Chapter 3

Research Methodology

Introduction

The study titled “Impact of Microfinance on Entrepreneurship Capacity Building” attempts to capture the effect of a number of independent variables, on entrepreneurial capacity building, due to microfinance intervention, in Kanakapura Taluk of Ramanagara district in the State of Karnataka in India.

The research was conducted using empirical methods. Data or evidence was collected from respondents with the help of a meticulously designed questionnaire, using an Interview Schedule. The data was then subjected to statistical analysis using the SPSS software and results obtained.

3.1 Title of the study

This research is titled “Impact of Microfinance on Entrepreneurship Capacity Building”.

3.2 Statement of problem:

Based on the literature review in Chapter 2 it is concluded that research studies in the area of microfinance have focused on the effect of microfinance on individual variables like women empowerment, asset growth or income generation. Other studies have examined the effect of microfinance on entrepreneurship development. There have also been descriptive studies on the role of SHGs and JLGs.

However, there is no conclusive research output on entrepreneurial capacity building in a given geographical region, due to the changes in variables such as asset growth, women empowerment, increase in income generation activities and
education of the beneficiaries resulting from microfinance intervention. Hence this research has implications even at national level.

3.3 Research questions

The research questions are stated as follows:

1. What are the changes in variables which improve economic well-being such as Income generation, Asset growth, sustainability of livelihood and financial inclusion due to microfinance intervention?
2. What are the changes in variables which improve the status of women in society, such as household decision making, education (linked to income generating propensity) and women empowerment due to microfinance intervention?
3. What is the effect of microfinance intervention on shift in occupation and on micro entrepreneurship?
4. Do micro entrepreneurs use microfinance for business operations and expansion or for sustenance activities?
5. Is asset growth in villages situated in closer proximity to Bangalore city higher than in other villages?

3.4 Need / importance of study

Between 1997 and 2012, “access to microfinance grew 29% a year, i.e., at a scale large enough to consider its macroeconomic impact. The Microcredit Summit Campaign, 2010, reports 3,552 institutions serving 155 million borrowers, which including borrowers and their households affect, 533 million people, roughly the size of Latin America. Microfinance loans had a positive effect on entrepreneurship: Households in the treatment group were 1.7 percentage points more likely to open a new business from a baseline of 5.4%. The impacts on the revenues, assets and profits of existing business owners are positive but all statistically insignificant”. (Economic Times, 2012). The need for this study stems from the need to reach the benefits of microfinance to the poor and marginalized
sections of the society in villages across India and to protect micro entrepreneurs from inherent risks and to understand the situation at the grass root level and reach conclusions with a view to suggest steps that will further the interests of all stakeholders of microfinance.

**3.5 Research objectives**

The primary objective of the research is to determine the impact of microfinance on entrepreneurship capacity building in Kanakapura Taluk of Ramanagara district in Karnataka State.

The secondary objectives are as follows:

1. To determine the effect of microfinance on income of beneficiaries
2. To examine if education plays a role in enhancing income generation ability of beneficiaries
3. To determine if microfinance has an effect on occupational shift of poor and marginal farmers.
4. To examine the effect of microfinance on assets held by beneficiaries.
5. To determine if microfinance leads to greater financial inclusion of beneficiaries.
6. To examine if decision making ability of women in households increases with income generation through microfinance.
7. To determine if microfinance is used for business operations/expansion or for sustenance activities.
8. To examine if microfinance leads to an increase in entrepreneurial capacity.
9. To recommend measures for affirmative action to ensure that entrepreneurial capacity is built on a sustained basis.
3.6 Variables of the study

Statistics is about measuring phenomena and organizing, analyzing and presentation of the numerical results in a way which enables better, more informed decisions. Statistical studies contain variables, measurements and data.

3.6.1. Variables:

A variable is the property or characteristic of any entity that is capable of taking on different values. Variables could be either independent or dependent.

3.6.2. Independent variables of the study:

Independent variables are variables that are manipulated or changed by researchers and the effects on other phenomena measured and compared. In cases where the experimenter is able to modify or control the variable, such an independent variable is referred to as a *treatment variable*. An independent variable could also be a *classification variable* if some characteristic of the entity or the subject was present prior to the experiment and is not a result of control or manipulation of the researcher (Black, 2013). Independent variables are also referred to as predictors, regressors, controlled variables, manipulated variables, explanatory variables and/or input variables.

