This chapter discusses the research methodology which has been used in the study. It includes, the type of study, research design, sample design containing the population for the study, sample frame, sample size, sample element, sampling technique used, the tool used for data collection and the tools used for data analysis.

**Research:** Research is a systematic investigation carried out for the purpose of finding the solution to a problem and driving principles. George Lundburg (1984), defined scientific method as one consisting of systematic observation, classification and interpretation of data.

Zina O’Leary (2005), defined research as a creative and strategic thinking process that involves constantly assessing, reassessing and decision making about the best possible means for obtaining trustworthy information carrying out appropriate analysis and tracing credible solution.

**Research Methodology:** Research methodology may be defined as a systematic investigation done for finding out the solution to a problem. It tells about the methods that are to be followed during the process of research starting from problem identification to finding out the solution of the problems, with the help of the results obtained to the conclusion drawn out of the study.

**3.1 THE STUDY**

The study was empirical in nature and survey method has been used to collect data for the study. The study evaluates the individual reasons behind the entry of women into self employment and barriers faced by women while getting self employment and finds out the most prominent reason and barrier amongst them. The study also compares the reasons and barriers of entrepreneurship between women with their counterparts that is, the male entrepreneurs. Also a comparison is done between uneducated and educated women entrepreneurs on reasons and barriers to entrepreneurship.
3.2 RESEARCH DESIGN

Burns and Grove (2003), defined a research design as “a blue print for conducting a research study with maximum control over the factors which may interfere with the validity of the research finding”. Polit et al (2001), defined a research design as “researcher’s overall work for answering the research questions or testing the research hypothesis”.

The study is empirical, and quantitative in nature. The overall structure for a quantitative research design is based in the scientific method. It uses deductive reasoning, where the researcher forms hypothesis, collects data for the investigation of the problem, and then uses the data from the investigation, after analysis is made and conclusions are shared, to prove the hypotheses not false or false.

The basic procedure of a quantitative research design is:

- The researcher makes observations about something that is unknown, unexplained, or new. He then investigates the current theory surrounding the research problem or issue.
- He then hypothesizes an explanation for those observations.
- He then makes a prediction of outcomes based on the hypotheses. Formulate a plan to test the prediction.
- After this he collects and processes the data. If the prediction was correct, he goes to step 5. If not, the hypothesis has been proven false. He returns to step 2 to form a new hypothesis based on his new knowledge.
- He then verifies the findings. Makes final conclusions. Present the findings in an appropriate form for the audience.
3.3 SAMPLE DESIGN

3.3.1 Population:

Jenning(2001), defined population as, “all the study subject or study units that are the focus of the research project”.

Population for the study includes all the entrepreneurs from different fields or areas, which consists of both the male and female entrepreneurs.

3.3.2 Sample frame:

A sample frame is a subset of the population or it can be said that a sample frame is a practical list of population or exact area which is used to take the sample.

Cooper and Schindler (2001), described a sample frame as “a list of elements in a population from which the sample is actually derived from”.

In this study, the sample frame includes all the female and male entrepreneurs’ from Madhya Pradesh region.

3.3.3 Sample size:

The total sample size comprises of 722 respondents out of which 361 were the successful female entrepreneurs from different fields all through the M.P. region. A Proportionate sampling has been carried out on the basis of demographic variables to ensure that the results are free of any bias. Out of the responses of 361 women entrepreneurs 183 were not well educated (that is, they were either XII pass or less than that and they were named as ‘uneducated’ for the rest of the study) while 178 were highly educated (either graduate or post graduate and were called ‘educated’ in the study). Similarly, a sample size of 361 male entrepreneurs has also been taken from different fields of entrepreneurship all through the M.P. region on the demographic basis to ensure that the results are free from any kind of bias. Responses from the male entrepreneurs are taken so as to compare them with the female entrepreneurs and
identify weather the reasons and barriers for entrepreneurship between the male and female entrepreneurs are similar or they vary. Thus, Sample elements are chosen on the basis of non-probability purposive sampling. And therefore, almost equal number of responses is taken from both female and male entrepreneurs as well as uneducated and educated female entrepreneur for the purpose of comparison.

3.3.4 Sample element:

The individual respondent or a single respondent is called the sample element.

In this study, individual successful female and male entrepreneurs of M.P. region have been taken as sample element.

3.3.5 Sampling technique:

Sampling methods can be classified into two types, probability and non-probability. In case of probability sampling, each member of the population has equal probability of being selected. Probability method of sampling includes simple random sampling, stratified sampling and systematic sampling. While in case of non-probability sampling members from the population are selected in a non-random manner. It includes convenience sampling, judgment sampling, quota and snowball sampling.

