An Impact Assessment of Microfinance: A Case Study of Socio-Economic Empowerment of SHG Members in Manipur (India)

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Abstract:
Microfinance holds a big promise to generate income and employment and alleviate poverty in developing countries. This in turn, can have positive social effects at different levels of society, from the personal, to the community, and to the regional level. Non-Governmental Organization (NGOs), being non profit organisation with social developmental objective, have been playing important roles as facilitator or intermediary in microfinance movement in India. NGO-MFIs have been playing significant roles in supporting and nurturing SHGs by not only extending credit or other financial services to SHGs but also in many ways. NGO-MFIs have significant contribution in building capacity of SHGs and shaping them to grow for self sustainable. This paper attempts to assess the economic empowerment of SHGs, the social empowerment of SHGs and the overall socio-economic empowerment of SHGS due to microfinance intervention in Manipur State which is in the North-Eastern corner of India. A sample size of 120 SHGs under 20 NGOs are considered for the study. Socio-economic empowerment index is used for assessing the socio-economic empowerment of SHGs. It is found that after joining the microfinance programme, there is a significant improvement in overall economic empowerment index and the social empowerment index of the sampled SHG members. Further, findings also revealed that there is a significant improvement in overall Economic and Social Empowerment index of MFI’s clients after joining the microfinance programme. The study was limited to only NGOs & SHGs who were involved in micro-finance activities. The study did not attempt to study other organizations or voluntary organizations involved in social development activities.

Key words: NGO-MFIs, SHGs, Economic empowerment index, social empowerment index.
1. INTRODUCTION

Microfinance holds a big promise to generate income and employment and alleviate poverty in developing countries. This in turn, can have positive social effects at different levels of society, from the personal, to the community, and to the regional level. All microfinance institutions (MFIs) contribute at all levels and with the same strength. On the contrary, it is equally important to constantly monitor and also observe potential negative impacts, such as over-indebtedness of clients or risk of corruption and illegal use of credit. At the same time, it is to be understood that microfinance is not the solution to all problems in developing countries, but should be focused on economically active poor who can afford to borrow and repay money as part of their normal budget and who are not living in an emergency situation.

Non-Governmental Organization (NGOs), being non profit organisation with social developmental objective, have been playing important roles as facilitator or intermediary in microfinance movement in India. NGO-MFIs have been playing significant roles in supporting and nurturing SHGs by not only extending credit or other financial services to SHGs but also in many ways.

Majority of NGOs have played a significant role as facilitator for formation of SHGs and providing training support because of their strengths in social intermediation process, concerns for the poor and ability to provide innovative for realizing their goals. They also help and assist SHGs in linking with banks for various financial services like loan, savings, etc. Over the years, NGOs are changing their roles from social intermediary to financial intermediary by directly extending various financial services such as credit, insurance, savings etc to group members.
Availability of bulk finance to these NGOs from banks and funding institutions like SIDI, RMK, etc. also motivate them to take up the role of financial intermediary.

NGOs have emerged as the major Self Help Promoting Institutions (SHPIs) mainly because of NABARD initiatives in 2000-01. Many NGOs provide training on group dynamism and group management. They also assist in formulation of group bye laws and group norms. Capacity building of SHGs is one of the challenges for many policy makers and agencies. NGOs have significant contribution in building capacity of SHGs and shaping them to grow for self sustainable. Various trainings that are provided by the NGO-MFIs are mainly book keeping, basic accounting, leadership and group management, skills for income generating activities, marketing support, etc.

Since most the NGO-MFIs deal with women groups, they have also directly contributed to women empowerment and gender equality. Not only providing credit, most of the NGOs tie up with various insurance companies to provide necessary micro insurance product to their poor SHG Members at cheaper premium. NGOs also help SHGs in taking up various social issues like sexual harassment, torture, alcoholism, dowry, gambling, etc. NGOs also provide necessary supports for SHG members in maintaining for their proper housing, hygienic sanitation, drinking water, family planning and children educations.

