Does microfinance impact on food security and living standard of the poor?

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ABSTRACT

Microfinance across the globe and particularly in India is being practiced as a tool to mitigate poverty. The paper utilizes statistical technique and adequate sample size chiefly as an empowerment tool to uplift the downtrodden. It was uniquely established that Self Help Groups (SHGs) in India have been significantly successful in achieving the objective of economic development of the weaker sections of the society as well as play a significant role in improving the incomes of the weaker sections, thereby ensuring food security besides improving their standard of living.

Key words: Economic development, institutions and growth, microfinance, banking, poverty, cross-sectional analysis, consumption, saving.

JEL Classification: G21, C21, C31, E21, I38, O43, O47, N35

INTRODUCTION

Microfinance has made incredible progress across the globe over a period of years. It has become popular to the poor in view of the varied benefits reaped/receivable from microfinance services by the poor. Self Help Groups (SHGs) have turned out to be the familiar means of development process, encompassing all development programmes. SHG-Bank Linkage Programme in India is considered as the largest microfinance programme in the world in terms of its outreach and hence many other countries are eager to replicate this model. A large number of Self-Help Group Promoting Institutions (SHPIs), all the banking agencies and MFIs are pursuing this programme for the emancipation of the resource poor. This programme is also considered as the foremost contributor towards the Financial Inclusion process in India. The small beginning of linking only 500 SHGs to banks in 1992, had grown to over 0.5 million SHGs by March 2002 and further to 8 million SHGs by March 2012. Together the 8 million SHGs of the poor maintain a balance of over INR6550 crore in the savings bank accounts with the banks, while they are estimated to have harnessed savings of over INR 22000 crore of which nearly 70% (over INR15000 crore) goes for internal lendings (NABARD, 2012).

Even though few studies (Mosley, 1999; Martha Alter Chen and Donald Snodgrass, 1999; Carolyn Barnes and Jennifer Sebstad, 2000; Puhazhendi, 2000; Chen and Snodgrass, 2001; James Copestake, Susan Johnson and Katie Wright, 2002; Stanely Fischer, 2003; NCEAR, 2008) have attempted to quantify the impact of Self Help Groups in general, there has not been a single study reported which has focused exclusively on the impact of SHGs on the weaker sections of the society; women, other Backward Castes (OBCs) and Scheduled Castes and Tribes. In this context, we generate information and analyse to what extent these Self Help Groups have been able to create sustainable impact on the economic lives of the weaker sections of the society mainly in terms of their annual income, food consumption and standard of living.

Microfinance and its relevance

The microfinance industry is going through a period of
rapid scaling up. In each year over the period of 2004 to 2006 the number of borrowers worldwide, according to MIX data, grew at an annual rate of over 20%, and the gross loan portfolio increased above 40%. Especially during the past ten years, these programmes have been in vogue in several developing economies. Amongst the well-known ones are: the Grameen Bank in Bangladesh, Bank Rakatay in Indonesia and Banco Sol in Bolivia. Particularly, the Grameen Bank system of Mohammad Yunus (a system of group lending started in 1976 in Bangladesh), has been widely replicated in other developing countries. According to Daley-Harris, during the period from December 1997 to December 2005 the number of MFIs has increased from 618 to 3,133. The outreach of these MFIs rose from 13.5 mn to 113.3 mn (84% of them being women) (Daley-Harris, 2006). Some observers estimate that there may be around 800 organisations currently providing micro-credit services in India (Ghate, 2006).

In an attempt to improve the effectiveness of efforts at reducing poverty, programs that fall under the broad rubric of “community driven development” (CDD) have recently seen tremendous expansion. The amount of World Bank loans under this category alone is estimated to have increased from US$ 0.3 billion per year in the late 1990s to some US$ 7 billion annually in 2006 (Mansuri and Rao, 2004; Mansuri and Rao, 2007).

Access to finance indeed empowers people, provides them the opportunity to have an account, to save and invest, to insure their homes or to take a loan and in many cases to liberate from the clutches of poverty (Peachey and Roe, 2006). There is growing evidence that an efficient, broad-based financial system offers a powerful momentum for economic growth (Schumpeter, 1912; Hick, 1969).

Amartya (2000) has credibly proved that poverty is not merely inadequate income, rather the lack of adequate range of capabilities (including security and ability to participate in economic and political systems). As a validation this viewpoint, the World Bank’s World Development Report 2000 / 2001 recognized three priority areas for efforts to tackle poverty: (1) promoting economic opportunity, (2) facilitating empowerment and (3) enhancing security. In this pursuit, microfinance has much to offer with its new dimensions in order to reach the unreached and provide hassle free services to the needy.

Microfinance can be defined as the provision of financial services such as deposits, loans, payment services, money transfers and insurance to the poor and financially excluded people to enable them to raise their income and in turn living standards (Rhyne, 2001). Transferring resources to local communities is expected to empower them to take control of their own affairs, improve governance and inclusiveness, build capacity, and increase the efficiency with which resources are used to benefit the target groups (Narayan, 2002).

