Research Methodology

3.1 INTRODUCTION

“Research is formalized curiosity. It is poking and prying with a purpose.”

- Zora Neale Hurston

Research in common phrase refers to a search for knowledge. Search for knowledge through objective and systematic approach for finding a solution to a problem in research. The systematic approach is defining problems and opportunities, generating and evaluating ideas, monitoring performance and understanding the process. This chapter deals with both the conceptual and practical elements of the research. It explores the problem statement in depth and discusses what methods are more appropriate, given the objectives and nature of research. Research methodology needs to be designed with all caution and care as any error in it may lead to offending the reliability and validity of the results. So, it is important for a researcher, follow a systematic pattern with all caution and care. In the following sections, an attempt is made to define the research methodology and various econometric models adopted to carry out this research study.

3.2 PROBLEM STATEMENT

The extensive survey of literature suggests the importance of MFI's. Microfinance institutions provide the loans to that peoples which are not able to take a loan from the formal financial institutions. But, MFI's is facing the problem of financial sustainability. This problem attracts the numerous researchers. So, an important question is arising here, what should be done to make these microfinance institutions sustainable till they will helpful in poverty reduction. First of all, should understand the factor affecting the financial sustainability of MFI's. Many studies have been conducted to determine the factor affecting financial sustainability of MFI's. Some determining factors are found significant in one economy and some are not significant. After reviewing the existing literature, it is identified that different studies have stated the different factors affecting the performance of MFI's. But, only a few of them have
been conducted in the context of Indian economy and these are based on limited factors affecting the performance. Specific study is not found in Indian context which measures the performance of microfinance institution on the development stages.

3.3 OBJECTIVES OF THE STUDY

The motivation for undertaking the present study has come from the questionable financial sustainability in microfinance institution in India. From here it becomes essential to study the factors affecting the financial sustainability of MFIs. The aim of the study is to study the financial and social report of MFIs. This study contributes to the existing literature by examining the various factors which affect the performance of MFIs. To cover the broad objective, the present study intends to accomplish the following specific objectives.

a) to study the effect of MFIs outreach and other related factors on the financial sustainability of MFIs in India;

b) to study the effect of financial sustainability on the breadth of outreach;

c) to study the effect of MFIs efficiency on the financial sustainability of MFIs;

d) to study the effect of determinants of financial sustainability on the sustainability of MFIs at their start-up and growth stage of development; and

e) to offer workable recommendations and suggestions.

3.4 MEASUREMENT MODEL OF SUSTAINABILITY

For achieving the sustainability of microfinance institutions a model is evolve on the behalf of literatures.
3.5 RESEARCH HYPOTHESES

To achieve above objectives, following four research hypotheses are formulated:

**H₀₁:** Financial sustainability is not significantly affected by outreach and other related factors of MFI.

- **H₀₁ₐ:** Operational Self-Sufficiency is not significantly affected by outreach and other related factors of MFI.
- **H₀₁ₕ:** Return on assets is not significantly affected by outreach and other related factors of MFI.
- **H₀₁ₖ:** Return on equity is not significantly affected by outreach and other related factors of MFI.

**H₀₂:** Breadth of outreach is not significantly affected by the financial sustainability of MFI.

- **H₀₂ₐ:** Number of active borrowers is not significantly affected by the financial sustainability of MFI.
- **H₀₂ₜ:** Average loan size is not significantly affected by the financial sustainability of MFI.

**H₀₃:** Financial sustainability is not significantly affected by the efficiency of MFI.

- **H₀₃ₐ:** Operational Self-Sufficiency is not significantly affected by the efficiency of MFI.
- **H₀₃ₕ:** Return on assets is not significantly affected by the efficiency of MFI.
- **H₀₃ₖ:** Return on equity is not significantly affected by the efficiency of MFI.

**H₀₄:** Development stages of MFI are not significantly affected by the determinants of financial sustainability.

- **H₀₄ₐ:** Start-up stage of MFI is not significantly affected by the determinants of financial sustainability.
- **H₀₄ₐ₁:** Earning ratio of MFI is not significantly affected by the determinants of financial sustainability.
- **H₀₄ₐ₂:** Liquidity of MFI is not significantly affected by the determinants of financial sustainability.
- **H₀₄ₜ:** Growth stage of MFI is not significantly affected by the determinants of financial sustainability.
H_{04b1}: Cost per borrowers of MFI is not significantly affected by the determinants of financial sustainability.

H_{04b2}: Financial productivity of MFI is not significantly affected by the determinants of financial sustainability.

