__Final Report__

Sustainability of Self-help and Joint-liability Group Institutions under Micro-finance

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Executive Summary

Section 1: Background of the Study

1. India being a large developing country with huge pockets of poverty became an important abode of micro-finance. In spite of having a fairly large network of micro-finance in the country and elsewhere, which has been there for quite some time, statistically rigorous results clearly confirming or rejecting the positive impacts of micro-finance on the poorer sections of the community, and especially the main target group of womenfolk, are few and far between. Naturally, the question of sustainability of micro-finance institutions (MFIs) repeatedly crops up among academicians, practitioners and policy makers around the issues of sustainability and its definition in operational terms. The present study is an attempt to fill in that gap.

Section 2: Objectives

2. The precise objectives of the study are:

1. To provide a review of the literature on micro-finance impact and the methodologies applied therein;
2. To analyse available secondary source data and to undertake selected case studies based on interaction with national and state level policy making bodies to bring out the stylized facts, features and trends in this sector;
3. To bring out factors contributing to or inhibiting sustainability of individual households, groups and even promotional agencies (if relevant data are available) based on primary data; and
4. To provide a road map to achieve sustainability in the true sense of the term.

Section 3: Major Points arising from Review of Literature *(Chapter 2)*

3. Review of the literature on impact of microfinance seems to suggest that the impacts are highly context-specific as it varies widely from study to study. Nevertheless, this literature has done great job by summing up the problems identified in the existing approaches about data and methodology used.

4. Although there is a general belief in the internal validity and credibility of randomized control trial (RCT) based findings, such studies don't seem to provide credible evidence in a timely and useful manner' from policy point of view. The pipeline design, on the other hand, generally suffers from non-random allocation and failure to have comparable control groups and drop-outs.

The third approach of using panel or cross section data before/after and with/without seems to have perused in many cases non-random allocations with the resulting risk of confounding selection and the program placement bias. Although elaborate analytical methods are used to compensate for the above-stated weaknesses in the research methodology, certain fundamental defects seems to have remained.

5. In view of the above-stated critique of the methodology used, it seems there is not even a single study which can strictly pass the tests of MFI impact evaluation. However, given the real world urgency, this study has gathered the courage, in spite of historical data constraints, to undertake a cautious and careful study to provide probably some biased and second-best results on impact assessment with some indication about the direction and sources of bias to provide some operational clues to assess and improve sustainability of micro-finance for the years to come.

Section 4: Findings from secondary data analysis *(Chapter 3)*

6. NABARD's annual micro-finance status reports being the only source of presumably authentic and relatively exhaustive data on the state of micro-finance in this country, an attempt is made to provide an independent analysis of this data source for 8 consecutive years (2006-07 to 2014-15), while having a critical look at the data and the existing analysis by NABARD. The major findings are as follows:

- While the total number of SGSY/NRLM, NABARD-promoted, and exclusively women SHGs are increasing at a fairly sharp rate, those with loans outstanding is increasing at a slower rate. NABARD's status reports do not draw attention to this aspect of the problem, nor do they provide any explanation for it.
- The fact that average fresh loan amounts are above and growing faster than the average outstanding amounts implies that there is net pumping in of money into the economy of the SHGs, presumably generating multiplier effects, but the fact that the loan outstanding grows faster than fresh lending raises concern over timely repayment of past loans.
- The number of SHGs having savings with commercial banks, but which did not get any loan during the year, nor did have any loan outstanding during the same year (and thus getting out of the loan cycle due to either demand failure or supply failure or both is increasing at a very steady rate for commercial banks, especially since 2009-10. This figure is increasing also for RRBs and cooperative banks, though the rate of growth is milder – maybe due to better proximity and closeness of RRBs and cooperative banks vis-a-vis their clients.

- SHG savings with bank as percentage of loan outstanding separately for all SHGs and those under commercial banks, RRBs and cooperative banks display decline since 2010-11.
- Fresh loans to SHGs as percentage of loan outstanding for all SHGs and those under commercial banks, RRBs and cooperative banks seem to be displaying steady decline since 2008-09.
- The incidence of non-performing assets (NPAs) as percentage of loan outstanding for SHGs is much higher for cooperatives as compared to the other two categories of lending agencies.
- NABARD's Micro-finance Status Report of 2010-11 shows that "the rural household coverage is less than 50 per cent in 19 states, while the coverage shows more than the number of rural households in 7 states (apparently on account of multiple membership)" (*ibid* p.vii). Unfortunately, the next year's status report does not report on this aspect of the SHG-Bank Linkage Programme. Naturally, this matter raises eyebrows not only about the quality of data reporting, but also about the implementation of the programme.
- Banks also provide financial resources to micro-finance borrowers through other institutions. Here average loan amount disbursed per MFI has increased steadily from all banks and especially from commercial banks, though these figures have started falling since 2010-11 – maybe because of the AP crisis in October 2010. The figures for RRBs and cooperative banks have remained insignificant. In this context, two cautions must be uttered regarding the quality of data reporting, its scrutiny and tabulation. First, as credit is provided in different dates during a year, a loanee may appear not only under loans disbursed during the year, but also as an entity whose loan is outstanding, though not overdue, by the end of the same year (thus having an overlap between the number of MFIs that are disbursed loans and those that have loans outstanding). As a result, it is not clear whether some MFIs are getting out of the loan cycles, as the study has brought out in the context of SHGs. Second, the figures reported are highly unstable. It appears neither the funding agencies nor NABARD have any control over reporting of data, not to speak of ensuring the quality of data.