Today microfinance is a major tool in poverty alleviation and also a major recipient of foreign aid (Roy Mersland 2005). Consultative Group to Assist the Poorest (the apex association of international donors who support microfinance) regards microfinance as “a powerful tool to fight poverty” that can help poor people to “raise income, build their assets and cushion themselves against external shocks” (CGAP, 2004). The initial literature providing the theory behind microfinance and group lending can be traced to early work by Stiglitz (1990) and Varian (1990), Banerjee et al. (1994), Armend_ ariz de Aghion (1999) and Chowdury (2005) who analyzed how joint liability may induce borrowers in a group to screen each other's abilities and monitor each other's efforts, thereby alleviating moral hazard problems.

The prime objective of microfinance is to provide a range of financial services to the needy resource poor. Microfinance according to Stanely Fischer (2003) aims to reduce poverty. According to SFMC Research team of SIDBI (2002), microfinance is only a means, not an end and the ultimate goal is to reduce poverty.

According to Sheokhand (1995), microfinance offers potential advantages to all stakeholders viz., the poor, the NGOs and the banks. The linkage between banks and SHGs with the NGOs as facilitators / financial intermediaries as a mechanism for channeling credit to the poor on a sustainable basis, offers a number of potential advantages. According to Mukherjee (1999), as a methodology, Self-help group (SHG) facilitates the service provider (government, development agencies) to reach the poor communities on a wider scale and at lower costs.

IMPACTS OF MICROFINANCE – LITERATURE REVIEW

Recent literature has found a positive correlation between access to finance, economic growth and poverty alleviation (World Bank, 2008; Honohan, 2004). There is greater consensus however, on the role of microfinance in reducing vulnerability. The provision of microfinance has been found to strengthen crisis-coping mechanisms, diversify income-earning sources, build assets and improve the status of women (Hashemi et al., 1996; Montgomery et al., 1996; Morduch, 1998; Zaman, 1998). One of the first comparative studies addressing effects of microfinance using quasi-experiments was Hulme and Mosley’s (1996) Finance against Poverty, bringing a new critical voice to the debate by showing the limitations of microfinance in bringing about poverty alleviation. Subsequently, more and more quasi-experimental and regression based analyses have followed (Pitt and Khandker, 1998; Khandker, 2003). More recently, randomized controlled designs have been used to assess particular aspects of microcredit activities (Giné and Karlan, 2008).

Useful overviews are also given by Weiss and Montgomery (2004), who summarise the evidence for the microfinance industry in Asia and Latin America, and Lafourcade et al. (2005) who focus on microfinance...
institutions in Africa. This literature provides mixed evidence, especially regarding depth of outreach. Some of the studies indicate that it is the “better off poor” rather than the “starkly poor” that stand to benefit most. Evidence for this is given in Hulme and Mosley (1996) and Copestake et al. (2005). Other studies, like Khandker (2005) and EDA Rural Systems (2004), find that the extremely poor benefit more from microfinance than the moderately poor.

The existing literature on SHG–bank linkage programme reveals an overall picture of great promise on the socioeconomic well being of the members’ households (Puhazhendi and Satyasai, 2000; Puhazhendi and Badatya, 2002; Moyle et al., 2006; EDA Rural System and APMAS, 2006) discussed mainly various socio-economic parameters of SHG members related to the situation during pre-SHG and post-SHG periods. Applying a quasi-experimental design to 1991-92 data, Pitt and Khandker (1998), concluded that microcredit boosts household consumption, particularly when lent to women. Further, Khandker (2005) applying panel methods (using a 1999 resurvey) concludes that microcredit benefits the ‘very poor’ even more than the ‘moderately poor’. According to a study by SIDBI (2008), while 76% of the poor were able to increase their income through MFI assistance, 66% improved their food consumption and 77% could provide better educational facilities to their children.

Bruhn and Love (2009) have recorded a rise in informal business and employment which led to an increase in income on an average of about 7%. Deininger and Liu (2008) state according to their results that by helping to improve consumption and nutritional status of the poor, a CDD program can benefit the poor even in the absence of measurable impacts on income and asset accumulation. Karlan and Zinman (2006) report a robust link between consumer credit and household welfare.

The impact on poverty reduction was reviewed by Morduch and Haley (2002) in India, Mosley (1999) in Bolivia and Khandker (2005) in Bangladesh find a greater impact on poverty for low-income households. Aroca (2002), reports a more favourable impact on income for Bank clients, than NGOs. Evidence from India by Mosley (1999) indicates that improvements in income are greater for clients who get their income from trade and in Bolivia; clients with nonagricultural enterprises saw their income increase more sharply. Chen and Snodgrass (2001) in India is the only report that assesses the impact of savings, not only credit. The results show that savings have a greater impact on poor households which are particularly vulnerable to economic shocks. For these households savings appear to be a more effective tool than credit to manage crises. Mosley (1999) in Bolivia argues that in less poor households, micro-credit impact increases employment.

Microfinance has the latent propensity to have influencing impact on women’s empowerment. Microfinance, although, is not all the time empowering for all women, most women do experience certain degree of empowerment. Undoubtedly, women need and profit from microfinance. In view of this, microfinance which provides Access to credit can be the only appropriate input required to launch women on the road to empowerment. Srinivasan (1995) illustrates that, realization of the poor women that they can take charge of their lives is a more significant gain of the SHGs. The confidence of the women that they can deal with external and modern institutions besides the feeling that they have competence to access and use finance and resources is another important gain. Further, she opines that access to financial resources is important for the development of poor women.