3.6 SCOPE OF THE STUDY

The universe of the study consisted of all those MFIs of India which are reporting their financial and social report to Microfinance Information Exchange (MIX) USA. There were nearly 160 MFIs of India reporting their data to the MIX USA.

3.7 DATA USED IN THE STUDY

The present study will be of an exploratory nature. Accordingly there will be the use of secondary data for the analysis. Annual reports of the MFIs will be used as secondary data. The reference period for annual data pertaining to the objectives is ranging from the year 2006-2007 to 2013-2014. The data has been sourced from Microfinance Information Exchange, USA. Since the data is off panel in nature consisting of both time series and cross-sectional. Then the main assumption of regression is that stationary of the panel data should be checked by applying appropriate tools. Only forty MFIs, their data is available for the above time period are selected for the purpose of analysis.

3.8 PERFORMANCE EVALUATION MODELS FOR MFIS

Several performance evaluation indicators are used in different areas of management for evaluating the performance of institutions. These indicators considered as the very useful in evaluating the performance of MFIs. Some performance evaluation models are generally accepted and adopted by institutions to monitor and evaluate the business. These models contribute to raising the level of informative transparency till institutions know the actual position and compare with others. Several performance evaluation models are PEARLS model, CAMEL model, GIRAFE model and Microfinance information exchange model.

3.8.1 PEARLS Model from the World Council of Credit Unions

PEARLS model consists of 44 indicators that are used for monitoring the performance of a specific type of microfinance institution.

- P – Protection
- E – Effective Financial Structure
• A – Asset Quality

• R - Rate of Return and Costs

• L - Liquidity

• S - Sign of Growth

3.8.2 CAMEL Model from ACCION International

It contains 21 indicators which are focusing mainly on the financial aspects of management. These are currently utilized by North American banks to evaluate the performance.

• C- Capital adequacy

• A- Asset quality

• M- Management

• E- Earnings

• L- Liquidity

3.8.3 GIRAFE Model from Planet Rating

The GIRAFE rating methodology is a reliable, complete tool to assess institutional risk and performance. It promotes an international standard of institutional performance for MFIs. It contains six assessment domains that split into 17 analytical factors.

• G- Governance

• I- Information

• R- Risk Management

• A- Activities

• F- Funding and Liquidity

• E- Efficiency and profitability

3.8.4 Microfinance Information Exchange Model: Microfinance information exchange delivers data services, analysis, and research and business information of MFIs because it is helpful for MFIs managers and board members to understand their performance with other MFIs. Its aim is to create a transparency of financial reporting of MFIs in worldwide and establish performance indicators for the microfinance industry. There are 9 comprehensive assessment domains in this model. They are as under.
• Institutional characteristics
• Financing structure
• Outreach indicators
• Macroeconomic indicators
• Overall financial performance
• Revenues
• Expenses
• Efficiency
• Risk and liquidity

For the conduct of the study, MIX model for performance evaluation is used. MIX model contains various financial indicators under nine broad categories which have been explained above. One or two indicators from each category are chosen for the performance analysis. In addition, indicators are also used which is common in more than two performance evaluation model. This section discusses different performance indicators to be used under the performance evaluation model and various tools and techniques used to carry out the research.