Keeping in view the objectives of the study, the following independent variables were identified: Income generation, Asset growth, sustainability of livelihood, shift in pattern of household decision making, shift in occupation, Education (linked to income generating propensity), financial inclusion and women empowerment.

3.6.3. Dependent variables of the study:

The dependent variable, also known as the outcome variable, is the event studied and expected to change whenever the independent variable is altered. The dependent variable is also referred to as the predicted variable, response variable,
measured variable, observed variable, outcome variable and/or output variable. Entrepreneurial capacity building is the dependent variable of the study

3.6.4. Moderating variables of the study:

A moderating variable impacts the strength of the relationship between the independent variable and the dependent variable. Demographic variables of the study like age, gender, caste and educational status are considered as moderating variables of the study. These variables are also taken into consideration while interpreting and analyzing the research

3.7 Conceptual framework/model of the study

McGaghie et al. (2001) state that the conceptual framework “sets the stage” for the presentation of the particular research question that drives the investigation being reported based on the problem statement. More precisely, the ‘conceptual framework’ draws on concepts from various theories and findings to guide research (Parahoo, 2006). Most researchers find it useful to develop a conceptual model – the diagrammatic form of a conceptual framework – and refine it as data collection and analysis takes place (Robson, 2002).

Development of the conceptual framework was preceded by statement of the problem, a literature review to determine research gaps, identification of the independent variables and the dependent variable of the study. The independent variables identified included income generation ability, Asset growth, sustainability of livelihood, shift in pattern of household decision making, shift in occupation, education (linked to income generating propensity), women empowerment and financial inclusion. The dependent variable identified was Entrepreneurial capacity building. The conceptual framework, thus constructed, postulated that the changes in the following independent variables: Asset growth, sustainability of livelihood, shift in pattern of household decision making, shift in occupation, education (linked to income generating propensity), women empowerment and financial inclusion, had a positive effect on entrepreneurial capacity building. The conceptual model is given in Figure 3.1:
3.8 Hypotheses of the study:

The hypotheses formulated for the purpose of this study are as follows:

1. Education of the beneficiaries leads to greater ability for income generation with the availability of microfinance.
2. Access to and use of microfinance has significantly increased the income of beneficiaries.
3. Access to and use of microfinance has led to creation of entrepreneurial capacity in non-agriculture business sectors through occupational shift.
4. Access to and use of microfinance has resulted in a significant increase in assets held by households of the beneficiaries
5. Microfinance is used more for sustenance activities than for business expansion
6. Asset growth of residents in villages forming part of BMRDA was higher than that of residents in other villages.
7. Higher incomes due to use of microfinance has led to greater level of financial inclusion.
8. Income generation through microfinance has led to greater decision making ability among women entrepreneurs
9. Increase in entrepreneurial capacity is significantly higher with access to and use of microfinance.

3.9 Operational definitions
Operational definitions are precise statements that convert the conceptual variables to measurable research variables. The meaning of the variables used in the context of the particular research is important as it lends credibility to and makes the research reproducible. The same terms may have different meanings in different research settings. The following are the terms and concepts used in this research study:

Microfinance

Microfinance refers to the provision of financial services to poor and near-poor households, whose members are self-employed or unemployed; the services provided to people who are into agriculture, fisheries, animal husbandry; those who operate small or microenterprises for manufacture, repair, recycling or trading; those who render services; those who work for wages and commissions or those who earn rents from hiring of assets and the provision of other services including group formation, development of self-confidence and training.

The financial products/services provided including loans, savings, micro insurance, money transfers and payment services. Similar to the needs of others,
those living in poverty also need these services to operate their businesses, smooth consumption, manage risks and build assets.

**Micro-entrepreneurship**

‘Micro-entrepreneurship includes firms with fewer than five employees and self-employed individuals’ (Munoz, 2010). They are ‘more likely to start their businesses because of alternative employment opportunities and are less educated on an average’ (Leino, 2009). More often than not, ‘they do not possess a burning desire or “competitive attitude”’ (Kabir et al. 2012) to scale up their business, seize opportunities or seek higher profits. The focus of micro-entrepreneurship and micro-entrepreneurs is more on ‘income generation as a tool of survival’ (Selamet, 2011)

**Entrepreneurial Capacity building**

Entrepreneurial capacity building refers to the enhancement in the ability of a significant number of people in a given geographical area to establish and to sustain micro-enterprises through a rise in their capacity to: raise finance; deploy the same in their micro-enterprises as fixed capital and working capital and generate a surplus; which can be used for consumption needs and savings. An increase in entrepreneurial capacity can be measured by the growth in assets held by the poor and other measures. In addition, it refers to the growth in entrepreneurial mindset of the people. It also refers to Economic independence, increased self-confidence; improved leadership qualities; growth in decision making abilities; greater ability to take risks; greater participation in community activities of its people.

