Chapter 3
Research Methodology
CHAPTER: 3

RESEARCH METHODOLOGY

3.1 Significance of Study:
For strategic decisions, research lays the foundation everywhere. However, the process of research is not easy. There are definite guidelines for research process. It includes a comprehensive procedure which starts from formulation of research problem, passes through extensive literature review, formulating hypotheses, preparation of research design, determination of sample design, primary and secondary data collection, analysis of collected data, testing of hypothesis, data interpretations and preparation of the report for presentation of the results. After study of literature, the next logical step is research methodology.

After studying of the research, it can be seen that public sector banks have been covering a wide range of education loans to offer education for all. In developing nations like India, where people have great faith and trust on public sector banks, this holds much significance. Out of all the public sector banks, education loan has been highly significant. A person in general would compromise on home or car, but would never compromise on education of his/her children. Due to increasing career options in India and abroad, the education loan applicants queue has been constantly increasing year after the year. The banks personnel have been more busy now in passing the education loans. Due to more career options and higher fees, parents have found bank loan as the best option for funding higher education. Though all public and
private sector banks in India offer study loans, State Bank of India has been covering maximum students in higher education. Being the biggest public sector bank in India, it has got highest number of applications for bank loans. Further, in terms of higher education programs, management and engineering courses are being more common.

Madhya Pradesh has been among the growing states in terms of professional colleges, where course fee is not too much exorbitant as compared to nearby states like Maharashtra and Andhra Pradesh etc. Due to state government fees regulation norms, the fee of management programs has been fairly affordable. However, many people still can’t afford the fees. There is a need to examine the role of public sector banks towards educational development of the state specially with reference to Indore, known as education hub of the state. In this study an attempt has been made by the researcher to study the role of banks for promoting higher education. This study has been undertaken from the viewpoint of students of professional colleges in Indore.

3.2 Statement of Problem:
ROLE OF PUBLIC SECTOR BANKS IN EDUCATIONAL DEVELOPMENT OF MP - A STUDY WITH SPECIAL REFERENCE TO INDORE DISTRICT

3.3 Objectives of Study:
Concrete objectives were framed which covered the subject of research before collecting primary and secondary data. To formulate the objectives, one has to understand the problem lengthily and rearticulate it in a significant way. The objectives should be valid and achievable. As this has been an empirical study, some objectives were framed by the researcher. The major objectives of research study were as follows:
Chapter 3

Research Methodology

The major objective of study is to examine the role of public sector banks towards educational development of MP with reference to Indore. Other objectives are:

1. To study the response of beneficiaries towards education loan in Indore.
2. To study the effectiveness of public sector banks towards facilitating the education loan processing as perceived by the students.
3. To focus on convenience offered by public sector banks for education loan as perceived by the students.
4. To assess the facilities offered by public sector banks for education loan as perceived by the students.
5. To evaluate the bank personnel support towards education loan system as perceived by the students.
6. To identify the problems faced by the students during education loan processing.
7. To suggest measures for smooth processing of education loan.

3.3 Hypotheses of the Study:

Hypothesis is a probable statement which is meant for the purpose of testing the logical and empirical outcomes of a study. Hypotheses are translated from objectives of study to maintain constancy. Each hypothesis needs to be tested for validity. The hypothesis can either be proven right or wrong. This testing of hypothesis paves the way for the findings. To fulfill the objectives in scientific manner, few null hypotheses were framed which were tested for significance using analysis of variance. These null and alternate hypotheses were as follows:
\( H_{01} \) (Null): There is no significant role of public sector banks towards educational development in Indore.

\( H_{a1} \) (Alternate): There is significant role of public sector banks towards educational development in Indore.

\( H_{02} \) (Null): There is no significant effectiveness of public sector banks towards facilitating the education loan processing as perceived by the students.

\( H_{a2} \) (Alternate): There is significant effectiveness of public sector banks towards facilitating the education loan processing as perceived by the students.

\( H_{03} \) (Null): There is no significant response of students towards convenience offered by public sector banks for education loan.

\( H_{a3} \) (Alternate): There is significant response of students towards convenience offered by public sector banks for education loan.

\( H_{04} \) (Null): There is no significant response of students towards facilities offered by public sector banks for education loan.

\( H_{a4} \) (Alternate): There is significant response of students towards facilities offered by public sector banks for education loan.

\( H_{05} \) (Null): There is no significant bank personnel support towards education loan system as perceived by the students.