3.9 COMPUTATION OF VARIABLES

There are a number of important variables for achieving the above objectives. A brief explanation of the selected variables and calculation is given below.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Variable standard name</th>
<th>Definition / Measurement</th>
<th>Variable name as used in Regression model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Return on Asset</td>
<td>(Net Operating Income - Taxes) / Average Total Assets</td>
<td>ROA</td>
</tr>
<tr>
<td>2.</td>
<td>Return on Equity</td>
<td>(Net Operating Income - Taxes) / Average of Total Equity</td>
<td>ROE</td>
</tr>
<tr>
<td>3.</td>
<td>Operational Self- Sufficiency</td>
<td>Financial Revenue / (Financial Expense + Net Impairment Loss + Operating)</td>
<td>OSS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expense)</td>
<td></td>
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<td>---</td>
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<td></td>
</tr>
<tr>
<td><strong>4.</strong></td>
<td>Borrowers</td>
<td>Number of active borrowers in MFI</td>
<td>NAB</td>
</tr>
<tr>
<td><strong>5.</strong></td>
<td>Average loan size</td>
<td>It is a ratio of outstanding loan portfolio over number of active borrowers</td>
<td>ALS</td>
</tr>
<tr>
<td><strong>6.</strong></td>
<td>Gross loan portfolio</td>
<td>All outstanding principles due for all outstanding client loans.</td>
<td>GLP</td>
</tr>
<tr>
<td><strong>7.</strong></td>
<td>Number of borrowers per staff</td>
<td>It is a ratio of borrowers over staff member</td>
<td>BPSM</td>
</tr>
<tr>
<td><strong>8.</strong></td>
<td>Number of borrowers per loan officer</td>
<td>It is a ratio of borrowers over loan officer</td>
<td>BPLO</td>
</tr>
<tr>
<td><strong>9.</strong></td>
<td>Personnel allocation ratio</td>
<td>It is a ratio of loan officer on the total number of staff members.</td>
<td>PAR</td>
</tr>
<tr>
<td><strong>10.</strong></td>
<td>Cost per borrower</td>
<td>Operating expenses/average number of active borrower</td>
<td>CPB</td>
</tr>
<tr>
<td><strong>11.</strong></td>
<td>Personnel expenses/loan portfolio</td>
<td>It is the amount of personnel expenses related to operations on the amount of loan portfolio.</td>
<td>PELP</td>
</tr>
<tr>
<td><strong>12.</strong></td>
<td>Operating expenses/loan portfolio</td>
<td>It measures the operating expenses on the loan portfolio.</td>
<td>OELP</td>
</tr>
<tr>
<td><strong>13.</strong></td>
<td>Portfolio at risk</td>
<td>Outstanding balance, portfolio overdue &gt; 30 Days + renegotiated portfolio / Gross Loan Portfolio</td>
<td>PR</td>
</tr>
<tr>
<td><strong>14.</strong></td>
<td>Earning Ratio</td>
<td>Financial income / operating expenses</td>
<td>ER</td>
</tr>
<tr>
<td><strong>15.</strong></td>
<td>Debt equity ratio</td>
<td>It measures the proportion of debt and equity.</td>
<td>DER</td>
</tr>
<tr>
<td><strong>16.</strong></td>
<td>Capital assets ratio</td>
<td>It measures the percentage of capital on the assets.</td>
<td>CAR</td>
</tr>
<tr>
<td><strong>17.</strong></td>
<td>Liquidity</td>
<td>It is the ratio of non-earning liquid assets on the total assets.</td>
<td>LR</td>
</tr>
<tr>
<td><strong>18.</strong></td>
<td>Yield</td>
<td>Financial Revenue from Loan Portfolio / Average Gross Loan Portfolio</td>
<td>Yield</td>
</tr>
<tr>
<td>19.</td>
<td>Financial Productivity</td>
<td>Financial income / average of total assets</td>
<td>FP</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------</td>
<td>------------------------------------------</td>
<td>----</td>
</tr>
<tr>
<td>20.</td>
<td>MFI size</td>
<td>The size of MFI is measured by value of its assets</td>
<td>SIZE</td>
</tr>
<tr>
<td>21.</td>
<td>MFI age</td>
<td>A year since its establishment. It also measures the length of outreach</td>
<td>AGE</td>
</tr>
</tbody>
</table>

### 3.10 TOOLS OF ANALYSIS

The research tools applied under the study are explained as follows:

#### 3.10.1 Methodology to study and analyze the performance appraisal of Indian microfinance institutions

A microfinance institution is playing a vital role in developing countries. Various studies of different countries on the performance of MFIs confirm this (Adongo and stork 2005, Zeller and Meyer 2002, Meyer 2002). This study builds on the methodology used in previous studies in microfinance (Coleman & Oesi 2008, cull et al 2007, Woller & Schreiner 2002) which used multiple regressions to study some aspects of financial sustainability of microfinance institutions. This study uses more explanatory variables in comparison to previous studies in the Indian context.

#### 3.10.2 Methodology to access and analysis financial sustainability, outreach and other indicators of Indian MFIs

The Collected data has been analyzed using descriptive statistics respectively. The descriptive statistics tools help in describing the data in the form of mean, median, standard deviation, skewness, kurtosis and minimum-maximum values of the variables.

Karl Pearson correlation coefficient has been applied to study the relationship between indicators of performance appraisal of Indian microfinance institutions. Karl-Pearson correlation coefficient measures linear relationship between any two variables respectively.