This paper attempts to describe overall socio-economic empowerment of SHG members due to microfinance Intervention using socio-economic empowerment index.
2. Review of literature

Review of available literature on Impact Assessment methodologies for microfinance is done According to Deba dutta K. Panda (2009), Impact Assessment is the structured study, which measures the impact on employment, income generation, nutrition, education, health, consumption, business development (micro entrepreneurship) and gender equity on MFI’s clients. Impact assessment refers to the assessment of how financial products and services affected the lives of the poor. Impact assessment is the measurement of the income growth, assets growth and vulnerability reduction of the poor by the microfinance programme. The indicators for impact assessment are not limited to economic development but extended to developmental growth like health, education, empowerment, gender, etc.

Impact assessment can be done through using qualitative as well as quantitative data collection tools. The qualitative tools are Participatory Rural Appraisal (PRA), Rapid Rural Appraisal (RRA), personal discussions, observations, etc. Qualitative impact assessment provides a broad idea, mostly open-ended, on the impact of microfinance programmes. The quantitative data collection tools are the schedule and structured questionnaires for household survey. Data from secondary sources complement the primary data. Quantitative impact assessment requires various mathematical, statistical and econometric models for analysis of data. In many microfinance programmes, both qualitative and quantitative methods are jointly used for overall impact assessment. Different level and methodologies of impact assessment of microfinance are briefly discussed here in this section.

According to Dunn (2002) and Cohen, M. and Bourjorjee, D. (2003), Impact Assessment (IA) for microfinance can be carried out at three different levels i.e. household level, enterprise level and individual level.
Household Level: The impact assessment programmes should capture the changes in the household level due to microfinance programme. The household economic positions like income, expenditure, asset position, livelihood portfolio, etc. may be changed over time due to the increasing access of households to microfinance products and services. The psycho-social changes can be experienced at the household level i.e. change in literacy, migration, gender equality, health, social status, etc. Some of the important changes are:

- increase in the level of household income;
- greater diversification in the sources of household income;
- increase in household assets, including improvements in housing,
- increases in major household appliances and transport vehicles, and
- increases in microenterprise fixed assets;
- increase in expenditures on children’s education;
- increase in expenditures on food, especially among the very poor; and
- increase in the household’s effectiveness in coping with problems.
**Individual Level:** In general, effective microfinance programmes bring a positive change in individual level. It develops managerial ability among the beneficiaries and increases status and position not only in the society but also in the house/family. The increase in capacity development due to microfinance programmes leads to a change in individual income level, expenditure pattern, living condition, literacy position, awareness, accessibility, equity and equality to the household and also in community assets, etc. Some of the important changes are:

- increase in the client’s control over resources and income within the household economic portfolio;
- increased self-esteem and respect from others;
- increased incidence of personal savings; and better position from which to deal with the future through more proactive behaviour, and
- increased confidence level

**Enterprise Level:** Microfinance programmes influence microenterprise operations i.e. change in profits, scale of operations, diversifications, etc.

- increase in microenterprise revenue;
- increase in enterprise fixed assets, especially among repeat borrowers;
- increase in the paid and unpaid employment generated by the enterprise; and
- improvements in the transactional relationships of the enterprise

Under Before and After Intervention Impact Assessment Method, according to Panda, D.K. (2009), the status of the sample units (person/household/village, etc) before microfinance intervention is compared with that of the after microfinance intervention; taking the various parameters or variables. This method is good for assessment of the actual impact; but this
method has a limitation. It becomes difficult to get the data (related to various variables) on before microfinance intervention from samples, as the impact assessment study is commissioned at the end of the programme.

Some of the microfinance programme compared the “Baseline Study” with the “Endline Study” for impact assessment. In the “Baseline Study” and “Endline Study” either the donor or the implementer designs a structured mapping of all the socio-economic characteristics that are related to a microfinance programme. The “Baseline Study” and the “Endline Study” are two similar studies that have conducted by taking the same components or variables; but the “Baseline Study” is conducted just before beginning of the microfinance programme; and the “Endline Study” is conducted just after ending the microfinance programme.