**Sustainability**

Sustainability refers to continuous growth in economic prosperity over a long period of time resulting in improvement in the quality of life of micro-entrepreneurs; survival of the micro-enterprise in the long term.
Entrepreneurial mind-set development

Entrepreneurial mindset development is set in the context of micro-entrepreneurship. It refers to the ability to start and operate a new business; securing access to finance; growth opportunities.

Occupational shift

Occupational shift refers to the changes in the principal occupation of families from one type to another from the following categories: agricultural labour, land ownership, regular factory jobs; casual workers in a factory; shop assistant; self-employment and any other.

Asset creation

Asset creation refers to growth in household assets: bicycle, car/truck/tractor, motorcycle/scooter, mobile phone, television, gas stove, sewing machines, agricultural tools, fans, pressure cookers, satellite TV connection and cupboard/furniture, gas stove and similar.

Income generation

Income generation refers to the increase in family income resulting from pursuit of new/additional economic activities and/or an increase in the number of earning members in the family.

Business operating ability

Business operating ability refers to the growth in number of employees, increase in scale or scope of business, growth in sales, profits and number of customers.

Women empowerment

Empowerment of women refers to greater say in decision making, more autonomy, ‘greater participation in decision making, more equitable status in the family and community, increased political power and rights, and increased self-esteem.’ (Cheston and Kuhn, 2002).
3.10 Scope of the study:

The study is carried out in Kanakapura Taluk of Ramanagara district in the State of Karnataka. Karnataka is the 5th largest state in India with an estimated nominal GDP of of $ 200 billion in 2017-18 (Karnataka Budget Analysis, 2017) and 9th largest in terms of population (6.11 crores), with a geographical spread of 191,791 square kilometres and a literacy rate of 75.36%. Ramanagara district, close to the capital city of Karnataka, Bangalore, spread over 3516 kilometres, has a population of 10.83 lakhs. Out of this 6.74 lakhs are literate. The district comprises 872 villages and 6 towns.

3.10.1 Geographical scope

The study is restricted to Kanakapura taluk, comprising 282 villages and 1 town. The Taluk is situated at a distance of 55 kilometres from Bangalore.

3.10.2 Reference period

The study spanned over the period 2010-2016. After an extensive background study, the actual data collection was done between May 2016 and November 2016. Data was collected for two (2) specific points of time, i.e., 2010 and 2016, with a view to capturing information post microfinance intervention.

3.11 Inclusion & exclusion criteria

Inclusion criteria are the attributes that are essential for considering for selection for a particular research. Exclusion criteria disqualify a prospective participants / situations from consideration of research. These are decided based on research questions and hypothesis formulated. The inclusion and exclusion criteria for the research were as follows:

Only respondents above the age of 18 were considered. Accordingly, men and women below the age of 18 and those living in a geographical region other than that identified for the study were excluded from the study.
It was concluded during the pilot study that membership of all the SHGs operating in the area covered by the study were open only to women. Therefore the survey covered only women residing in the 73 villages of Kanakapura taluk were identified for the study.

3.12 Design of the study

3.12.1 Sources of data for the research:

The data for the research is collected from both primary and secondary sources. Primary data collection is done through an interview schedule, using a structured questionnaire. This method is more expensive than questionnaires filled by respondents themselves, but are better for more complex questions and in situations where there is low literacy or lack of co-operation from respondents (FAO, 1998) Informed consent was circulated along with the questionnaire, stating the facts of the research and seeking voluntary participation. The secondary data collection is sourced from different print and electronic media.

3.12.2. Structure of the questionnaire:

The questionnaire used for the study is drafted keeping the research problem in mind in such a way to allow logical understanding and reasoning that helps in analysis. The questionnaire used for data collections consists of two parts: Part I consisting of 19 questions to collect the demographic details of the sample and Part II consisting of 15 questions to collect data pertaining to the objectives of the study. The questionnaire consists of multiple choice questions, bi-polar questions, and open ended questions.