Stanley Fischer (2003) observes that not only can microfinance help people emerge from poverty, but also can be an effective strategy to reach other Millennium Development Goals, mainly those relating to improving health outcomes for women and children, and empowering women. Progress in these areas can be sustainable only when the households have enhanced earnings and better control over financial resources. Copestake et al. (2002) emphasize that microfinance services contribute to development by adding value (benefits to society exceed costs). They state that the key equation is whether costs of provision are less than the benefits (net of transaction costs) to clients. If they are, then business is possible, with benefits shared between provider and user according to the price that is struck between them. The scope for business can be enhanced by lowering the cost of provision of the services, as well as by developing new products that better serve the needs of clients.

Meyer (2001) observes that microfinance can contribute to poverty alleviation and food security. It does this through supplying loans, savings and other financial services that enhance investment, reduce the cost of self-insurance, and contribute to consumption smoothing. India has expanded microfinance, but it has not yet developed a strong system capable of serving massive numbers of poor in a sustainable fashion. Undoubtedly, the legacy of directed credit with its top-down approach to lending and the prevalence of highly subsidized state and national poverty projects and programmes retard the development of true market-oriented rural microfinance. The policy of supporting SHG linkages with banks has merit in a country with a large bank network, but it should not be the only model encouraged. Additional efforts are needed to create and nurture competitive MFIs willing to experiment with other models.

Puhazhendi and Satyasai (2000) have observed that SHG–bank linkage programme has significantly contributed to the improvement in savings, assets, income levels and social conditions of the rural people. Puhazhendi (2000) describes the significant impact of SHGs on social empowerment, empowerment of women, employment generation, credit absorption, new income generating activities, savings pattern etc, in his study of SHGs in the
state of Tamilnadu. Further, he opines that the creation of income generating assets / activities through loans availed from banks has made significant impact on the overall economic status of the group members. He also points out that there is a positive impact of employment generation on 40 percent of the group members who had undertaken income generating activities. Puhazhendi and Badatya (2002) have made a study of impact assessment of the SHG-bank linkage programme in India. The study compared the socio-economic conditions of 115 members in 60 SHGs during pre and post SHG situations to quantify the impact. Significant increase was observed in the mean annual savings, asset structure, average annual net income, average loan per member, overall repayment percentage and employment per sample households. Remarkable improvement was observed in the economic empowerment of SHG members in terms of self-confidence, better communication and involvement in decision-making etc.

Chen and Snodgrass (1999), in their study "An Assessment of the Impact of Sewa Bank in India: Baseline Findings" observe that participation in micro enterprise services leads to an increase in the level of household income. According to their study, the average income of borrower households was higher (by 39%) than the average for non-member households. Further, they have observed that participation in micro enterprise services leads to an increase in expenditures on food, especially among the very poor. Average daily expenditure on food was reported to be Rs. 61 per day per household, equivalent to Rs. 1,830 per month. This represents 53% of reported monthly household income (Rs. 3,460). The percentage is plausible, since low-income households worldwide typically spend half or more of their income on food, and suggests that income and food expenditure have been measured with reasonable consistency. Average daily expenditure on food in borrower households, at Rs. 68 is 21% higher than in control households. Barnes and Sebstad (2000) have presented useful guidelines intended to guide the planning, design and conduct of microfinance impact assessments that are credible, useful, and cost effective. They cover both qualitative and quantitative impact assessment methods and highlight the potential role of each.

A very recent study in India by NCEAR (2008), found 25.3 percentage points net reduction in poverty of the households who were living below the poverty line, a significant drop from 58.3 per cent at the base level to 33 per cent in 2006. The study found that SHG-Bank Linkage programme has influenced the consumption pattern of member households. The average annual growth rate of consumption expenditure on food items registered an increase of 5.1 per cent and with 5.4 per cent higher for non-food items. The average annual growth rate of expenditure on food and nonfood was thus higher than 5 per cent respectively at the All-India level (six States).

Thus, the growth in the microfinance sector has prompted a large number of academic empirical studies examining different aspects of the industry. These studies have implications for the design of microfinance programmes as well as broader issues relating to the structure and regulation of the sector.

Statement of the problem

Microfinance has made incredible progress in India over a period of years. It has become popular as well as familiar to the poor in view of the varied benefits reaped/receivable from microfinance services by the poor. Self Help Groups (SHGs) have turned out to be the familiar means of development process, converging all development programmes. SHG-Bank Linkage Programme is considered as the largest microfinance programme in the world in terms of its outreach and hence many other countries are eager to replicate this model. A large number of Self-Help Group Promoting Institutions (SHPIs), all the banking agencies and MFIs are pursuing this programme for the emancipation of the resource poor. This programme is also considered as the foremost contributor towards the Financial Inclusion process in India. According to Status of Microfinance in India - 2008-09 published by NABARD, there are more than 61 lakh saving-linked SHGs as on 31 March 2009 and of them more than 42 lakh are credit-linked SHGs and thus, programme has covered about 8.6 crore poor households.