**Fig: Before and After Intervention Method**

Chen, M.A and Dunn, E. (1996) developed a model called Household Economic Portfolio Model (HEPM) to measure the impact of microfinance. The *household economic portfolio* can be defined as a) the set of household resources, b) the set of household activities, and c) the circular flow of interaction between household resources and household activities. A model of the household economic portfolio is illustrated below:
Household resources are the set of human, physical, and financial resources available which are used by the household in a given period of time. Household activities are the set of consumption, production, and investment activities that the members of the household undertake in a given period of time. The circular flows include both the decisions that allocate resources to activities and the return flow of income and other resources generated by the selected activities. This return flow of income serves to augment the set of household resources.

The household economic portfolio (HHEP) model is based on a conceptualization of the microenterprise as part of a larger portfolio of household economic activities. Decisions about microenterprises are made in the context of options and trade-offs within the overall household economy. The HHEP model provides a framework for developing hypotheses about the cause-and-effect relationships between microenterprise services and impacts. It measures the impacts, or changes, at the household, the microenterprise and the individual levels.

The household portfolio model is premised on the fact that individuals within the household have one or more socially ascribed identities: notably gender but also seniority, marital status, parental status, and others. The individuals or categories of individuals within the household may have separate (even competing) preferences, interests, needs, resources, and constraints and may therefore, take separate (even competing) decisions and actions. For instance, men and women within the same household may engage in different enterprises; may engage in joint enterprises; or may share resources and income across separate enterprises. Depending on the pattern they follow within a given household, men and women can be expected to respond differently to microenterprise services. The model allows for the systematic investigation of the implications of socially defined divisions within the household.
Chen and Snodgrass (1999) carried out impact assessment study of SEWA Bank in India at three different levels i.e. at household level, at enterprise level and at individual level. Study reveals that participation in microenterprises services leads to an increase in the level of household income, improvement in housing, increase in microenterprise revenues, increase in self-esteem and self-confidence, etc.

Barnes, Morris and Gaile (1998) have taken following broad four parameters for their baseline study in Uganda i.e. 1) improvements in the economic welfare of households; 2) enterprise growth or stability; 3) increases in empowerment, especially among women; and 4) strengthened social and rural networks.

Ansera (1996) reviewed various methods and techniques of collection, measuring and analysis of household income. Most methods for measuring income are based on respondent recall of relevant data, and are typically subject to considerable inaccuracy and distortion due to recall errors. Some of the indirect or alternative methods used for measuring household economic status are wealth ranking technique, household assets and household expenditure, microenterprise income, etc. No single approach seems to overcome all of the constraints that affect the measurement of the economic status or well-being of the microenterprise or household. Finally, it is recommended for using more than one approach to gather information on changes in income of microenterprises or their households. Collection of qualitative information is also recommended as a valuable way to complement and verify quantitative data.

Cohen and Chen (1997) explained their framework for core hypothesis for measuring impact of microfinance at individual level. The framework was based on following broad parameters: material change (income, earning capacity, resources control, basic needs, etc), cognitive change (knowledge, skills, awareness, etc.), perceptual change (self esteem, self confidence, future vision, respect, etc.), relational change (decision making, bargaining power, participation, self reliance, organizational strength, etc.).

Puhazhendi & Badatya (2002) have done a study to assess the impact of microfinance channelised through SHG Bank Linkage programme implemented by NABARD since 1992 in Eastern areas (Orissa, Jharkhand & Chattisgarh) of the country in 2001-2002. The study was based on primary details collected from 115 members in 60 SHGs. The socio-economic conditions of the members were compared between pre and post SHG situations to quantify the impact. The findings of the study concluded that SHG Bank Linkage Programme has made a significant contribution to social and economic improvement of the member households of SHGs.