\( H_{a5} \) (Alternate): There is significant bank personnel support towards education loan system as perceived by the students.

\( H_{06} \) (Null): There are no significant problems faced by the students during education loan processing.

\( H_{a6} \) (Alternate): There are significant problems faced by the students during education loan processing.

These hypotheses were tested and significant results were obtained.

3.4 The Universe:

There must be a specific population defined in terms of elements, sampling units and time. A universe or population is the total of all the elements having
some specified characteristics, which the researcher wants to explore and define before sample selection. An element is the unit about which the information needs to be collected. It provides the standard for analysis as per the process. Among the beneficiaries of education loan, specifically higher education segment was chosen, since this is the segment where education loan is applied. Students pursuing post-graduation in management stream were targeted for primary data collection.

There were respondents selected from management institutes of Indore in Madhya Pradesh state that included private colleges as well as University managed colleges. Top 10 management colleges of Indore were selected to collect the data. These are the colleges running MBA [Masters of Business Administration] course affiliated to Devi Ahilya University Indore and approved by AICTE [All India Council of Technical Education]. AICTE is the regulatory body of HRD Ministry, Govt. of India. Colleges running MBA courses from other University under distance learning mode and autonomous colleges offering Post Graduate Diploma in Management programs were not included due to irregularity in fee structure. Also, Indian Institute of Management Indore was not included for primary data collection since it has got a separate fee structure monitored by Central Government.

Among the beneficiaries of study loan, 400 management students pursuing their post-graduation course in Indore through loan were selected for the purpose of primary data collection. These were the students from Indore district. In this way, it was purposive sampling that included fairly big chunk of the students studying through bank loan in Indore district. There was unequal number of boys and girls since gender was not a major factor in the study. The respondents included those who were studying in MBA course through study loan from State Bank of India, the biggest bank in India. Since
the bank had largest number of bank loan applications, it was considered as representative public sector bank.

It was a random sampling technique. Random sampling is also popularly known as probability sampling or chance sampling. In this design, each item in the universe gets equal opportunity of getting included in the sample just like lottery method, where any lottery can be the winner. Random sampling has been widely accepted. The results of this random sampling can be ensured by the means of probability. Due to this reason, random sampling is very common. It works on the idea that if a random sample has been chosen, there will be consistency in features and composition.

3.5 Data Sources:
Before starting the research, secondary data are always gathered and stored. No study is complete without studying and referring to secondary data. These are the historical data which are previously collected and recorded by research scholars across the world. This collected data is of great significance in exploratory research since it forms the foundation of the study. In this study, secondary data were collected from various sources like- Internet, books, journals, newspapers, periodicals, brochures, magazines etc. However, secondary data alone is not sufficient for research completion. Primary data is more valid since it is the first hand and freshly collected data by the researcher. For collection of primary data, questionnaire has been one of the most common instruments used worldwide. A questionnaire includes a set of open-ended and/or closed-ended questions or statements. These are to be filled up by respondents. Questionnaires are applied when the data are to be collected from large population about their opinion or agreements on related characteristics like perception, attitude, expectations, taste & preferences, impact and behaviour.
Structure of the questionnaire:
The questionnaire was divided into two sections. First part was informative and second was primary data collection. In first part, relevant information was sought from the respondents that included age, gender, college, father’s occupation/business, annual income, place of loan approval. This was significant from the point of view of acquiring demographic information. In the second part, there were 30 questions (statements), out of which 28 were closed ended, which were measured on Likert five point scale having ample choice of response and last two were open ended.

Before actually going for primary data collection, the questionnaire was pilot tested on 12 respondents and the response has been favourable. After making minor changes, it was finalized for study. The statements comprehensively covered all the relevant aspects of role of public sector banks in educational development. All the statements were able to cover the objectives of research. There was no ambiguity in any portion of the questionnaire due to straightforward approach. The questionnaire was given to 409 respondents, out of which 404 were received. There were 4 incomplete questionnaires, which were rejected. A final sample of 400 respondents was selected for study.

The second portion of the questionnaire was the core of the research which constituted 28 statements on Likert five point scale of agreement. There was a statement written and the respondents were requested to tick any of the options given against the statement from strongly agree to strongly disagree. The first 5 statements covered the information and awareness about study loans where source of information was sought from the respondents. Next few questions were on process part, where loan process detailing was explored. Aspects like - time frame, explanation, convenience, cooperativeness of bank
staff members, formalities, paper work, communication, follow up, satisfaction, referral and role of banks. The second last question was open-ended which explored problem/s faced by the beneficiaries during the entire process of loan approval. The final question was related to inviting suggestions from the beneficiaries for improvement of the entire process. There was no ambiguity in the language and all statements were clear in simple English.