Even though few studies have been conducted to quantify the impact of Self Help Groups in general, there has not been a single study reported which has focused exclusively on the impact of SHGs on the weaker sections of the society; women, other backward castes (OBCs) and Scheduled Castes and Scheduled Tribes. In this context, it is desirable to generate information and analyse to what extent these Self Help Groups have been able to create sustainable impact on the economic lives of the weaker sections of the society mainly in terms of their annual income, food consumption and standard of living.

Objectives of the study

It is generally felt that there have been perceptible changes in the living conditions of the rural poor mainly on economic side and relatively on social side owing to the role of Self Help Groups. Also, it is widely believed that SHGs have had a positive impact on the poverty levels and standards of living of the poor and more particularly on the economic empowerment of women. It is with this conceptual background that this detailed study has been undertaken to find out the economic impact of the Self-Help Groups on food security and non-food consumption of the weaker sections of the society.

In the light of this, the following are the objectives of the study:
1) To evaluate the impact of Self Help Groups on the income levels of the weaker sections of the society.
2) To assess the impact of Self Help Groups on the food security of the weaker sections of the society.
3) To measure the impact of Self Help Groups on Non-food consumption (standard of living) of the weaker sections of the society.

For the purpose of this study, weaker sections of the society include; women, other backward castes (OBCs) and scheduled castes and scheduled tribes

**Hypothesis**

This impact study intends to explore the following hypothesis:

**Hypothesis**: Self Help Group approach combined with other supportive interventions (like non-financial services, social mobilization, and other forms of social protection) has greater impacts on the weaker sections of the society mainly such as; Women, Other Backward Castes(OBCs) and Scheduled Castes and Scheduled Tribes in India which constitute significant population.

**Study area**

In India, southern region has dominated the SHG-bank linkage programme since the launch of the Pilot project to link SHGs with banks. In terms of cumulative number of SHGs linked with banks, Karnataka has been among the top three, the other two being Tamil Nadu and Andhra Pradesh. In Karnataka state, Shimoga has led the way in the formation and linkage of SHGs with banks. Shimoga district has been among the front running districts in the state of Karnataka in the SHG-bank linkage programme. The district provides an ideal region to undertake the study in view of the diverse culture, climate encompassing the maidan region (temperate plain region) consisting of Shikaripura, Soraba, Shimoga and Bhadravathi blocks and malnad region (hilly forest region) consisting of Thirthahalli, Sagara and Hosanagara blocks endowed with majestic Sahyadri hill ranges and thick forest cover.

In terms of SHGs linked with bank credit among the districts in the state of Karnataka, **Shimoga district with linkage of 5554 SHGs stands 13th** with a share of 9%. As at March 2008 (the reference period), in Shimoga district there were in all 4621 SHGs of which 2755 SHGs were linked with bank loans. Some of the salient features of the district which prompted us to select this district as **study area** are; **Shimoga district** has the distinction of having 2755 SHGs linked to the banks under linkage programme with cumulative bank loan disbursed up to Rs. 83.91 Crores by March 2008. The pioneer to the linkage programme erstwhile Sahyadri Gramin Bank with head office at Shimoga has linked 1420 SHGs with cumulative bank loan of Rs. 55.04 Crores by March 2008. The district provides an ideal region to undertake the study in view of the **diverse culture, climate and people**. The district has good mix of quite old and new SHGs ranging from 12 years to 1 year old. Apart from the erstwhile Sahyadri Gramin Bank, **about 15 to 20 NGOs** are actively engaged in SHG formation and linkage programme. The State Government Sponsored ‘Stree Shakti’ SHG programme for women has been catching up in a big way with the formation of more than 500 SHGs during last year. Therefore, Shimoga district was selected as a study region since all the indicators are very well stabilized.

**Reference period**

The Self Help Group promotion movement has gathered momentum since 1998 and there has been phenomenal rise in the number of SHGs due to the active support of banks, NGOs, Government Organisations and Non Government Organisations. For the purpose of study it is decided to consider a ten year period upto 2008 as a suitable period for the study. Accordingly, March 2008 has been reckoned as the reference period as the subject study was also commenced during this period.

**METHODOLOGY AND RESEARCH DESIGN**

To investigate the proposed objectives and verify the hypothesis at field level, a sample survey was undertaken following multi-stage purposive random sampling design in selection of SHGs in the study area. Factual opinions were collected from the participating functionaries of the programme such as Banks, Government Departments, NGOs and the common public. A combination of both the analytical and descriptive design was employed for the present study. In the following section some of the approaches employed towards data collection aimed at maximizing the accuracy of the study are elaborated.

**Approaches to data collection**

A planned approach has been employed for data collection so that the facts that are near to reality and free from aberrations are elicited for impact evaluation. The data were obtained from primary as well as secondary sources. The primary data were collected by conducting a survey. The secondary data were collected from the NABARD’s publications, Banks’ publications and other Governmental/Non-Governmental Organizations’ publications. The primary data were obtained by administering a pre-tested schedule designed for the study. Wherever necessary, the collected data from both the primary and secondary sources have been compiled and presented in the form of tables and charts to make the presentation of the study...
more impressive. Some of the methods employed for the purpose of data collection are; Observation method, Questionnaire method, Mailed Questionnaire method and Telephone Interview.