SIDBI (2008), a national wide longitudinal study was done by SIDBI from 2004-2007 covering 4510 households comprising 3253 client households and 1257 non-client households of 25 MFIs. The study highlighted the benefits received by the client households from their association with microfinance, in terms of expansion of diversification of livelihood activities, growth in employment opportunities, income growth, asset-acquisition, savings, access to loans, reduction in vulnerability and enhancement of women empowerment

Based on the review of literature, the Economic and social indicators to be used for the study are given below:

**Economic Indicators:**

**Social Indicators:**
Self Confidence; 1. Confidence of facing financial crisis 2. Confidence of meeting official people 3. Physical mobility
Social awareness and recognition; 7. Social recognition 8. Social awareness (AIDS, family planning, government schemes etc) 9. Ability to take up social issues like abuse, violence, drugs, alcoholism etc)
3. Objectives of the study

The objectives of the study are given below:

a) to assess the economic empowerment of SHGs due to microfinance intervention

b) to assess the social empowerment of SHGs due to microfinance intervention

c) to assess the overall socio-economic empowerment of SHGS due to microfinance intervention

4. Hypotheses governing the Study are given below:

   a) Null hypothesis (H0): There is no significant improvement in overall economic empowerment index of MFI’s SHG Members after joining the microfinance programme.

   b) Null hypothesis (Ho): There is no significant improvement in overall Social empowerment of MFI’s SHG Members after joining the microfinance programme.

   c) Null hypothesis (Ho): There is no significant improvement in overall Economic and Social Empowerment Index of MFI’s SHG Members after joining the microfinance programme.

5. Methodology adopted for the study

Type of research: The nature of the research used for the study was hypothesis testing research to test the hypothesis formulated for the proposed study.

Universe of Study: The universe study consists of two populations; one for NGOs and the other for individual SHG members. In Manipur, there were about 900 NGOs out of which there were 75 NGOs which were directly associated with microfinance. So, the universe of the study for
NGOs consisted of 75 NGOs. The universe of the individual SHG members were all the SHG members of the NGOs selected for the study.

**Sample Size:** For the purpose of study, only 20 NGOs which is 26 per cent of 75 NGOs which were directly involved in microfinance were considered. So the sample size of NGOs was 20. In all there were 14,988 individual members of 20 NGOs. With the help of sample size determination software, the calculated sample size was found to be 120 SHG members at 8.9 per cent of confidence interval. So the sample size was 120 SHG members.

**Sampling Method:** A multistage sample design was adopted for selecting the sample SHGs and sample SHG members to be interviewed in the survey.

*First stage:* 20 NGOs were selected from 75 NGO’s by using simple random sampling with replacement which comes under Probability sampling method.

*Second stage:* From each of selected NGOs, 3 SHGs were again chosen by using simple random sampling method. Thus, 60 SHGs were taken for the study.

*Third stage:* 2 individual SHG members were selected to be included in the sample by using simple random sampling from each of the 60 SHGs identified. Therefore, in all there were 120 SHG members which were covered under the study.

**Sources of data and data Collection method:** The study was based on both the primary and secondary data. The secondary data were collected from various Government Departments, Financial Institutions, and Banks. The primary data were collected through interview schedule from NGOs and SHGs. Besides interview schedule, focus group discussions and observations method were also used.
**Socio economic empowerment assessment of SHGS**

Socio-economic empowerment index is used for assessing the socio-economic empowerment of SHGs. Socio-economic empowerment index measures relative social and economic profile of SHG members. Change in socio-economic empower index before and after joining the microfinance will indicate overall socio-economic empowerment of SHG members due to microfinance intervention.