3.12.3. Pilot study details:

It is wise to assess reliability and validity of indicators before carrying out the actual study (Yin, 1994). A pilot study was therefore conducted prior to the main study with a view to pre-testing the questionnaire. A sample 50 respondents were interviewed from 9 villages. Convenience sampling method was used to draw sample respondents from the population.
The pilot study helped in assessing the time required to complete an interview and to observe reaction of the respondents while responding to the questions. The results of the pilot study helped in making the required corrections and modifications in the questionnaire. The process was completed in April 2016. The questionnaire was translated in Kannada (the local language in the State of Karnataka), with a view to eliciting clear responses to the questions in the interview schedule. The researcher clarified doubts raised by the respondents, whenever, required for improving the accuracy of the responses.

3.12.4. Sample size of the study

The sample size for the study is arrived at using the standard error of the mean method, by considering the standard deviation of the pilot study of 50 respondents and an acceptable error of 5%, i.e., at 95% confidence level. Calculation of sample size is shown in Table 3.1.

Table 3.1.
Table showing the computation of sample size

<table>
<thead>
<tr>
<th>Sample Size (N)</th>
<th>( \left( \frac{Z \times S}{E} \right)^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where Z = Standard value corresponding to a confidence level of 95% = 1.96</td>
<td></td>
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<tr>
<td>S = Standard deviation from the pilot study of 50 samples = 0.6841</td>
<td></td>
</tr>
<tr>
<td>E = Acceptable error = 5% = 0.05</td>
<td></td>
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<tr>
<td>Therefore, the sample size should be = (N) = ( \left( \frac{Z \times S}{E} \right)^2 = \left( \frac{1.96 \times 0.6841}{0.05} \right)^2 = 719 )</td>
<td></td>
</tr>
</tbody>
</table>

3.12.5. Validity testing of the questionnaire:
The Average Congruency Percentage (ACP) (Popham, 1978) method was used to evaluate the face validity of the questionnaire. Three experts were requested to compute the percentage of questions considered relevant by them. The ACP arrived at was 92% (Table 3.2), which is acceptable (Waltz et al., 2005).

### Table 3.2

Table showing the congruency percentage

<table>
<thead>
<tr>
<th>Details</th>
<th>Congruency Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert 1</td>
<td>94%</td>
</tr>
<tr>
<td>Expert 2</td>
<td>92%</td>
</tr>
<tr>
<td>Expert 3</td>
<td>90%</td>
</tr>
</tbody>
</table>

(Source: Survey data)

3.12.6. **Reliability testing of questionnaire**

The Test-Retest retest reliability method was used to test the reliability of the questionnaire. Tappen states that Test-retest reliability is evaluated by administering the same test to the same people or taking the same measurement on the same people after a specified period of time. The results of the two testing times are then compared statistically (Tappen, 2011). The questionnaire was administered to the 50 respondents included in the pilot study after a time lag. The results were then coded and compared. The degree of reliability is indicated by the ratio of reliable responses to the total number of responses. The degree of reliability rests between 0 and 1. The closer the ratio is to 1, the higher is the reliability. A ratio that is greater than 0.7 is considered as acceptable. The ratio arrived at was 0.92 indicating high reliability.

3.12.7. **Period of the study:**

The data collected covered two time periods, i.e., 2010 and 2016. The pilot study was conducted during the period between August 2015 and November 2015. Data for the main survey was collected during the period May 2016 and November 2016.
3.12.8. **Sampling techniques:**

As a prelude to collection of data, decisions had to be made on the techniques to be adopted for:

(i) Selecting a representative sample from among the 282 villages in Kanakapura Taluk.

(ii) Selecting a representative sample of respondents from the shortlisted villages.

After careful consideration, it was decided that the multistage random sampling technique was best suited for collection of data needed for this study.

In the first stage, the simple random sampling technique was applied to select the sample villages. 73 villages were selected from out of the 282 using a random number generator.

In the second stage, stratified random sampling technique was applied. Each village represented a stratum from which random samples were drawn.