Selection of good indicators

Majority of indicators included in the study are “impact” indicators that establish criteria to measure the impact of the SHGs on the development of rural economy. For quantification of impacts, some of the indicators employed for impact assessment in the subject study include the following factors at the individual level in case of member of SHG; Monthly income – before and after SHG intervention, Annual income - before and after SHG intervention, Per Family Food Expenses (PFF Expenses) - before and after SHG intervention and Per Family Non Food Expenses (PFNFE) - before and after SHG intervention.

Further, some of the indicators employed for quantification of impacts in the subject study include the following factors at the SHG activity / programme level in the district: (i) Participation of Women and Men and (ii) Participation of Social Classes – SC/ST, OBC and GEN categories. The selection of indicators is based on experience of the researcher in the field of microfinance, standard approaches in impact evaluation, available information, and to a degree, common sense. The selected indicators are considered in view of their following characteristics: validity, reliability, relevance, technically feasible, usability, sensitivity, timeliness, cost-effectiveness and ethical. Questionnaire designed with 29 parameters enabled one to quantify the impacts through the questionnaire method as it is primary data originated directly from the sample groups and their members during the field visits.

Statistical technique employed for analysis

Quantification of the impacts for before and after impact situations of any intervention is normally attempted using the most popular statistical tool, that is, Paired-Sample T-Test. The Paired-Samples T-Test procedure is used to test the hypothesis of no difference between two variables. It computes the differences between values of the two variables for each case and tests whether the average differs from 0. Accordingly Paired-Samples T-Test has been used here to determine whether there is statistically significant difference between the income levels, food and non-food expenses, production and asset creation levels, savings mobilization and credit off-take levels, interest rates on borrowings and credit-savings ratio levels of the members of the SHGs: before and after the intervention of SHG approach. Further, appropriate arithmetical techniques were also used for quantification of the results of the analysis in the study. In order to make an impact assessment study involving huge size of the target population, it is very much required on the part of the researcher to employ a most suitable statistical tool for sampling. The sample design and the sampling technique selected for the study are explained briefly in the succeeding section.

Sample design and choice of sampling technique

For the subject study, all the Self Help Groups in Shimoga district constitute the relevant population. The Sampling frame constitutes the broad account of units of population i.e. different sets of SHGs in the district and it was adequately constituted to be a perfect frame that identifies each element only once. Proportionate Stratified Random Sampling technique has been selected keeping in view purpose of the study, measurability, degree of precision, information about population, the nature of the population, geographical area of study, size of population, financial resources, time limitations and economy. Proportionate Stratified Random Sampling involves drawing a sample from each stratum in proportion to the latter’s share in the total population in order to give proper representation to each stratum thereby increase the statistical efficiency. In this method, in view of the diverse nature of data, the population was sub-divided into homogeneous groups or strata, and from each stratum, random sample is drawn. Stratification is necessitated in order to increase the sample’s statistical efficiency, providing adequate data for analysing the various sub-populations and applying different methods to different strata. Further, this has ensured representation to all relevant sub-groups of the population. Stratification of SHGs in the district has been made on the following lines; Block wise, Gender wise, Category wise, Age wise, Size wise, Activity wise, Performance wise, Rate of Interest wise and Repayment wise. Multi-staging of the population of SHGs is made into block levels and then into different parameters of significance. Size of the sample was adequate and representative in order to provide sufficiently high precision. It is believed that the larger the sample size, the higher is the precision.

Master sample frame

In order to understand the trends of organisation of groups according to the social classes the groups were broadly classified as SC / ST, OBC and General. SC / ST mean those groups which consist more number of members belonging to Scheduled Castes and or Scheduled Tribes categories. OBC mean those groups, which consist more number of members belonging to Other Backward Classes. General
Table 1. Master Sample frame (Annexure 1)

<table>
<thead>
<tr>
<th></th>
<th>Bhadravathi</th>
<th>Hosanagara</th>
<th>Sagara</th>
<th>Shikaripura</th>
<th>Shimoga</th>
<th>Soraba</th>
<th>Thirthahalli</th>
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<td>3</td>
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<td>OBC</td>
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<td>GEN</td>
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Table 2. Classification of sample groups according to master sample frame (Annexure-2)

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<td>OBC Groups</td>
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<td>3</td>
<td>General Groups</td>
<td>269 Groups</td>
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</tbody>
</table>

(indicated in the table and elsewhere in the study as GEN) mean those groups, which constitute more number of members belonging to those classes other than those mentioned above. Master Sample frame in Table 1 (Annexure 1) presented here has been finalized after considering the above mentioned dimensions of SHGs and keeping in mind the various criteria such as the purpose, measurability, degree of precision, size of the population, time limitations and the nature of the SHGs. Table 2 (Annexure 2) explains the number of groups accounted in the sample frame according to the social classes that were studied, the impact on weaker sections of the society in India.