*Economic Empowerment Index*

For the purpose of the study, economic empowerment index is rating score of economic parameters measured in terms of household assets, household income, household expenditure, household savings, loan and housing type of the SHG members. It can be expressed as

\[
Economic \, Index \, (En) = \frac{\sum E_i}{\sum E_i(\text{max})}
\]

Where,

\(\sum E_i = \text{ith Economic Indicators}\)

\(\sum E_i(\text{max}) = \text{Maximum scores ith Economic Indicators.}\)

*Social Empowerment Index*

The parameters used for calculating the social empowerment index for the purpose of study are self confidence level, skills, social awareness and recognition and ability to access various public facilities and services. Social empowerment index can be expressed by the following formula:

\[
Social \, Index \, (Sn.) = \frac{\sum S_i}{\sum S_i(\text{max})}
\]

Where,

\(\sum S_i = \text{ith Social Indicators}\)

\(\sum S_i(\text{max}) = \text{Maximum scores ith Social Indicators.}\)
**Combined Socio-Economic Empowerment Index**

The combined social-economic empowerment index is the average weighted index of economic empowerment index and social empowerment index. This index measures the overall socio-economic index of SHG members and the study on change of this index helps in determining the socio-economic impact of microfinance programme on SHG members. For the purpose of study, formula for calculating the combined index of socio and economic empowerment is derived as under:

\[ SEIn = w1Sn + w2En \]

Where,

\[ SEIn = \text{Combine Socio-Economic Empowerment Index} \]
\[ Sn = \text{Social Empowerment Index} \]
\[ En = \text{Economic Empowerment Index} \]

\[ w1 = \frac{\sum S_{i(\text{max})}}{\sum S_{i(\text{max})} + \sum E_{i(\text{max})}} \]
\[ w2 = 1 - w1 \]

\[ w1 = \frac{65}{65+36} = 0.6435 \]
\[ w2 = 0.3565 \]

Therefore,

\[ SEIn = 0.6435 Sn + 0.3565 En. \]

**Data Analysis**

For the summarisation of the data, descriptive statistics is used. For data analysis, socio-economic empowerment index and independent sample t test is used.

**Period of study:** For analyzing the growth of SHG members, primary data was collected during the period 2007-2008. Therefore, the reference year of the study is 2007-08.

**Scope and Limitation of the Study:** The research was restricted to only 20 NGOs and 120 SHG members promoted by NGOs of Manipur. Therefore, the study was limited to only NGOs
& SHGs who were involved in micro-finance activities. The study did not attempt to study other 
organizations or voluntary organizations involved in social development activities. The study did 
not attempt to cover SHGs promoted by other agencies such Banks, Government Agencies, etc. 
Therefore, no attempt was made to generalize the finding for other region or for India as whole.

6. FINDINGS OF THE STUDY

Assessment of Economic Empowerment Index

Scores assigned to different Economic Indicators for preparing Economic Index is given in the 
Table no.-1.

<table>
<thead>
<tr>
<th>Economic Indicators/ Scores</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Max score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Household Assets</td>
<td>Below</td>
<td>Rs.1000</td>
<td>Rs.15,000</td>
<td>Rs.20,000</td>
<td>Rs.25,000</td>
<td>Above Rs.25,000</td>
<td>6</td>
</tr>
<tr>
<td>2. Household Income</td>
<td>Below</td>
<td>Rs.4000</td>
<td>Rs.6000</td>
<td>Rs.8000</td>
<td>Rs.10000</td>
<td>Above Rs.10000</td>
<td>6</td>
</tr>
<tr>
<td>3. Expenditure</td>
<td>Below</td>
<td>Rs.2000</td>
<td>Rs.3000</td>
<td>Rs.4000</td>
<td>Rs.5000</td>
<td>Above Rs.5000</td>
<td>6</td>
</tr>
<tr>
<td>4. Savings</td>
<td>Below</td>
<td>Rs.400</td>
<td>Rs.600</td>
<td>Rs.800</td>
<td>Rs.1000</td>
<td>Above Rs.1000</td>
<td>6</td>
</tr>
<tr>
<td>5. Loan</td>
<td>Below</td>
<td>Rs.4000</td>
<td>Rs.6000</td>
<td>Rs.8000</td>
<td>Rs.10000</td>
<td>Above Rs.10000</td>
<td>6</td>
</tr>
</tbody>
</table>