Section 5: The Sample Design *(Chapter 4)*

7. Sampled primary data from the state of West Bengal is mainly used to probe directly the issues pertaining to sustainability of SHGs and JLGs. Within this state, it was decided to concentrate on the southern part of Bengal and pick up three clusters – one from a relatively affluent area (in district of Nadia), and two from relatively backward areas (in districts of Bankura and North/South 24 Parganas), where both SHGs and JLGs (Bandhan promoted) were functioning.

8. Once these three clusters are purposefully selected after visits to several potential pockets, the study team prepared a comprehensive list of SHGs and JLGs (under Bandhan) functioning in these areas. From each comprehensive list, the study drew a two-stage stratified random sample of 72 SHGs and JLGs and 144 member households consisting of (i) old groups and borrower households which enjoyed the benefits of micro-credit for at least 2 years; (ii) new groups and client households who had recently joined (within 2 years from date of joining); and (iii) those who are parts of reconstituted categories of groups - reconstituted after they became defunct or non-functional for some time. The study aims at judging the impact of micro-credit on the first category of groups and households as compared to the same for the other two control categories, which either hardly got any treatment effect or got only truncated treatment effect.

Section 6: Findings from analysis of primary data from West Bengal *(Chapter 4)*

9. The study has attempted to provide best possible answers on the question of sustainability of SHGs and JLGs by drawing a random sample of 72 groups and 144 borrower households from three selected clusters of the state of West Bengal using a Pipeline Approach, which involves statistical approximation based on fairly reasonable assumptions about the behaviour of the population. Only statistical tables supported by selective Student's t and paired t tests, rather than more rigorous regression equations are prepared to find out whether and to what extent the historical performance of SHGs/JLGs and their clients conform to the notion of sustainability, and what else needs to be done to reach that goal[1]. The methodology followed for primary data analysis made a clear distinction across pre-determined/exogenous, input/output and outcome variables in evaluation of any intervention measure to avoid confusion between causes (i.e., pre-determined initial conditions or intervention measures), immediate effects (may be looked upon as direct output from intervention) and final goals (called outcomes).

Findings from group level analysis

10. In this context the major findings are as follows:

[1] Two types of t-tests are performed: first, Student's t-test to see whether or not inter-temporal changes (i.e., before and after joining in group) in relevant output/outcome variables are significantly different from (mostly, greater than) zero; second, paired t-tests to see whether or not spatial changes within the three above-stated demarcating variables are significantly different or not. However, it must be emphatically mentioned that t-tests are neither necessary, nor sufficient conditions to ensure significant effect of an independent variable on a dependent one not merely because there is almost always a set of other independent variables which instead of remaining constant do exert positive or negative influence over the dependent variable, but also because the choice of dependent and independent variables must pass through rigorous statistical tests rather than being based on mere presumptions.

- In terms of important initial characteristics, it is found that NBFC-promoted JLGs seem to have attracted relatively more of higher caste Hindu members and less of exclusively labour households than SHGs, though there is no significant difference in initial conditions between newer and older groups, on the one hand, and between reconstituted and non-reconstituted groups.
- In terms of provision of a disciplined system of inputs, JLGs being for-profit institutions, seem to have done in general significantly better than non-profit and government process-dependent SHGs. This is also generally true of older groups as compared to the younger ones and non-reconstituted vis-à-vis reconstituted groups.
- Of different output measures of SHG/JLG lending process identified, average % loanee members is significantly higher for JLGs than SHGs – apparently due to strong profit motivation of NBFCs coupled with their fairly autonomous operations free of government and/or bank bureaucracy. The older groups also seem to have performed significantly better, as expected, in terms of effectiveness of training in general as compared to newer groups. However, no significant output difference is observed between old reconstituted and old non-reconstituted groups.
- Regarding demographic and educational outcomes, the instruments of SHG/JLG while successful in reducing illiteracy and casualization of labour, are not strong enough to force reduction in % of BPL members. Only decline in % of exclusively labour members is found to be significantly higher for older compared to newer groups. Moreover, reduction in illiteracy and in casualization of labour are significantly larger than zero, as per Student's t-test, only for older groups. That significant benefits flow mostly to older rather than newer groups is a pointer towards the existence of a gestation lag for flow of benefits to stabilize and make any noticeable impact on the program beneficiaries. These improvement outcomes are not however significantly different between reconstituted and non-reconstituted groups.

Findings from beneficiary household level analysis

11. As in case of group level data, analysis of household level data involves categorization of created variables into exogenous (mostly initial conditions), input/output and outcome (from SHG/JLG lending process) variables to see whether and to what extent the last two categories of variables vary across three main beneficiary characters – namely, whether belonging to SHGs or JLGs, or older vs. newer groups, or to reconstituted or non-reconstituted groups. The major findings in this context are:

- With respect to the household level initial conditions considered in this study, the initial conditions are not exactly similar across the three demarcating variables – a matter which can't be ignored in a more rigorous multivariate regression analysis.
- Most of the identified input/output variables of the lending process are found to be significantly higher for JLG members than for SHG members – probably reflecting relatively greater urge and lesser constraints in operation on the part of the organisers of JLGs than that of SHGs towards meeting the demand of borrowers. It is also true for several indices in older as compared to newer, and non-reconstituted than non-reconstituted group members.
- While considering outcome variables dealing with changes in demographic and educational status of member households, we find intertemporal changes in maximum education index of males and females as significantly larger than zero (as per Student's t-test) for both groups, though significantly larger for SHGs than for JLGs. This slight difference in result is probably attributable to a relatively greater developmental focus of SHGs as compared to JLGs. In terms of outcome in demography and education, it appears older and newer group members seem alike, as none of the constructed indices are found to be significantly different as per paired t-test. In this context, significant differences are noted only in changes in household extension status – improved in reconstituted cases, while declined in non-reconstituted cases, and in household earning status - declined for reconstituted cases, but improved for non-reconstituted cases.
- Regarding family expenditure position at the end of the treatment period, while most parameters are significantly larger for SHG members than JLG members, absolute value as well as share of loan repayment in income consistently and significantly larger for JLG members than SHG members – quite consistent with relatively stronger developmental orientation of SHGs and much higher interest burden of JLG borrowing. Between older and newer group members, however, no significant difference is noticed in terms of current family expenditure status. Between old reconstituted and non-reconstituted group members, only average food expenditure and % share of consumption expenditure are found to be significantly larger for reconstituted cases - probably indicating greater stabilization in non-reconstituted categories. The opposite is true for loan repayment expenditure and its % share, which raises a matter of concern.
- Regarding food security, diet and clothing status of SHG and JLG households, it is observed that intertemporal changes are significantly greater than zero for both groups, while the extent of diversification in clothing is only significantly more in JLGs than SHGs. The fact that the current food security is significantly better for newer group than for older group

members is either reflecting a selectivity bias in newer group members (meaning more affluent members entering new groups) or that the newer group members are feeling lesser pinch of loan repayment burden as compared to their older counterparts. In this context, no significant difference is noticed between old reconstituted vs. non-reconstituted group members.

- Among indices constructed to indicate improvement in different types of asset holding – intertemporal change is found to be significantly above zero in all assets for both SHG AND JLG groups of households. However, SHG households seem to have concentrated more on acquiring agricultural and livestock assets, while JLG households seem to have concentrated more on improving their holding of non-farm and machine assets. Compared between older and newer group households, older members seem to have done significantly better in respect of temporal improvement in and diversification of household assets, and also in temporal improvement of non-farm asset. However, significantly better results are achieved with respect to improvement in productive assets by non-reconstituted group, as expected, and in diversification of household assets by reconstituted groups.
- While dealing with improvement in SHG/JLG households' holding of intangible assets or social capital, it is found that intertemporal improvement is significantly larger than zero under both groups. Not only that; these two assets seem to have grown relatively more in SHG households than in JLG households, given relatively greater developmental focus of the former. For older and newer group members, again, there is positive and significant temporal improvement, but there is no other significant difference between them. Both constituted and non-reconstituted groups seem to have achieved positive and significant temporal improvement, though it is significantly larger for reconstituted group members – maybe due to greater urge on the part of such group members to quickly acquaint and establish themselves in the society.
- The results display significantly greater than zero improvement in savings and insurance coverage between joining in groups and now, for both SHG and JLG households. However, these improvements are not significantly different between these two groups. In older and newer group members, there is positive and significant temporal improvement in savings and insurance status for both, but there is no significant difference between the two. Similar significantly intertemporal positive improvements in saving and insurance holding is seen in both reconstituted and non-reconstituted categories of households. However, diversification in savings portfolio is significantly more in reconstituted category – probably

reflecting greater urge in them to look for better alternatives to fill in the loss due to reconstitution.

- Between joining and now, there appears to be significantly positive improvement in overall income for SHGs/JLGs, newer/older groups, and reconstituted/non-reconstituted groups, it is significantly more for JLG vis-à-vis SHG households and older vis-à-vis newer group households. But it is not significantly different across between constituted vis-à-vis non-reconstituted group households.
- We find significantly positive intertemporal change in share of formal credit for SHG households, but not for JLG ones; shares of semi-formal credit achieving significantly positive intertemporal change for both SHG/JLG households; and informal credit share registering significantly positive improvement only for JLG households, as expected. Even though formal credit seems to have made some inroads into SHG households, they are still dependent on informal sources for a large chunk of their credit needs. Incidence of joint use of credit (i.e., for production alongside consumption) seems significantly more for JLG than SHG households. Between older vs. newer group members on access to credit, we find positive and significant temporal improvement in % share of formal and semi-formal credit for older members, but no significant change anywhere else. While assessing the impact of group reconstitution on access to credit, we find positive significant improvement in % shares of formal and semi-formal credit in both reconstituted and non-reconstituted groups. Temporal improvement in formal credit share and diversification in formal credit sources are also significantly more for reconstituted groups – maybe because of greater renewed efforts towards reconstituted group members.
- JLG households are significantly above their SHG counterparts in terms of average sale per month, average annual profit, diversification in profit use, and in terms of diversified ways of improvement in enterprise, while SHG enterprises seem to face significantly more problems than JLG ones. Qualitative differences in clients, on the one hand, and in service towards them by the promoting organizations, on the other, seem to have generated this difference. However, JLG enterprises face significantly more risks in terms of CV of monthly sales and CV of annual profit as compared to their SHG counterparts. Obviously, both types of organizations are yet to evolve effective tools to bring down such large variation in their sales and profit. However, there is absolutely no significant difference in enterprise status between the older and newer group members, which is a bit surprising as it appears to negate the basic pipeline effect on business enterprise development. Group reconstitution too has no significant effect on micro-business performance.

- Given their stronger social and developmental focus, no wonder SHG households have achieved improvement in intra-family relation and community participation in significantly more dimensions than their counterparts in JLGs. Moreover, older members seem to have done significantly better in terms of improvement in spousal, intra-family and neighbourly relations, and also in more dimensions of intra-family relations. Regarding effect of group truncation, although both groups seem to have achieved positive and significant changes over time in all types of relations and empowerment indices, there is no significant difference in the achievement of these two groups.