The formula for calculating relationship between two variables say X and Y are as follows:

\[ r = \frac{N \sum XY - \sum X \cdot \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}} \]
Where,

- \( N \) = Number of pairs of variables
- \( \sum XY \) = sum of the products of paired variables
- \( \sum X \) = sum of \( x \) variable
- \( \sum Y \) = sum of \( y \) variable
- \( (\sum X)^2 \) = square of the sum of \( x \) variables
- \( (\sum Y)^2 \) = square of the sum of \( y \) variables

The study makes use of panel data models to explain the relationship between dependent and independent variables. Panel data is a combination of cross-section and time series data (Gujarati 2003). Correlation coefficient is based on time series data are valid only under the assumption of non-autocorrelation and stationarity. To test the variables under the study are stationary, unit root test is performed using Levin, Lin and Chu test methods.

**Levin-Lin-Chu Test:** Levin-Lin-Chu test is applicable on the panel data. The power of a test is the probability of rejecting the null when it is false and the null hypothesis is unit root. Levin-Lin-Chu test suggests the following hypothesis.

- \( H_0 \): each time series contains a unit root.
- \( H_1 \): each time series is stationary

where the lag order \( p \) is permitted to vary across individuals. First, we run Augmented Dickey-Fuller (ADF) for each cross-section on the equation:

\[
\Delta y_{it} = p_i y_{i,t-1} + \sum_{L-1}^{p_i} \theta_{iL} \Delta y_{it-L} + \alpha_{mi} d_{mt} + \varepsilon_{it}
\]

In the second step, we run two auxiliary regressions:

1. \( \Delta y_{it} \) on \( \Delta y_{i,t-L} \) and \( d_{mt} \) to obtain residual \( \hat{\varepsilon}_{it} \) and
2. \( y_{i,t-L} \) on \( \Delta y_{i,t-L} \) and \( d_{mt} \) to get the residual \( \tilde{y}_{i,t-1} \)

The next step involves standardization of the residuals. And finally, we run the pooled OLS regression to check the relationship between dependent and independent variables of the Indian microfinance institutions. Ordinary linear square (OLS) regression is applied with fixed effect and random effect model. If the effect is fixed then random effect model
estimators are inconsistent then fixed effect model should be used (Cameron & Trivedi 2009). Hausman (1978) test suggested in the economic literature (Gujarati 2003, Greene 2003) for which model is consistent. The table shows that which estimator will be used on acceptance or rejection of the null hypothesis.

<table>
<thead>
<tr>
<th>Estimator</th>
<th>$H_0$ is true</th>
<th>$H_1$ is true</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random Effect Estimator</td>
<td>Consistent Efficient</td>
<td>Inconsistent</td>
</tr>
<tr>
<td>Fixed Effect Estimator</td>
<td>Consistent Inefficient</td>
<td>Consistent</td>
</tr>
</tbody>
</table>

If Hausman results indicates that Random effect provides consistent estimates. Then further, check the appropriateness of Random effect model in compared to pooled OLS. For it, Breusch and Pagan Lagrangian Multiplier (1980) test will apply. If test rejects the null hypothesis it means that there was no random effect. This indicated that random effect regression will appropriate (Cameron & Trivedi 2009, Verbeek 2004).

To avoid the problem of multicollinearity, the correlation matrix is made. Multicollinearity problem exists when the correlation between two or more independent variables are a high but not perfect correlation (Cameron and Trivedi 2009; Johnston and Dinardo 2007; Wooldridge 2006). Churchill and Iacobucci (2005) have argued, multicollinearity condition reduces the efficiency of the estimates. How much correlation causes multicollinearity, it is not clearly defined. Hair et al (2006), (Nuredin 2012) argue that correlation coefficient below 0.9 may not cause serious multicollinearity problem, (Kennedy 1985) recommended that if the correlation between explanatory variables exceeds 0.8 then it would be a problem of multicollinearity. As in Kennedy (1985), we consider correlation coefficient above 0.8 to be high and it recommended for further investigation.

So, we further compute the variance inflation factor (VIF) for each coefficient as diagnostic statistics test to indicate how serious the multicollinearity problem. (Green 2003) The variance inflation factor shows the increase in variance that can be attributing of multicollinearity; it also claims that the VIF values in excess of twenty suggest the existence of multicollinearity problem. (Hair et al 2006; Gujarati 2003) suggest that variance inflation factor above ten indicates the existence of multicollinearity problem.