Research limitations

Measuring the impact of microfinance institutions and policies on the dimensions of poverty and related aspects precisely is technically intricate and expensive (De Aghion and Morduch, 2005; Khandker, 1998; Morduch, 1998; Sebstad and Chen, 1996). This research has limitations that are ought to be taken into consideration. First, similar to previous studies about the impact evaluation of SHGs, it is very difficult to construct a statistically representative sample given the large size of the population (No. of SHGs in the area) and its geographic extension. However, in order to mitigate this limitation to an extent, Proportionate Stratified Random Sampling was employed involving a sample size of 555 SHGs, which accounts for about 12% of the population of the sample. Secondly, this study countenances the difficulties similar to previous researches regarding the exactness or accuracy of the
data that are not systematically collected by the implementing agencies. For example, banks, Government Departments and most NGOs do not collect information about the longevity of SHGs, which is the best indicator for their sustainability. Finally, this study believes that the obvious factors of economic impact on rural development such as the role of Government, the effect of inflation and resource endowment in the study area are limited or the same when compared to the pre-SHG situation and the post-SHG situation. This assumption is prompted by the most popular understanding that SHGs have had a lasting impact on the economic living of the poor in the area and dominate the other variables of analysis for economic development.

RESULTS AND DISCUSSION

The key to the success of a development programme is its effectiveness in bringing about the desired change in the lives and livelihoods of the participants or the target groups it is intended to benefit. Impact Evaluation is helpful in ascertaining the effectiveness of the development programme. Impact Evaluation can be defined as a systematic analysis of the lasting changes – positive or negative, intended or not – in people's lives brought about by an action or a series of actions. For Impact Evaluation, the study has considered a host of factors like; (1) Impact on income levels (2) Impact on food security and (3) Impact on non-food expenses.

Analysis of income levels of members of SHGs: Before and after intervention of SHG approach

The null hypothesis (H0)

There is no significant difference between the mean values of the two variables annual income before (AIB) the formation of SHGs and annual income after (AIA) the SHG impact.

The alternative hypothesis (Ha)

There is a significant difference between the two variables annual income before (AIB) the formation of SHGs and annual income after (AIA) the SHG impact (Table 3).

The result of the analysis indicates that the null hypothesis is rejected at 1% significance level and hence the alternative hypothesis that there is statistically significant difference between the mean values of the two variables AIB and AIA was accepted (Table 4).

As a matter of fact, from the analysis the performance of OBC category Groups have outperformed the others in terms of growth in annual incomes. While the OBC Groups have registered 78% growth in annual incomes by expanding from an average level of Rs. 8013 to Rs. 14257, the SC/ST Groups registered a growth of 69% in annual incomes by increasing from an average level of Rs. 7687 to Rs. 13028. Similarly the General Category Groups also registered a growth of 69% in annual incomes by increasing from an average level of Rs. 8149 to Rs. 13750. This result was further justified by the field observations that there is an increase in the annual incomes of the members of the SHGs after the impact of SHG. Also, this supported the views expressed by the members of SHGs contacted during the visits and by the experts in microfinance as well as NGOs and bankers involved in the SHG activity. Further, the outcome of the analysis generalizes our observation that there is a significant improvement in the income levels of the members of the SHGs in Shimoga district. Increase in mean annual income was 72%, that is from Rs. 8005 in pre-SHG situation to Rs. 13750 after SHG impact. Puhazhendi (2000, p 4) also found similar kind of significant changes in members annual incomes in his study. AIMS study on the SEWA Bank by Chen and Snodgrass (1999) also found that the average income of borrower households was higher (by 39%) than the average for non-member households. NCEAR (2008) study also found a similar drop of poverty level from 58.3% at base level to 33%.

Impact on food security

One of the important dimensions of development is provision of adequate food for the poor. Provision of food indicates the adequate supply of food to the needy. It is thus one of the parameters of indicators of standard of living. In this background, attempt was made to analyse the trends of

<table>
<thead>
<tr>
<th>Table 3. Paired samples statistics for analysis of annual incomes of 555 sample groups - before and after SHG intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Pair 1 AIA</td>
</tr>
<tr>
<td>AIB</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Paired samples Test</th>
<th>Std. Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 AIA - AIB</td>
<td>3250.127</td>
<td>41.640</td>
<td>554</td>
<td>.000</td>
</tr>
</tbody>
</table>
Table 4. Results of the annual Income analysis of different sample categories.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Sample Category</th>
<th>Average Level Before Intervention of SHG Approach (A)</th>
<th>Average Level After Intervention of SHG Approach (B)</th>
<th>Improvement in Percentage terms B-A * 100 A (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SC / ST Groups (129 Groups)</td>
<td>Rs 7687</td>
<td>Rs 13028</td>
<td>69</td>
</tr>
<tr>
<td>2</td>
<td>OBC Groups (157 Groups)</td>
<td>Rs 8013</td>
<td>Rs 14257</td>
<td>78</td>
</tr>
<tr>
<td>3</td>
<td>General Groups (269 Groups)</td>
<td>Rs 8149</td>
<td>Rs 13750</td>
<td>69</td>
</tr>
</tbody>
</table>