12. In striking contrast to SHG households, which commit disproportionate delays in completing Bank-client linkage process, for JLG households promoted by NBSC-MFIs, the delay in getting the first loan is nil (i.e., almost instant) for new groups, 0.6 month for older groups and 1.5 months for reconstituted groups. These figures are for the same parameters.

13. The study finds unfavourable group dynamics and enterprise-related in striking contrast to those in the context of SHGs problems as the two major reasons for drop outs among SHG clients (with 32 – 33% importance), while external factors, programme policies and personal reasons seem to have lesser importance (claiming 20%, 18%, and 14% importance, respectively). Among JLG clients, the most prominent reasons for drop out are: programme policies (51% weightage), enterprise reason (39% weightage) and unfavourable group dynamics (34% weightage), while external factors and personal reasons have only 25% and 14% weights, respectively. If difficulties in interpersonal comparison across SHG and JLG clients are ignored, one can argue that each of the aforesaid reasons play stronger role among JLG rather than SHG clients. JLG clients are found to be much more sensitive to programme policies than SHG clients.

14. While probing the extent of income shocks and shock-absorption capacity of SHG and JLG members, the following observations are made:

- Income fluctuations seem to have increased with longer loan cycles, even though average income rises with longer credit interventions.
- Regarding incidence of earning shortfall during the last three years, it seems that the risk distribution has become flatter (with probabilities of very small and very large shortfalls being higher, and those of moderate shortfalls lower) for older group members as compared to newer group members in case of SHGs. Interestingly, the risk distribution of income shortfalls in case of JLGs seems to have shifted to the right, thus signifying that while the risk of small shortfalls has gone down, that for large shortfalls has increased. For both SHGs and

JLGs, therefore, there is need for not only insurance, but also even reinsurance for protecting them against large income shortfall risks.

- Living in extended families and networking through friends/relatives for possible mutual support are the two major *ex ante* steps undertaken by the SHG households against income shortfalls, the incidence of these two reasons together being highest (30%) for old group members, moderate (21%) for reconstituted group members and lower (14%) for new group members. Similar is the situation with JLG members in old groups (46% incidence) and reconstituted groups (42% incidence); JLGs members of new groups, however, take only precautionary steps to avoid health hazards (with weightage of only 10%).
- In terms of posterior steps, new SHG members are worse of as compared to those under old and reconstituted SHGs, as the latter are not required to cut down their basic goods consumption, nor to sell off their assets outright. For old and reconstituted JLG members, the two prominent posterior steps to handle income shocks are: relying on past savings and mortgaging of assets, and borrowing from friends/relatives at zero interest, with their combined weightage being 30% and 33%, respectively. The prominent posterior option used by new JLG members is relying on past savings. For both JLGs and SHGs, it is clearly found that older groups have performed better than newer groups in terms of undertaking some positive *ex ante* measures or ex post measures. Moreover, the incidence of both *ex ante* and *ex post* measures is higher for JLGs than SHGs.

15. The observed strengths of SHGs and JLGs in the context of West Bengal are several. First, both SGSY/NRLM and NBFC-MFI categories of SHGs/JLGs have created a vast network in the state. Second, they have made small loans available to small clients for purposes, which are non-standard and hence non-appreciated and even looked down upon as petty and unworthy of any cash flow analysis. Third, anonymous and faceless clients without marketable collateral and non-standard projects are getting these loans at low monetary and non-monetary transaction cost for themselves. Fourth, there is better targeting of beneficiaries under SHG/JLG programmes, as compared to the flagship schemes in the country. Fifth, pumping in credit through SHG/JLG route seems to be generating the much required multiplier effect towards financial inclusion. Sixth, there is significant, though certainly limited, economic as well as social benefits of SHGs/JLGs. Finally, there is considerable complementarity between SHG and JLG loans – while SHGs concentrate relatively more on consumption loans as well as loans for agriculture and allied activities (as much as 81%), the JLGs seem to be concentrating more on loans for cottage industries, trade and business and services (to the tune of 88%) as seen in this Study.

16. However, these institutions suffer from certain serious weaknesses. In case of SHGs, the vast network created seems to contain a large amount of 'fat' apparently because of multiple entries and a large number of defunct units. Second, although officials do make tall claims, nowhere within the sample areas we could come across any effective higher-tier organization, nor did the respondents talk of their roles. Third, maintenance of records demands a lot to be done at group and individual level, except for SHGs promoted by one Youth Development Centre (YDC) in Sandeskhali-II Block of North 24 Parganas, and those promoted by one Rural Cooperative at Gontra village in the district of Nadia. Fourth, even though the instrument of SHG can be adopted by any group to achieve growth through mutual support, probably those promoted by Gontra Cooperative and the extension wing of BCKV in the village of Goragachha could be better off if they could utilize the benefits of internal lending as well as of external lending and support to strengthen training and awareness creation. Fifth, the SHG movement in West Bengal is suffering from two major problems – (i) serious lack of timely initiative on the part of bank officials to guide and help the SHGs as reflected in disproportionate delays in achievement of prescribed land marks like passing of first test, second test, etc. and opening of cash-credit account for the groups; and (ii) alleged failure of Resource Persons (RPs) to conduct business as prescribed to them by the state government as well as the state unit of NRLM to serve the interest of SHGs more than that of their own cadres. Presence of large subsidies and grants in SHG schemes, there is some rent-seeking behaviour on the part of the clients, their monitors or hand-holders - government bureaucracy, NGOs, banks or RPs appointed with the intention of providing professional help. Last but not the least, in spite of frequent clamour about insufficient and untimely bank loans, the fact is that there is inadequate effective demand for productive investment by clients. Neither the bank officials, nor the PRIs, nor the officials or RPs, and not even most of the NGOs do have enough capability and urge to play leadership role to plug in these lacunae in the SHG movement.