**TOTAL SCORE** | 36

_Economic Empowerment Index_: It is calculated by using the following expression,

\[
\text{Economic Index} (En) = \frac{\sum E_i}{\sum E_{i(max)}}
\]

Where,

\[
\sum E_i = \text{ith Economic Indicators}
\]

\[
\sum E_{i(max)} = \text{Maximum scores ith Economic Indicators.}
\]
Economic empowerment Index for 120 selected SHGs is calculated from the data of the situations before and after joining the SHGs. The study revealed that the average economic empower index increased before joining the microfinance from 33.65 per cent to 43.54 per cent showing improvement in economic status of the most of the sample SHG members.

### Table no.-2: Average Economic Empowerment (EE) Index

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Joining MFI</td>
<td>120</td>
<td>69.44</td>
<td>16.67</td>
<td>86.11</td>
<td>33.65</td>
<td>13.9524</td>
<td>1.2737</td>
</tr>
<tr>
<td>After Joining MFi</td>
<td>120</td>
<td>69.45</td>
<td>19.44</td>
<td>88.89</td>
<td>43.54</td>
<td>15.7344</td>
<td>1.4363</td>
</tr>
</tbody>
</table>

Further analysis of frequency distribution revealed that number of sample SHG members having economic empowerment index less than 40 per cent has been reduced from 91 (75.83 per cent) to 59 (49.16 per cent) after joining the microfinance programme. Thus, it is observed that microfinance helps in improving the economic empowerment of SHG members.

### Table no.-3: Economic Empowerment Index

<table>
<thead>
<tr>
<th>Economic Index</th>
<th>No of Individual MFI’s SHG Members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before joining MFIs</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Upto 20</td>
<td>9</td>
</tr>
<tr>
<td>20-40</td>
<td>82</td>
</tr>
<tr>
<td>40-60</td>
<td>23</td>
</tr>
<tr>
<td>60-80</td>
<td>4</td>
</tr>
<tr>
<td>80-100</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
</tr>
</tbody>
</table>

*Source: Primary data*
Hypothesis testing is carried out to examine the significant impact on economic empowerment index by comparing before and after situation. The result of the hypothesis testing is presented below.

**Hypothesis testing:**

**Null hypothesis (H₀):** There is no significant improvement in overall economic empowerment index of MFI’s SHG Members after joining the microfinance programme.

**Alternative hypothesis (H₁):** There is significant improvement in overall economic empowerment index of MFI’s SHG Members after joining the microfinance programme.

<table>
<thead>
<tr>
<th>Economic Empowerment Index of SHG Member</th>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td></td>
<td>After – Before</td>
<td>9.8851</td>
<td>6.6569</td>
<td>0.6077</td>
<td>8.6818</td>
</tr>
</tbody>
</table>

*Statistical tool used: SPSS for Window (v.10.0.5)

*Significant at 0.01 level

Since t value is significant at $\alpha = 0.01$ level, the above null hypothesis is rejected and alternative hypothesis is accepted. Thus, it can be concluded that there is significant improvement in overall economic empowerment index of SHG members after joining the microfinance programme.

**Assessment of Social Empowerment Index**

Scores assigned to different Economic Indicators for preparing Economic Index is shown in Table no.-5.
Table no.-5: Score for Social Empowerment Index