3.6 Analysis of Data:
The most important part of a research is analysis of collected data. The data analysis process involves applying the statistical tools for interpretation of primary data collected by the researcher. The choice of statistical techniques for primary data analysis is dependent on the characteristics of research design and nature of collected data. The collected data from 400 respondents were significant because it consisted of all the relevant information required for fulfilling the objectives of research.

Before applying statistical techniques for data analysis, the data collected was tabulated to facilitate interpretation process. The primary data was converted into excel sheet by coding using MS Excel. The data transformation was done in a spreadsheet. The relevant data were transferred from collected questionnaires to the computer. It was arranged in a tabular manager in rows and columns. The rows represented respondents and the columns indicated relevant statements against which the response was recorded. Finally, a rectangular data matrix was formed on spreadsheet.

The data analysis software SPSS (Statistical Package for Social Sciences) was applied for data processing. SPSS facilitated in precise and timely analysis of factors by sorting. Beginning from data tabulation to calculation of mean, median, mode, data analysis was performed. Kaiser-Meyer-Olkin Measure
and Bartlett's test were applied to test the sampling adequacy. After getting positive results, it was moved for further data analysis.

3.7 **Statistical Tools for Analysis:**

The choice of suitable statistical tools gives proper directions for data interpretation and implications. After the tabulation process of data in MS Excel sheet, analysis of primary data was performed by applying various statistical tools depending upon their applicability. Statistics used in this study included mean, frequencies, percentages and standard deviations. The selection of tools was done on the basis of objectives of the research work and the nature of respondents. The data analysis tools applied in this research work were factor analysis and analysis of variance. Statistical Package for Social Sciences (SPSS) was applied for facilitation of the analysis of data. SPSS has helped in precise and appropriate data processing for analysis of various factors. The basis of selection and relevance of each technique is as follows:

**Factor Analysis:** A factor is a fundamental dimension which accounts for some experimental variables. Factor analysis is a regular process where data reduction and summarization takes place using various steps. Factor analysis is suitable for summarizing the information which is gathered and contained in large number of variables into smaller number of factors. This doesn't involve division of data matrix into various criteria; rather the focus is laid on the relationship involving the whole set of variables. Through factor analysis process, the researcher is mainly interested to study the strength of overall association among the variables. This is significant since the researcher would continue to mention this association in terms of a smaller set of linear multiples of original variables. These variables store most
of the information in full data set. Factor analysis applies the rule of maximum reduction of variance found in the initial set of variables. This is known as varimax criterion. In this research, principal component analysis was applied and sorting was done by size. There were factors identified by SPSS having different factor loads.

Out of the data interpretation, there were seven factors identified, which were directly related with the subject matter. Before conducting the factor analysis, Cronbach Alfa was applied to test the internal consistency of the items. By using the formula, the alpha coefficient was found to be more than 0.7, therefore all the items were found internally consistent and acceptable. The extraction method was Principal Component Analysis and the rotation method was Varimax with Kaiser Normalization, which was converged in iterations.

**Null Hypotheses testing**: After identifying the factors null hypotheses were tested. Hypothesis testing determines the validity of hypothesis for selecting between two conflicting hypotheses about the value of a population. It helps to decide the basis of a sample data, whether a hypothesis about the population is likely to be true or false (rejected or not rejected). In this study the sample size was more than 30, so z-test was applied. It is a univariate hypothesis test based on z-distribution and is considered as an appropriate test for judging the significance of a sample mean. After using the formula, if the calculated value of z comes smaller than table value at a particular level of significance (.05), null hypothesis is accepted (not rejected) and vice-versa. When null hypothesis is rejected, alternate hypothesis is accepted.

Significance level is the maximum value of probability of not accepting the null hypothesis when it is true. In this research, 95 per cent confidence level

48
was selected by the researcher, so .05 significance level was derived (1.00 -.95 = .05). After the level of significance is determined, the researcher has to find the z-value (tabulated) under .05 column at the row in which degrees of freedom equals the appropriate value.

For comprehensive understanding of the response, percentage analysis was also performed, which gave clear results on statements and its response by the respondents. By using the above statistical techniques, data analysis was performed and results were derived. These results were very significant from the point of view of objectives of the research and hypotheses stated. Detailed results of data analysis have been explained in the next chapter.