17. Although the JLGs under Bandhan in West Bengal seem to have much more disciplined in terms of record-keeping, performance evaluation and guidance – apparently because of stricter RBI regulations, stringent bank/donor monitoring and above all the compulsions of competition and profit making, they too seem to be suffering from certain serious limitations. First, they do not make their records public, even though they seem to be better maintained and even though MFIs also draw a large chunk of public sector bank resources earmarked for priority sector lending. Second, while the JLGs seem to have subsumed a large part of borrower transaction cost by minimisation of borrower's trip to branch office for loans and repeat loans, it has happened at the cost of higher lender transaction cost. Third, availability of large pool of educated but unemployed youths in West Bengal has no doubt helped Bandhan to recruit from this pool its credit officers at a fairly low cost

with great advantages of socio-economic proximity of these officials to its clients. But this short term advantage may not be sustainable in the future unless the expectations and aspirations of this pool of ground level workers are fulfilled through increased flow of monetary benefits and training opportunities to build up their human capital. Fourth, though economic benefits to clients seem to be stronger to JLG clients than SHG clients, Bandhan seems to have achieved it so far only through steady rise in working capital loans, but as further expansion of existing business enterprises becomes increasingly difficult, Bandhan must find ways and means to encourage its credit officers as well as clients to go in for modern technology, better organizational skill and more value added production for premium markets. Last but not the least, cut-throat competition by NBFC-MFIs to poach each other's clients through aggressive and/or multiple lending, unless controlled through self-regulation rather than merely through difficult-to-enforce RBI stipulations may ruin the customers (through increased spending of their income on loan repayments), as well as the MFI lenders.

Section 5: Observations from selected case studies from Andhra Pradesh and Kerala *(Chapter 5)*

16. A short assessment of SHG/JLG programs in AP and Kerala raises both hopes and concerns. Hopes arise because of the meticulous ways both the states have gone ahead in mustering resources, innovative ideas and unique plans to bring about a change in the profile of the village poor and especially of the womenfolk. However, while Kerala has gone in for community participation in the structure of the program as well as in its implementation by placing this popular program under Department of Self-government, AP has put the Movement under the control of the Department of Rural Development. Given the dominance of government Departments and importance of government support and resources, it is an open question whether the Movement has maintained or lost its autonomy. In this context, several concerns arise. First, MIS continues to be poor as no data could be obtained at SHG/JLG or even at their association level over time and space, which could be rigorously analysed to judge comparative performance and guide policy directions, though the SHGs/JLGs visited by the study team did have the requisite data. The second concern is about the huge expenditure being incurred by these states in promoting this Movement. Unless government can gradually withdraw, it will be extremely difficult to sustain large expenses with results highly dependent on and probably not commensurate with such expenses. Nevertheless, some of the brilliant ideas like organic agriculture, thrust on horticulture, eco-tourism etc., which are being implemented in these two states are worth pursuing as a matter of policy. Whereas AP has concentrated more on productive investments, Kerala with its long tradition has pursued a mixed blend of productive investment and welfare activities.

Section 6: Observations on NABARD-promoted selected SHGs from Gujarat and Maharashtra *(Chapter 6)*

17. These case studies bring out several important lessons for NABARD, in particular, and for the SHG Movement in general. First of all, MIS has to be sufficiently strengthened, and the NGOs/PRIs involved must be communicated this message in clear terms, based on the observed micro-data deficiencies pertaining to internal and external borrowing and the costs thereof, savings and investments and returns thereof activity-wise, timing and effectiveness of both formal and informal trainings and grants, etc. Only then extremely useful micro-data can be created, which can be put at the disposal of reputed researchers and research organizations, and not merely analysed in-house, to guide policy as well as evolution of the future MIS system. Second, NABARD – to justify its continuation as a developmental bank, must persuade the Central Government to give a serious thought of putting allied agricultural activities on the same footing as agriculture, in terms of interest rate concession, as allied activities often go together with agriculture not only because Nature is a common factor, but also because crop cultivation alone is no longer a gainful proposition, as it used to be in the past. Third, innovative investment projects must be chalked out based on resource availability and human resource capability in specific regions; else the SHG/JLG movement will turn out to be a trick to make extremely poor people net lenders to the banking sector against awfully low rates of rates of interest on their unused savings. Fourth, the next generation of SHG/JLG members must be provided access to other government Department schemes if they are to be induced to take up education and become part of the mainframe economy. Finally, various low-cost insurance schemes not only of insurance companies, but also of mutual type must be propagated through effective awareness creation and training in favour of SHGs/JLGs, if these poor communities are to be protected against multiple contingencies including health hazards and loss of lives, earnings and assets.

Section 7: Ingredients for success from Illuminating cases across the country *(Chapter 7)*

18. While the study looked around for examples to bring out ingredients necessary to build up a stronger case and an expanded domain for application of this instrument of SHGs/JLGs, the main findings found are as follows:

- While SHGs/JLGs can be started in any resource-poor community, their scope for and chances of success would be higher if these instruments can be applied in a more disciplined and systematic fashion to capture huge benefits for hitherto neglected and untapped natural resource endowments located in the domains of these poor communities (Examples, the vast water bodies of Damodar Valley Corporation (DVC) and the western-side, tribal forest areas of West Bengal, commonly referred to as *Paschimanchal* with demonstrated potential for cultivation of turmeric and complementary crops).

- Examples of four community hospitals – namely, EMS Memorial Hospital in Malappuram district in Kerala, *Shushrusha* Citizens' Cooperative Hospital at Mumbai, *Jai Kishan* Hospital at Gandevi in Gujarat, and Rotary International Eye Hospital at Navsari in Gujarat, engaged in providing cheap medical services to members as well as local area population, are cited to highlight that SHG/JLG members can be encouraged through policy to be associated with such hospitals rather than big corporate hospitals to make optimal use of their own hard-earned money and/or RSBY funds for medical treatment.
- Example is cited of a large group of SHGs in the slum areas of the cities of Pune and Mumbai under an NGO called *Annapurna Parivar* to highlight how mutual health insurance can be provided at extremely low cost using judicious internal processes and by roping in community hospitals with the SHG/JLG Movement.
- Example is also cited of one Amalsad Multipurpose PACS in Gandevi Taluka of Navsari District in Gujarat, which through evolution of mutually reinforcing activities and/or organizations has practically subsumed input and consumer purchase risks, output sale risk and capacity failure risks of farmers without asking for costly compulsory insurance alongside credit, besides opening up thousands of investment opportunities for itself as well as its farmers. It also shows how such successful cooperative organizations can be converted into a federation of SHGs/JLGs in mutual interest.
- The famous thrift cooperatives of men and women, promoted by the Cooperative Development Foundation (CDF) in and around the districts of Warangal in Telangana, show not only how SHGs can be evolved and formalized over time, but also how strong and permanent business activities (milk and paddy seeds in their case) can be created to keep thrift and investment motives strong and alive for ever.
- The examples of *Krishi Vigyan Kedra* attached to Navsari Agricultural University in Gujarat and of one Farmers' Club at village Vanjar of Sabarkantha district in Gujarat highlight the need for networking across suitable organizations as well as suitable agents to perform this networking task to connect SHGs/JLGs and their members and leaders to the Knowledge Society and appropriate lobbying organizations.
- The example of once-famous Versova Fishermen's Cooperative Society in Mumbai, which is facing rapid decline following the global phenomenon of too many people chasing too few fish in the oceans highlights how the instrument of SHGs/JLGs can help re-engineer its fate

through regular and organized sale of value-added fish products by their womenfolk, which they are in any case doing, but only occasionally.

- Finally, the example of *Bhagini Mandal* within the famous Warana Sugar Cooperative Complex near Kolhapur in Maharashtra highlights the need for internal leadership, which alone can feel and articulate the needs of the people, come up with a mission, vision and implementable plan, and thus spearhead the spiral process of growth to achieve sustainability. However, the need for continuity in leadership remains as sustainability demands a continuous relay race – a matter, which policy can't ignore even if does everything else other than promoting autonomous leadership.

Section 8: Recommendations *(Chapter 8)*

8.32 There are broadly three recommendations arising out of this study – first, on the need for evolution and utilization of a suitable MIS; second, on the need to correct faulty program designs; and third, the need for networking with appropriate organizations to get connected to the Knowledge Society, which alone can sustain the SHG Movement.

19. Given serious dearth of secondary data on micro-finance related matters, NABARD and SGSY/NRLM, the two main agencies promoting the SHG Movement must discharge tremendous responsibility in making authentic data available for analysis, monitoring and policy making. Unfortunately, the states have so far failed to produce the requisite data. Unless micro-data provides clues about the group dynamics, social dynamics, family dynamics as well as on economic and process parameters, supplemented by appropriate quasi-macro/macro-data on group and government funding and support, no meaningful conclusion can be reached on sustainability of these organizations, not to speak of policy measures to guide sustainability. NBFC-MFIs are extremely reluctant to share their data, though they too are making use of public funds in the form of unspent funds earmarked for priority sector lending by commercial banks, which are being diverted towards them. Moreover, NBFC-MFIs are often caught in fierce cut-throat competition with each other without knowing the reality or the truth about where they stand. So, both government and the NBFC-MFIs themselves must arrange to make the relevant data available to the public not only in public interest, but also in their own interests. Examples of outstanding MIS at Amalsad Mandali, thrift cooperatives under CDF, SHGs under *Annapurna Parivar*, as cited in this study, ought to be publicized and utilized to teach what good MIS means.

20. Several corrective measures are already spelt out earlier to get rid of faulty project designs. First, dominance of government departments and importance of government support and resources

should not rob the Movement of its autonomy. Second, the chance and scope for sustainable success would be larger, the stronger the initial endowments – be it a physical resource like a vast pool of water bodies or cultivable land, or human resource like availability of visionary leadership. So, policy makers and activists keen to utilize the SHG/JLG instrument to achieve empowerment and sustainable growth of the poorer communities are better advised to concentrate more on areas and pockets, which better fulfil these conditions, rather than thinly spreading their resources and energy over a large and untargeted population. Third, the Finance Ministry as well as NABARD/RBI need to give a serious thought of putting allied agricultural activities on the same footing as agriculture, in terms of interest rate concession, as such activities often go together. Fourth, innovative investment projects must be chalked out based on resource availability and human resource capability in specific regions. Fifth, the next generation of SHG/JLG members must be provided access to other government department schemes if they are to be induced to take up education and become part of the mainframe economy. Finally, various low-cost insurance schemes not only of insurance companies, but also of mutual type must be propagated through effective awareness creation and training in favour of SHGs/JLGs.

20. The third set of recommendations pertain to networking with suitable organizations and change agents, which can strengthen the SHG Movement, lobby for suitable policy changes and connect it with the Knowledge Society. For this purpose, only a few examples rather than an exhaustive list are provided in Chapter 7 of this Study to flag directions of change and provide a roadmap.