Table 5. Paired samples statistics for analysis of per family food expenses of all 555 sample groups.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 FEA</td>
<td>8215.74</td>
<td>555</td>
<td>3034.317</td>
<td>128.800</td>
</tr>
<tr>
<td>Pair 1 FEB</td>
<td>4849.05</td>
<td>555</td>
<td>1448.861</td>
<td>61.501</td>
</tr>
</tbody>
</table>

Paired samples test

<table>
<thead>
<tr>
<th></th>
<th>Std. Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 FEA - FEB</td>
<td>2052.623</td>
<td>38.640</td>
<td>554</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 6. Results of the analysis of per family food expenses of different sample categories.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Sample Category</th>
<th>Average Level Before Intervention of SHG Approach (A)</th>
<th>Average Level After Intervention of SHG Approach (B)</th>
<th>Improvement in Percentage terms B-A * 100 A (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SC / ST Groups (129 Groups)</td>
<td>Rs 4670</td>
<td>Rs 7710</td>
<td>65</td>
</tr>
<tr>
<td>2</td>
<td>OBC Groups (157 Groups)</td>
<td>Rs 4779</td>
<td>Rs 8367</td>
<td>75</td>
</tr>
<tr>
<td>3</td>
<td>General Groups (269 Groups)</td>
<td>Rs 4970</td>
<td>Rs 8362</td>
<td>68</td>
</tr>
</tbody>
</table>

Per Family Food Expenses of the members of the SHGs.

**The null hypothesis (H0)**

There is no significant difference between the two variables Food Expenses Before (FEB) the formation of SHGs and Food Expenses After (FEA) the SHG impact.

**The alternative hypothesis (Ha)**

There was a significant difference between the two variables Food Expenses Before (FEB) the formation of SHGs and Food Expenses After (FEA) the SHG impact (Table 5).

The result of the analysis indicates that the null hypothesis is rejected at 1% significance level and hence the alternative hypothesis, that there is a statistically significant difference between the mean values of the two variables FEB and FEA was accepted (Table 6).

It is evident from the analysis that the OBC category Groups have increased their Spending for Food Provisions than the other Category Groups. While the OBC Groups have registered 75% escalation in Food Expenses per annum by expanding from an average level of Rs. 4779 to Rs. 8367, the SC/ST Groups registered an increase of 65% by increasing from an average level of Rs. 4370 to Rs. 7710 and similarly the General Category Groups also registered an increase of 68% by increasing from an average level of Rs. 4970 to Rs. 8362. This result was further confirmed by the fact that there is an increase in the Food Expenses of the members of the SHGs after the impact of SHG as was observed during the field visits. Also, this was endorsed by the views of the members of SHGs contacted during the visits and microfinance experts such as NGOs and bankers involved in the SHG activity. Further, the outcome of the analysis generalizes our observation that there is a significant improvement in the income levels of the members of the SHGs in Shimoga district. The mean value of the per family food expenses has increased from Rs. 4849 in pre-SHG situation to Rs. 8216 after SHG impact registering an improvement to the extent of 69.41%. It is
Table 7. Paired samples statistics for analysis of per family non-food expenses of all 555 sample groups.

<table>
<thead>
<tr>
<th>Pair 1</th>
<th>NFEA 6228.26</th>
<th>555</th>
<th>3573.426</th>
<th>151.683</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFEB</td>
<td>3595.82</td>
<td>555</td>
<td>1581.499</td>
<td>67.131</td>
</tr>
</tbody>
</table>

Paired samples test

| Std. Deviation t df Sig. (2-tailed) |
|------------------------------------|--|--|------------------|
| NFEA - NFEB 2983.709 20.785 554 .000 |

Table 8. Results of the analysis of per family non-food expenses of sample categories.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Sample Category</th>
<th>Average Level Before Intervention of SHG Approach (A)</th>
<th>Average Level After Intervention of SHG Approach (B)</th>
<th>Improvement in Percentage terms B-A * 100 A (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SC / ST Groups (129 Groups)</td>
<td>Rs. 3469</td>
<td>Rs. 6008</td>
<td>73</td>
</tr>
<tr>
<td>2</td>
<td>OBC Groups (157 Groups)</td>
<td>Rs. 3553</td>
<td>Rs. 6188</td>
<td>74</td>
</tr>
<tr>
<td>3</td>
<td>General Groups (269 Groups)</td>
<td>Rs. 3685</td>
<td>Rs. 6352</td>
<td>72</td>
</tr>
</tbody>
</table>

desirable to mention here that AIMS study by Chen and Snodgrass (1999), also found that average expenditure on food in borrower households was 21% higher than in control households. Puhazhendi (2000) found similar kind of impact on food expenditure. Similarly, NCEAR (2008) study also found 5.1% increase in food expenditure.

Impact on non-food expenses (standard of living)

In addition to the provision of food for the poor, it is also vital that the poor spend for other Non-Food Expenses in order to make a reasonable Standard of Living. The Non-Food Expenses largely account for expenses towards health, education, day-to-day expenses of home making and quality of life etc. It is in this background that the analysis of the impact of SHGs on the Non-Food Expenses of the members of the SHGs is attempted here.