3. 13. **Scheme of analysis:**

Entrepreneurial capacity building is considered as the variable that the research intends to measure (dependent variable). In terms of the scheme of analysis presented in Figure 3.3 the change in capacity building from 2010 to 2016 is captured by measuring the eight independent variables viz., income generation, asset growth, sustainability of livelihood and shift in pattern of household decision making, shift in occupation, education and income generating propensity, financial inclusion and women empowerment. The dimensions are drawn from the questions included in the questionnaire that was administered. The figures mentioned in parenthesis against each variable in Figure 3.2 relate to the question numbers included in the questionnaire. E.g., data related to asset growth is captured through question no. 27 in the questionnaire both pre-intervention and post-intervention of microfinance in 2010 and 2016 respectively.
Figure 3.2

Scheme of Analysis

Entrepreneurial Capacity Building
(Independent Variable)

Before Microfinance Intervention 2010

<table>
<thead>
<tr>
<th>Independent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset growth (27)</td>
</tr>
<tr>
<td>Sustenance oriented micro entrepreneurship (24)</td>
</tr>
<tr>
<td>Financial inclusion (25)</td>
</tr>
<tr>
<td>Income generation (15, 28, 30)</td>
</tr>
<tr>
<td>Household decision making (29)</td>
</tr>
<tr>
<td>Education linked to income generation (12, 28)</td>
</tr>
<tr>
<td>Women empowerment (29, 33, 34)</td>
</tr>
<tr>
<td>Entrepreneurship capacity creation in non-agri sector through occupational shift 26</td>
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<td>Entrepreneurial orientation 13</td>
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After Microfinance Intervention 2016

<table>
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(Source: Self-compiled from various sources)
3. 14. Tools and techniques used for analysis

Data collected were coded, cleaned and tabulated for ease of analysis. Both parametric and non-parametric statistical tools of analysis, like percentage analysis, Chi square test of independence, paired samples t-test and Z test of proportions were used.

3. 15. Research implications of the study

Based on the findings of this research study, it is expected that:

a) Original contributions can be made to existing literature in the following areas:
   i) Determinants of entrepreneurial capacity building in Less Developed Countries.
   ii) Women empowerment through enhancement of income generation and decision making capacity.
   iii) Higher financial inclusion through microfinance intervention

b) Suggestions that are easily implementable are made to NABARD, Banks, MFIs and other NGOs on improving existing practices of financial intermediation through microfinance.

c) Suggestions for social intermediation that can ensure better outcomes for entrepreneurial capacity building are made to institutions involved with microfinance.

d) Recommendations are made to Governments and donor institutions, involved in policy making proposing measures to generate greater social impact.

The study has national significance since the recommendations can be implemented in other parts of the state of Karnataka and other states in India.
3.16. Limitations of the study

The limitations of the study are as follows:

- Geographic coverage: The study is carried out in one district/taluk in the State of Karnataka in India. It cannot be generalized that the findings are applicable to other parts of the State and other regions of the country.
- Illiteracy or low levels of education of the respondents, it was difficult to capture dimensions of micro entrepreneurship which would have involved asking respondents relatively complex questions.

3.17. Scope for future research:

A wider study, incorporating villages from north, south, west and east of India will produce a more balanced research output. A comparative study between a few states is another suggestion for future research. This will throw light on common and divergent practices in planning and implementation of microfinance interventions in different states. It is also suggested that a study be conducted to capture more dimensions of micro entrepreneurship using suitable research methodology.

3.18. Chapter scheme

A well-organized Chapter scheme facilitates the smooth flow of information to the reader. The research thesis is organized in logical sequence of five chapters, followed by bibliography and annexures.

The first chapter titled ‘Introduction’ contains details such as the concepts of microfinance, its growth and evolution world-wide and in India, typologies and delivery models, role of NABARD, SHGs and MFIs, role of microfinance in micro entrepreneurial development, key aspects of microfinance, rationale and utility of the study.
The second chapter comprises a review of literature, identification of research gaps and the variables identified for research based on the research gaps for consideration in the current study.

The third chapter, titled Research design, includes an introduction, research questions, need for the study, objectives of the research, sampling design, structure of the questionnaire, pilot study and reliability of questionnaire, tools and techniques used for analysis, scheme of analysis, chapter scheme, scope for further research and limitations of the study.

The fourth chapter titled ‘Analysis of data, interpretation of results and discussion’, includes an introduction to analysis, descriptive statistics, inferential statistics and interpretation of results of the analysis of data. Descriptive statistics deals with classification, tabulation of demographic variables and establishing the relationship between the dependent and independent variables based on the hypothesis framed in chapter 3. Inferential statistics tests the relationship between the variables in the formulated hypotheses in order to draw conclusions about the variables under consideration.

The fifth chapter titled Summary of Findings, Conclusion and Recommendations consists of the major findings derived from the analysis, conclusion of the research and recommendations made on the basis of conclusion.