<table>
<thead>
<tr>
<th>Social Indicators/Scores</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Max score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self Confidence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Confidence of facing financial crisis</td>
<td>Not at all</td>
<td>Very little</td>
<td>Somewhat</td>
<td>Much more</td>
<td>To a great extent</td>
<td>5</td>
</tr>
<tr>
<td>2. Confidence of meeting official people</td>
<td>-do-</td>
<td>-do-</td>
<td>-do-</td>
<td>-do-</td>
<td>-do-</td>
<td>5</td>
</tr>
<tr>
<td>3. Physical mobility</td>
<td>No Mobility</td>
<td>Seldom/Restricted</td>
<td>Sometimes/Occasional</td>
<td>More/Often</td>
<td>Free and always</td>
<td>5</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Communication skills</td>
<td>Hesitates to talk</td>
<td>Talk only if asked</td>
<td>Sometimes talks</td>
<td>Normally/usually talks</td>
<td>Freely and openly talks</td>
<td>5</td>
</tr>
<tr>
<td>5. Business Skills</td>
<td>Extremely Poor</td>
<td>Poor</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Excellent</td>
<td>5</td>
</tr>
<tr>
<td><strong>Social awareness and recognition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Social recognition</td>
<td>Not at all</td>
<td>Very little</td>
<td>Somewhat</td>
<td>Much more</td>
<td>To a great extent</td>
<td>5</td>
</tr>
<tr>
<td>(AIDS, family planning, government schemes etc)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Ability to take up social issues like abuse, violence, drugs, alcoholism etc)</td>
<td>Submit to oneself</td>
<td>Resist</td>
<td>Lodge complain in the group</td>
<td>Complain to relatives</td>
<td>Warns</td>
<td>5</td>
</tr>
<tr>
<td>10. Respect in the family</td>
<td>Not at all</td>
<td>Very little</td>
<td>Somewhat</td>
<td>Much more</td>
<td>To a great extent</td>
<td>5</td>
</tr>
<tr>
<td><strong>Access to facilities/services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Medical facilities</td>
<td>Extremely Poor</td>
<td>Poor</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Excellent</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL SCORE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>65</td>
</tr>
</tbody>
</table>
Social Empowerment Index: It is calculated by using the following expression

Social Index (Sn.) = \( \frac{\sum S_i}{\sum S_{i(max)}} \)

Where,
- \( \sum S_i = \) ith Social Indicators
- \( \sum S_{i(max)} = \) Maximum scores ith Social Indicators.

Social empowerment Index for 120 selected SHGs is calculated from the data of the situations before and after joining the SHGs. It is found that average social empowerment index increased from 45.16\% per cent to 68.64\% per cent after joining the microfinance programme.

<table>
<thead>
<tr>
<th>Table no.-6: Average Social Empowerment Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Before Joining MFI 120</td>
</tr>
<tr>
<td>After Joining MFi 120</td>
</tr>
</tbody>
</table>

Further, it is found that number of SHG members having social empowerment index above 40 per cent increased from 82 out of 120 sample items (68.33 per cent) to 120 (100 per cent) after joining the microfinance programme. It is observed that there is some improvement in social empowerment index after joining microfinance programme.
Table no.-7: Distribution according to Social Empowerment (SE) Index

<table>
<thead>
<tr>
<th>Social Index</th>
<th>No of Individual MFI's SHG Members Before joining MFIs</th>
<th>After joining MFIs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>Upto 20</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>20-40</td>
<td>38</td>
<td>31.7</td>
</tr>
<tr>
<td>40-60</td>
<td>76</td>
<td>63.3</td>
</tr>
<tr>
<td>60-80</td>
<td>6</td>
<td>5.0</td>
</tr>
<tr>
<td>80-100</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>120</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary data

Paired samples t-test is used to test the hypothesis for establishing the impact on social empowerment index of SHG members after joining microfinance programme. The result of hypothesis testing is shown below:

**Hypothesis testing:**

**Null hypothesis (Ho):** There is no significant improvement in overall Social empowerment of MFI’s SHG Members after joining the microfinance programme.

**Alternative hypothesis (Ha):** There is significant improvement in overall Social empowerment of MFI’s SHG Members after joining the microfinance programme.