Chapter 1

Introduction

Section 1: Background

1.1 Throughout the world and especially in the developing countries, micro-credit seems to be filling in the vacant space between traditional formal and traditional informal lenders (See, for example, Datta et al, 2013). This is happening because in most developing parts of the globe and even in pockets of the developed world, there is a huge number of potential small borrowers who are either non-standard in terms of personal attributes and projects, lack marketable collateral and have high transaction costs for their relatively small loans which prevent them access to the traditional formal sources of credit provided by the organized banking sector. Naturally, the small borrowers have fallen victims for centuries to usurious rates of interest and non-affordable terms of credit of traditional moneylenders, as they are often left with no alternative other than approaching these moneylenders as the last resort for credit. It is in this context, a new form of credit called micro-credit emerged, thanks to several path-breaking efforts in various parts of the globe. Professor Muhammad Yunus of Bangladesh Grameen Bank, who popularized and put it on global landscape has contributed further to its acceptance and growth, besides encouraging a lot of entrepreneurs to make further experiments on micro-credit.

1.2 India being a large developing country with huge pockets of poverty became an important abode of micro-credit, or to use the more general term, micro-finance. In spite of having a fairly large network of micro-finance in India and elsewhere, which has been there for quite some time, statistically rigorous results clearly confirming or rejecting the positive impacts of micro-finance on the poorer sections of the community and especially the main target group of women-folk, are few and far between. Naturally, the question of sustainability of micro-finance institutions (MFIs) repeatedly crops up among academicians, practitioners and policy makers. The main issues raised in the context of sustainability pertain to its definition in operational terms – namely, whether the term refers to mere financial sustainability and of individual borrowers or their groups or the promotional bodies, whether there is sustainability of income, expenditure and asset generation process of the micro borrowers, whether these borrowers develop robust shock absorbing-capacity, whether there is stability in intra-family, inter-family and extra-family relations of the borrower households, whether the micro-finance system is socio-politically and environmentally robust and whether it is possible to work out a pragmatic regulatory framework to sustain the system. So, when the topic 'Sustainability of SHGs and JLGs of micro-finance institutions in India' was entrusted to the Centre for Management in Agriculture of the Indian Institute of Management, Ahmedabad as a research topic by the Ministry of Agriculture, Government of India, given our knowledge and past experiences in this field, we embraced this topic and did the necessary brain-storming along with various promotional agencies, SHGs/JLGs and their individual clients to try to identify the researchable issues and set up the objectives, coverage and methodology for the study. Given two broad types of micro-finance organizations in the country – one, non-profit type with traditional developmental focus as instituted initially by NGOs and then later on being replicated on a much larger scale by government (initially under *Swayambhar Gosthi Swarnajayanti Yojana* (SGSY) and later under National Rural Livelihood Mission (NRLM)) and the National Bank called NABARD (which followed an independent course initially organizing only SHGs, but later on organizing JLGs as well of larger size groups of certain classes), and another for-profit type being organized by NBFCs. The former groups operate through bank linkage now-a-days arranged by resource persons (RPs) employed by *Panchayats* (in cases of government-promoted SHGs) or by selected NGOs (in cases of NABARD-promoted SHGs/JLGs), whereas the latter groups are promoted and financed directly by NBFCs, which get access to credit from commercial banks and international donor and banking agencies. Naturally, the group lending rates are much higher for NBFC-promoted JLGs than for government/NABARD promoted SHGs/JLGs, though as we shall see in course of analysis in this study NBFCs seem to have absorbed a large part of borrower transaction costs. After the AP Crisis in 2010 of several NBFCs, the whole gamut of micro-finance institutions is being strictly regulated by RBI regulations, popularly known as Malegam Committee stipulations. Recently RBI has granted regular or small banking license to several well-functioning NBFCs to access cheaper customer deposits like commercial banks, though its beneficial effects on micro-finance borrowers are yet to be seen.

1.3 The study is organized as follows. The rest of this chapter spells out the objectives, coverage and the design of the study. Chapter 2 provides a detailed overview of the literature on the subject of micro-finance. Chapter 3 provides an analysis of the secondary data on the Micro-finance Movement in this country, based on available annual status reports from NABARD. Chapter 4 analyses primary data collected from the state of West Bengal. Chapter 5 brings out insights from several case studies in the states of Andhra Pradesh and Kerala. Chapter 6 brings out further insights from several case studies on NABARD-promoted SHGs and JLGs from a small number of districts in the states of Gujarat and Maharashtra. In order to develop a road map on this sector, the study has looked around and identified several illuminating examples across different states in Chapter 7, which can provide further insights about the potential of the movement in terms of areas, sectors and providing solutions to some of the burning issues of micro-finance. The last chapter summarizes and concludes the study, besides providing a set of recommendations for possible implementation in the near future.

Section 2: Objectives

1.4 The precise objectives of the study are:

1. To provide a review of the literature on micro-finance impact and the methodologies applied therein;
2. To analyse available secondary source data and to undertake selected case studies based on interaction with national and state level policy making bodies to bring out the stylized facts, features and trends in this sector;
3. To bring out the factors contributing to sustainability of individual households, groups and even promotional agencies, subject to availability of adequate information from collected primary data; and
4. To provide a road map to achieve sustainability in the true sense of the term.