In this study, the sample is drawn from the population on the basis of non-probability purposive sampling technique from the male and female entrepreneurs of M.P. region.

3.4 TOOL USED FOR DATA COLLECTION

Data collection is the systematic approach for gathering and measuring information from a variety of different sources to get a complete and accurate picture of the area of interest. Data collection helps a person or organization to find the answer of the relevant questions, evaluate the outcomes and make predictions regarding the future probabilities and related trends. The data can be primary or secondary in nature depending upon the requirement of the researcher.
In this study: Primary data has been used which had been collected through survey method. A self-designed questionnaire had been framed and was used to collect the data. The questionnaire was framed after an extensive survey of the literature and the questionnaires were prepared after discussion with the practitioners in the relevant area. For ‘reasons of entrepreneurship’ 12 items had been included in the questionnaire from which four items had to be dropped due to poor internal reliability. Similarly a self-designed questionnaire was framed for identifying the ‘barriers to entrepreneurship’ which consisted of 27 items out of which four items had to be dropped to due to their poor internal reliability.

3.4.1 Measurement scale:
All the items of the questionnaire were measured on a Five-point Likert scale, in which:
5 indicates ‘strongly agree’
4 indicates ‘agree’
3 indicates ‘neutral’
2 indicates ‘disagree’
1 indicates ‘strongly disagree’

3.5 TOOLS USED FOR DATA ANALYSIS
Appropriate statistical tools have been applied in the study with the help of PASW Statistics 18 (Predictive analytical software - previously known as SPSS). The tests include Cronbach alpha reliability test, factor analysis, one sample T-test and individual sample T-test. The data was tested at 95% level of confidence.

3.5.1 Cronbach alpha reliability test:
The Cronbach alpha reliability acts as a measure of identifying the internal consistency which shows and depicts that how closely the set of items in a group are related to each other. This measure is used to test the reliability of the questionnaire. Reliability depends on the sample which is used and finding consistent reliable scales are important for the study. All negatively worded items must be reversed to ensure the reliability (Pallant, 2007).
In this study: Cronbach alpha reliability test has been applied on the collected data of both the parts of the questionnaire including reasons of entrepreneurship as well as the barriers of entrepreneurship.

3.5.2 Factor analysis:

The factor analysis is the most commonly and widely used statistical technique of checking the interdependency, which is used when the relevant set of variables shows systematic interdependence. The main objective of this test is to find the commonality amongst the latent factors.

It is applied to reduce the number of variables and to identify the relationship between the variables and to classify the variables. Therefore, it can be said that factor analysis is applied as a data reduction or structure detection method. According to Pallant (2007), factor analysis allows the reduction of a large set of variable into smaller more feasible number of factors or dimensions. It groups items that are similar.

In this study: Factor analysis was applied on the basis of which the Kaiser- Meyer-Olkin measure of sampling adequacy was found on both the part of the questionnaire to check the adequacy and normality of the sample. Also the Bartlett’s Test of Sphericity of the sample was tested which indicated that the data used for further analysis had no sphericity and was therefore suitable for further factor analysis.

3.5.3 One sample T-test:

One sample T-test is used to identify that weather the sample comes from a population with specific mean. In this method a random sample is drawn from the population and then this sample mean is compared with the population mean on the basis of which a statistical decision is taken whether or not the sample mean is different from that of the population mean.

In this study: One sample T-test has been applied on the individual questions of both the parts of the questionnaire to identify the significance of individual reasons which motivates women to get self employed and barriers women entrepreneurs have to face
while getting self employed and also to find out the most prominent reason and barrier for women entrepreneurship amongst them.

3.5.4 Individual sample T-test:

Individual sample T-test is an inferential statistical test which is used to determine whether a statistically significant difference is found between the two groups or not.

The Independent samples T test helps to compare the mean values of two independent groups so as to identify whether there is any statistical evidence that the associated population means are significantly different from each other or not.

In this study: Individual sample T-test has been applied:

- To compare the mean scores of the individual reasons of entrepreneurship between female and male entrepreneurs.
- To compare the mean scores of the individual barriers of entrepreneurship between female and male entrepreneurs.
- To compare the mean scores of the individual reasons for entrepreneurship between educated and uneducated female entrepreneurs.
- To compare the mean scores of the individual barriers of entrepreneurship between educated and uneducated female entrepreneurs.