Table no.-8: Paired Samples t-Test on Social Empowerment Index

<table>
<thead>
<tr>
<th>Social Empowerment Index of SHG Member</th>
<th>Paired Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
<td>95% Confidence Interval of the Difference Lower</td>
</tr>
<tr>
<td>Before-After</td>
<td>23.47</td>
<td>7.50</td>
<td>0.68</td>
<td>22.11</td>
</tr>
</tbody>
</table>

Statistical tool used: SPSS for Window (v.10.0.5)

*Significant at 0.01 level
Since t value is found significant at $\alpha = 0.01$, the above null hypothesis is rejected and alternative hypothesis is accepted. Therefore, it can be concluded that there is significant improvement in overall social empowerment index of SHG members after joining the microfinance programme.

**Combined Socio-Economic Empowerment Index**

For the purpose of study, formula for calculating the combined index of socio and economic empowerment is derived as under:

\[ SEIn = w1Sn + w2En \]

Where,

- **SEIn** = Combine Socio-Economic Empowerment Index
- **Sn** = Social Empowerment Index
- **En** = Economic Empowerment Index

\[ \begin{align*}
  w1 &= \frac{\sum S_{i(max)}}{\left( \sum S_{i(max)} + \sum E_{i(max)} \right)} \\
  w2 &= 1 - w1 \\
  w1 &= 65/(65+36) = 0.6435 \\
  w2 &= 0.3565 \\

deck

Therefore,

\[ SEIn = 0.6435 Sn + 0.3565 En. \]

Combined Socio=Economic Empowerment Index for 120 selected SHGs are calculated from the data of the situations before and after joining the SHGs by using the above equation of Combined Socio-Economic Empowerment Index.

<table>
<thead>
<tr>
<th>Table no.-9: Avg. Combined Empowerment Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>Before Joining MFI</td>
</tr>
<tr>
<td>After Joining MFi</td>
</tr>
</tbody>
</table>
It is found that the average combined empowerment index increased from 41.06 per cent before joining microfinance to 59.69 per cent showing positive socio-economic impact of microfinance on SHG members.

Table no.-10: Frequency Distribution of Combined Empowerment Index

<table>
<thead>
<tr>
<th>Combined Empowerment Index</th>
<th>No of Individual MFI’s SHG Members Before joining MFIs</th>
<th>No of Individual MFI’s SHG Members After joining MFIs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Upto 20</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>20-40</td>
<td>59</td>
<td>24.6</td>
</tr>
<tr>
<td>40-60</td>
<td>58</td>
<td>24.2</td>
</tr>
<tr>
<td>60-80</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>80-100</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100</td>
</tr>
</tbody>
</table>

It is also found that number of SHG members having combined empowerment index above 40 per cent increased from 61 out of 120 (50.80 per cent) to 120 (100 per cent). It is observed that there is some improvement in majority socio-economic status of SHG members after joining the microfinance programme.

However, in order to confirm this improvement in socio-economic empowerment index, a hypothesis testing is done using paired t-test comparing pre and post situation of microfinance intervention. The result of hypothesis testing is shown below:

**Hypothesis testing:**

**Null hypothesis (Ho):** There is no significant improvement in overall Economic and Social Empowerment Index of MFI’s SHG Members after joining the microfinance programme.

**Alternative hypothesis (Ha):** There is significant improvement in overall Economic and Social Empowerment Index of MFI’s SHG Members after joining the microfinance programme.
It is observed from the above table that the t value of 32.042 is found to be significant at 0.01 level. Hence, null hypothesis is rejected and alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant improvement in overall Economic and Social Empowerment Index of SHG members after joining the microfinance programme.

CONCLUSION

Most of the NGO-MFI's are changing role from social intermediary to financial intermediary by providing various financial services to SHGs such as loan, savings, micro-insurance, etc. It is found that there is a significant improvement in overall economic empowerment index of MFI’s clients after joining the microfinance programme. It is also found that social empowerment index of sample SHG members is significantly increased after joining the microfinance programme.

Further, findings also revealed that there is a significant improvement in overall Economic and Social Empowerment index of MFI’s clients after joining the microfinance programme.
Notes and Reference: