2
- Neutral = 3
- Agree = 4
- Strongly Agree = 5

Q = 01 to 21 Problems
- Strongly Disagree = 1
- Disagree = 2
- Neutral = 3
- Agree = 4
- Strongly Agree = 5

### 5.9.4 Classification and Tabulation of Data

As the data obtained from the primary instruments is bulky and voluminous in nature, it is required to reduce the information collected into homogenous categories. In this survey classification and tabulation of information has been done on the basis of common attributes and on the basis of class intervals.

### 5.10 Pre-testing the Questionnaire

Pilot testing refers to testing and administering the designed instruments on a small group of people from the population under study (Chawla et. al., 2011). The purpose of pretesting is to identify whether the instrument is able to provide all the information as expected by the researcher (Aaker et al., 2001). The purpose is to essentially remove any errors that might have remained while preparing...
questionnaire. It ensures that there are not any ambiguous questions, understood by respondents in the way it has to be and is not too long etc.

For present study, questionnaire was developed under the supervision of guide and changes were made as per guide suggestions. After preparing questionnaire, the opinion of experts in mutual funds industry was also taken for better and practical understanding of questionnaire from respondent point of view. Their suggestions were also incorporated.

Finally, pilot survey was conducted on 36 respondents possessing characteristics of sample selected for survey. Respondents were requested to comment on any difficulty or ambiguity faced while filling-up questionnaire. Their comments and suggestions were incorporated while preparing final questionnaire.

5.11 Data Analysis and Software Used for Data Analysis

For analyzing data, Descriptive Statistics, Chi-Square test, Friedman ANOVA, Factor Analysis and ANOVA, Post-hoc and Cramer’s V techniques were used with the help of Microsoft Excel and SPSS (Statistical Software for Social Study) software.

Chi-square test shows the relationship between two variables. It is used to test the statistical significance of the observed association in cross tabulation (Malhotra, 2009). It helps in determining association between two variables.

Factor analysis is a multivariate statistical technique that is used to summarize the information contained in a large number of variables into a smaller number of subsets or factors (Hair et. al. 2009). As the major objective of research is to study the factors affecting awareness, opportunities and problems for investment in mutual funds and as the numbers of variables extracted through in-depth literature review were sixty three in numbers, it is not possible for companies to concentrate on all variables. To fulfill the objective and to reduce and summarized data, researcher found factor analysis techniques as most suitable technique.
According to Chawla et. al. (2011), factor analysis is a multivariate statistical technique in which there is no distinction between dependent and independent variables. In factor analysis, all variables under investigation are analyzed together to extract the underlined factors. For present study factor analysis is used to reduce the number of variables that (1) Helps to increase awareness of mutual funds among retail investors (2) Provide key variables preferred by respondents as opportunities for investing in mutual funds and (3) Extract key variables that prevent respondents for investing in mutual funds.

Analysis of variance (ANOVA) is used for examining the difference in the mean values of the dependent variable associated with the effect of the controlled independent variables, after taking into account the influence of the uncontrolled independent variables. Essentially, analysis of variance (ANOVA) is used as a test of means for two or more populations (Malhotra, 2009).

For ANOVA analysis all the hypothesis are formulated based on factors extracted through factor analysis and divided into three sections for awareness, opportunities and problems for investing in mutual funds. Hypotheses have been developed to study the mean differences between factors extracted through factor analysis and socio economic profile of the respondents.

5.12 Scope of the Study

This study attempts to evaluate the behavioural aspects towards awareness, opportunities and problems for retail investors with reference to mutual funds. In present research work retail investor includes only those investors who have invested money in mutual funds. It is also limited to the respondents from four major cities of Gujarat (Ahmedabad, Surat, Rajkot, and Baroda) and for time being when the data were collected. The scope of this study is also limited to one product that is mutual funds.
5.13 Limitations of the Study

The proposed research study is subject to following limitations.
Investor behavior is a very wide subject; so present research work covers only
behavioural aspects about awareness, opportunities and problems for retail investors
with reference to investment in mutual funds. As the survey of whole population
cannot be conducted due to time and cost constraints, researcher has selected samples
from the universe. It also acts as a limitation for present study.

While taking opinion of retail investors i.e. filling questionnaire for primary data
collection, halo effect of respondents may restricts the proposed study to certain
extent. The research study includes only retail investors of mutual funds in sample
due to time and cost consideration. So, ignorance of institutional investors of mutual
funds becomes another limitation to generalize finding of the study.

Data were collected at one point of time (June to September, 2012) so; the result may
vary if the study conducted at any other point of time. The investors generally differ
in their opinion. Sometimes the difference may be very high in their opinion. For
collecting data convenience sampling method is used. So, the limitations of
convenience sampling method also restrict the finding of the study.

5.14 Summary

To attain the objectives of the study and to test the hypothesis developed, researcher
has found descriptive research design as the most appropriate method which enables
researcher to identify and quantify key variables under study. To select respondents
for primary survey convenience sampling method was used as the population was
very large and not known. The sample size has been determined considering 95
percent confidence level and 5 percent tolerable error. To achieve the objectives of the
research Factor analysis, ANOVA and Chi-square test were found most appropriate
techniques. Next chapter of the thesis would be deal with data analysis.