### 3.10.3 The Conceptual Models:

- The study makes use of panel data model to explain relationship between dependent and explanatory variables. In carrying out the analysis, we employ the basic panel data regression equation
\[ Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it}, i = 1 \ldots N; t = 1 \ldots T \]  
\[ \varepsilon_{it} = \mu_i + v_{it} \]

Where, \( i \) denote the individual microfinance institutions and \( t \) denoting time. In this case, \( i \) represent the cross-section identifier and \( t \) the time identifier. \( \alpha \) is a scalar, \( \beta \) is a \( K \)-dimensional vector and \( X_{it} \) is the \( t \)th observation on the \( K \) explanatory variables. In estimating a panel data model, most applications make use of a one-way error component model for the disturbances, with

3.10.4 Model Specification: Since the data is of panel nature consisting of both time series and cross sectional data, Ordinary Least Square (OLS) regressions are used for the purpose of analysis.

We estimate the following specific regression model:

\[ Financial\ Sustainability_{it} = \alpha + \beta Outreach_{it} + Control_{it} \]  
\[ Outreach_{it} = \alpha + \beta Financial\ Sustainability_{it} + Control_{it} \]  
\[ Financial\ Sustainability_{it} = \alpha + \beta Efficiency_{it} + Control_{it} \]

Where Financial Sustainability_{it} represents the Financial Sustainability measure variable, Outreach_{it} represents the Outreach measure variable and Efficiency_{it} represents the Efficiency measure of firm \( i \) in time \( t \), and Control_{it} represents the control variable of firm \( i \) in time \( t \).

Following from equation 2, 3 and 4, the following equations are estimated

(a) Financial Sustainability and Outreach

ROA_{it} = \alpha_i + \beta_1 NAB_{it} + \beta_2 ALS_{it} + \beta_3 CAR_{it} + \beta_4 DER_{it} + \beta_5 PR_{it} + \beta_6 SIZE_{it} + \beta_7 AGE_{it} + \varepsilon_{it}  
ROE_{it} = \alpha_i + \beta_1 NAB_{it} + \beta_2 ALS_{it} + \beta_3 CAR_{it} + \beta_4 DER_{it} + \beta_5 PR_{it} + \beta_6 SIZE_{it} + \beta_7 AGE_{it} + \varepsilon_{it}  
OSS_{it} = \alpha_i + \beta_1 NAB_{it} + \beta_2 ALS_{it} + \beta_3 CAR_{it} + \beta_4 DER_{it} + \beta_5 PR_{it} + \beta_6 SIZE_{it} + \beta_7 AGE_{it} + \varepsilon_{it}  

(b) Outreach and Financial Sustainability

NAB_{it} = \alpha_i + \beta_1 ROA_{it} + \beta_2 ROE_{it} + \beta_3 OSS_{it} + \beta_4 CAR_{it} + \beta_5 DER_{it} + \beta_6 PR_{it} + \beta_7 SIZE_{it} + \beta_8 AGE_{it} + \varepsilon_{it}
ALS\_it = \alpha\_it + \beta\_1 \text{ROA}\_it + \beta\_2 \text{ROE}\_it + \beta\_3 \text{OSS}\_it + \beta\_4 \text{CAR}\_it + \beta\_5 \text{DER}\_it + \beta\_6 \text{PR}\_it + \beta\_7 \text{SIZE}\_it + \beta\_8 \text{AGE}\_it + \epsilon\_it

(c) Financial Sustainability and Efficiency

\text{ROA}\_it = \alpha\_it + \beta\_1 \text{BPSM}\_it + \beta\_2 \text{BPLO}\_it + \beta\_3 \text{PAR}\_it + \beta\_4 \text{CPB}\_it + \beta\_5 \text{PELP}\_it + \beta\_6 \text{Yield}\_it + \epsilon\_it

\text{ROE}\_it = \alpha\_it + \beta\_1 \text{BPSM}\_it + \beta\_2 \text{BPLO}\_it + \beta\_3 \text{PAR}\_it + \beta\_4 \text{CPB}\_it + \beta\_5 \text{PELP}\_it + \beta\_6 \text{Yield}\_it + \epsilon\_it

\text{OSS}\_it = \alpha\_it + \beta\_1 \text{BPSM}\_it + \beta\_2 \text{BPLO}\_it + \beta\_3 \text{PAR}\_it + \beta\_4 \text{CPB}\_it + \beta\_5 \text{PELP}\_it + \beta\_6 \text{Yield}\_it + \epsilon\_it

(d) Initial Stage and determinants of Financial Sustainability

\text{ER}\_it = \alpha\_it + \beta\_1 \text{BPSM}\_it + \beta\_2 \text{CPB}\_it + \beta\_3 \text{PR}\_it + \beta\_4 \text{Yield}\_it + \beta\_5 \text{AEA}\_it + \beta\_6 \text{SIZE}\_it + \beta\_7 \text{AGE}\_it + \epsilon\_it