The null hypothesis (H0)

There is no significant difference between the two variables, Non Food Expenses before (NFEB) the formation of SHGs and Non Food Expenses after (NFEA) the SHG impact.

The alternative hypothesis (Ha)

There is a significant difference between the two variables Non Food Expenses before (NFEB) the formation of SHGs and Non Food Expenses after (NFEA) the SHG impact (Table 7).

The result of the analysis indicates that the null hypothesis was rejected at 1% significance level and hence the alternative hypothesis that there is a statistically significant difference between the mean values of the two variables NFEB and NFEA was accepted (Table 8).

Analysis of impact with reference to social classes

It is evident from the analysis that the OBC category Groups have increased their spending for Non-Food Expenses than the other Category Groups. While the OBC Groups registered 74% rise in Non-Food Expenses per annum by going up from an average level of Rs. 3553 to Rs. 6188, the SC/ST Groups registered an increase of 73% by increasing from an average level of Rs. 3469 to Rs. 6008. Similarly the General Category Groups also registered an increase of 72% by increasing from an average level of Rs. 3685 to Rs. 6352. This result further vindicated the fact that there is a considerable increase in the non-food expenses of the members of the SHGs after the impact of SHG as was observed during the field visits. Moreover, the views expressed by the members of SHGs contacted during the visits and the experts in microfinance such as NGOs and bankers involved in the SHG activity confirm the result. Furthermore, the outcome of the analysis generalizes our observation that there is a significant rise in the non-food
expenses levels of the members of SHGs in Shimoga district. The mean value of per family non-food expenses has increased from Rs. 3596 in pre-SHG situation to Rs. 6228 after SHG impact, thus registering an improvement to the extent of 73.24%. Similarly, NCEAR (2008) study also found 5.1% increase in food expenditure.

**Outreach of impact of SHGs on weaker sections**

One of the important dimensions of a successful development intervention is the Outreach of its impact. The typical beneficiaries of SHG are low-income persons who are deprived of the access to formal financial institutions. Microfinance clients are poor and vulnerable and also to some extent, those non-poor who have a rather comparatively stable source of income. In the Indian context, socially depressed classes form the significant proportion of the beneficiaries of SHG-bank linkage approach. It is in this background that this analysis was made, as to how the SHG approach benefits the Women, SC/STs and the OBCs and has made impressive outreach. There is significant outreach of impact of SHGs in terms of physical as well as qualitative factors on the socially weaker sections of the society such as Women, SC/STs and OBC Category of the poor. While the Women constitute a whopping 92% of the sample SHGs in the study area, the SC/STs constitute 23% and the OBCs constitute 28.30%. Further, the economic impact of the SHGs on the above said weaker sections of the society is presented in Table 6.

Thus, from the results of the analysis presented in Table 6, it can be opined that the weaker sections have considerably benefited from the SHG activity as the above said economic indicators explain meaningful improvements in their economic living.

**Conclusions**

Empirical experiences worldwide have revealed that microfinance particularly in the form of Self Help Group approach is most suited for sustainable rural development through the participation of the stakeholders at all levels. Amidst several failures of rural development efforts by the government, Self Help Group approach in India is being used as a developmental intervention in order to address the problems of rural Indias such as rural indebtedness, under-employment, unemployment, lack of asset creation, low productivity levels, inadequate food security, low standards of living, socio-economic inequities, lack of hygiene and sanitation, illiteracy, blind beliefs, issues of gender inequality and others so as to attain economic development of the country through rural development. SHGs reduce poverty and vulnerability of the poor by increasing capital / asset formation at the household level, improving household and enterprise incomes, enhancing the capacity of individuals and households to manage risk, increasing enterprise activity within households, expanding employment opportunities for the poor in non-farm enterprises, empowering women, and improving the accessibility of other financial services at the community level.

**Coverage of weaker sections**

According to social classification, the coverage of the weaker sections (Scheduled Castes / Scheduled Tribes and backward classes) worked out was 63%. The coverage of these categories was more pronounced in NGO groups. According to the size of the groups, the percentage of 10-15 size groups to the total groups constituted about 83% and the percentage of 16-20 size groups to the total groups constituted about 17%. According to gender of the groups, the women groups constituted about 90%, men groups 8% and the remaining mixed groups about 2%. According to age of the groups, 1 to 2 years old groups constituted about 30% and 3 to 5 years old groups constituted about 40%, 6 to 10 years old groups constituted about 20% and the groups of age above 10 years accounted for about 10%.

**Impact on income levels**

The impact was 73% among women groups, 69% among SC / ST groups and 78% among OBC groups.

**Impact on food security**

The impact on per family food expenses due to SHGs was 70% in the women groups; 65% in the SC / ST groups and 75% among the OBC groups.

**Impact on standard of living**

SHGs impact on per family non-food expenses was 73% in the case of the women groups, 73% in SC /ST groups and 74% among the OBC groups.

**Outreach impact of SHGs on weaker sections**

There is a significant outreach impact of SHGs in terms of physical as well as qualitative factors on the socially weaker sections of the society such as Women, SC/STs and OBC category. Even in terms of the impact parameters, the impact of SHGs on weaker sections was significant.

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