\text{LR}\_it = \alpha\_it + \beta\_1 \text{CPB}\_it + \beta\_2 \text{OELP}\_it + \beta\_3 \text{Yield}\_it + \beta\_4 \text{PR}\_it + \beta\_5 \text{SIZE}\_it + \beta\_6 \text{AGE}\_it + \epsilon\_it

(e) Growth Stage and determinants of Financial Sustainability

\text{CPB}\_it = \alpha\_it + \beta\_1 \text{BPSM}\_it + \beta\_2 \text{BPLO}\_it + \beta\_3 \text{AEA}\_it + \beta\_4 \text{Yield}\_it + \beta\_5 \text{SIZE}\_it + \beta\_6 \text{AGE}\_it + \epsilon\_it

\text{FP}\_it = \alpha\_it + \beta\_1 \text{PR}\_it + \beta\_2 \text{AEA}\_it + \beta\_3 \text{Yield}\_it + \beta\_4 \text{CPB}\_it + \beta\_5 \text{SIZE}\_it + \beta\_6 \text{AGE}\_it + \epsilon\_it

Where, \alpha\_it = constant term, \text{ROA} = Return on Assets, \text{ROE} = Return on equity, \text{OSS} = Operational Self Sufficiency, \text{NAB} = Number of active borrowers, \text{ALS} = Average loan size, \text{BPSM} = Number of borrowers per staff member, \text{BPLO} = Number of borrowers per loan officer, \text{PAR} = Personnel allocation ratio, \text{CPB} = Cost per borrower, \text{PELP} = Personnel expenses on loan portfolio, \text{OELP} = Operating expenses on loan portfolio, \text{ER} = Earning ratio, \text{PR} = Portfolio at risk, \text{DER} = Debt equity ratio, \text{CAR} = Capital asset ratio, \text{Liquidity} = Non earning liquid assets on the total assets, \text{Yield} = Yield on gross loan portfolio, \text{FP} = Financial Productivity, \text{SIZE} = Measured by the value of assets, \text{AGE} = Year from inception and \epsilon\_it = error term.

R^2 and Adjusted R^2 values were measured. The significance of the regression coefficient pertaining to various independent variables has been examined by applying t-test at 1%, 5% and 10% level of significance.

3.11 RELEVANCE OF THE STUDY

Previous studies mainly focused on the efficiency and social performance of microfinance institutions. Some study focused on women empowerment and financial performance of microfinance institutions. The present study focuses on the sustainability of Indian microfinance institutions. This study examines the factors which affect the sustainability of
Indian MFIs. It will facilitate decision-making from the results which will helpful for Indian MFIs for their performance improvement. It will also provide some suggestion for the development of microfinance institutions till they achieve the level of sustainability. Sustainability is also beneficial for the investors till they invest in the microfinance institutions and achieve the benefit on their investment. This study assesses the determinants of financial and social sustainability and understands the factor affecting the financial and social sustainability of Indian MFIs. This study will useful for attaining financial and social sustainability.

3.12 ORGANIZATION OF STUDY

The report is organized into seven chapters.

Chapter 1: The first chapter is introductory which covers need and concept of microfinance institutions and also covers the historical background of MFIs; the delivery methodology, the legal and regulatory frameworks of MFIs.

Chapter 2: The second chapter will review the relevant studies conducted in the area of Microfinance. This chapter will also define the problem, gaps in the microfinance area, objectives, research methodology adopted and relevance of the study.

Chapter 3: The third chapter will going to present the research methodology used in the study.

Chapter 4: The fourth chapter gives an explanatory analysis of financial and social performance measures of Indian MFIs using trend analysis and simple statistics as mean, standard deviation, skewness, kurtosis, minimum and maximum value.

Chapter 5: The fifth chapter provides the effect of MFIs outreach and other related factors on the financial sustainability. It also presents the effect of financial sustainability on the breadth of outreach.

Chapter 6: The sixth chapter present the results of efficiency indicators on financial sustainability. It also provides the affects of the determinants of financial sustainability on the start-up and growth stage of Indian MFIs.

Chapter 7: presents the major findings emerged from the present study and offer some recommendations and their implications.
3.13 REFERENCES


Cameron, A. C., & Trivedi, P. K. (2009). Microeconometric Using Stata. USA: Stata Press Publication.