Section 3: Coverage and Study Design

1.5 As far as secondary data is concerned, the study has depended exclusively on 'Status of Micro-finance in India' reports of NABARD till 2014-15, as no other authentic data sets are available. As similar state level data sets are hardly available from state counterparts of NRLM, the analysis had to depend exclusively on borrowing household level primary data collected from the state of West Bengal supplemented by several case studies from two selected states of Andhra Pradesh and Kerala. These case studies are further supplemented by a few others on SHGs and JLGs promoted by NABARD in the states of Gujarat and Maharashtra, as the drawn sample of primary data from West Bengal contains very scanty information on NABARD-promoted SHGs.

1.6 As sustainability of SHGs and JLGs constitutes the main thrust of this study, the sample primary data from the state of West Bengal is used to probe directly the issues pertaining to sustainability. Given paucity of time and human resources, on the one hand, and the comprehensive nature of the issues around sustainability, which demands detailed probing, on the other, the study had to content itself with selection of only one state for purpose of primary data analysis. Given this constraint, the choice of the state of West Bengal was influenced by two considerations: first, the lead author had a prior acquaintance with the geography and districts of the state, and second, Bandhan, the largest NBFC-MFI in the country at this stage with its headquarter in West Bengal happened to be the only MFI, which agreed to collection of primary data from its clients. So, after consultation with the state level office of NRLM and Bandhan, when we were told that we could choose any part of West Bengal for drawing the primary data, we decided to concentrate on the southern part of Bengal and pick up three clusters – one from a relatively affluent area (in district of Nadia), and two from relatively backward areas (in districts of Bankura and North/South 24 Parganas), where both SHGs and JLGs (Bandhan promoted) were functioning.

1.7 Once these three clusters are purposively selected after visits to several potential pockets, the study team prepared a comprehensive list of SHGs and JLGs (under Bandhan) functioning in these areas[1]. From each comprehensive list, the study drew the sample of SHGs/JLGs in two stages. In the first stage, the study retained only three categories of groups – first, groups in the first loan cycle[2], which have hardly enjoyed any significant benefit of micro-credit treatment; second, groups which were reconstituted after becoming defunct or non-functioning for some time, as a result of which these groups enjoyed only truncated effects of micro-credit treatment, and third, older groups which have completed at least four years of treatment[3] and therefore enjoyed fuller benefits of micro-credit treatment. In the second stage, a probability proportional stratified random sample of SHGs and JLGs was drawn separately, subject to a total of 12 groups from each cluster. Thus, altogether 24 groups of SHGs and JLGs (12 each) were drawn from each cluster, thereby making the total sample of groups 24 x 3 = 72 for the entire state. From each of the selected groups, two members were drawn at random, thus making the total size of the sample households 72 x 2 = 144. The primary data, therefore, consisted of three types of SHG/JLG groups and households: (i) old groups and borrower households which enjoyed the benefits of micro-credit for at least four years; (ii) new groups and client households who just joined and were mostly in the first loan cycle though some of them were with SHGs/JLGs up to less than four years, and (iii) those who are parts of

[1] At the time of the survey (2012), JLGs which too were promoted by NABARD, were scanty - at least in the state of West Bengal, and hence NABARD-promoted JLGs could not be included in the collected primary data.
[2] Very often young members who were in the first loan cycle were found to be with the group for more than one year. Moreover, the proportion of members in the first cycle was found to be less than 10%. So, for varied statistical analysis we had to expand the size of the youngest group to cover members upto less than four years of SHG engagement.
[3] Highlighting choice of clients with four or more years of treatment arose from insights obtained during an earlier study of Bandhan in West Bengal. See, Datta et al (2013) for details.

reconstituted categories groups reconstituted after they became defunct or non-functional for some time. The study aims at judging the impact of micro-credit on the first category of groups and households as compared to the same for the other two control categories, which either got at best scanty treatment or got only truncated treatment.

1.8 To the study team, there were broadly two options for drawing the sample – the Randomized Control Trial (RCT) Method, and the Pipeline Method. The former method has no doubt the best statistical properties, but it requires not only huge resources including time, but also a futuristic perspective in the sense that this sample design can be applied to assess the impact of a future project, wherein two samples of equal size can be drawn from the same population in advance, before treatment is provided to one sample group, while denying treatment to the other. But in the present case, since a question is raised about the sustainability of SHGs and JLGs based on past historical experiences, there was no option other than choosing the second method. Naturally, the second method is susceptible to a selectivity bias in the choice of groups/households belonging to different loan cycles because of the common allegation that the population itself may undergo dynamic changes over time, besides the fact that the promoting organizations may be choosing better client groups and clients in the earlier years, while leaving only less lucrative customers for selection in the future. While this allegation seems to be true to some extent, one cannot totally disregard somewhat neutralizing effects of three factors – first, all groups and households in an area (in our case, cluster) are not covered at the same point in time, but only in stages; second, the population is not static as fresh candidates do enter every year to somehow neutralize the effect of depletion; and third, the selection criteria for formation and entry into SHG/JLG group seems not to have changed significantly over time. Nevertheless, the second method is not fool proof, but given various constraints, this method provided the best way to arrive at reasonable estimation of the impact of micro-credit out of the drawn sample. Nevertheless, in order to ensure that the treated and controlled groups come from almost identical population in terms of certain initial conditions, the study performed t-test separately for SHGs and JLGs between old and new groups, as well as between old and re-constituted groups and the selected households therein, the results of which confirm substantial homogeneity across these pairs of groups and households, as it can be seen from Appendices 1.1 and 1.2, respectively. As SHGs/JLGs of women constitute the most dominant component of micro-credit, the study deliberately concentrated on micro-finance groups, while leaving aside exclusively male or male and female mixed groups. Since JLGs promoted by NABARD are of recent origin, the study did not attempt to cover them in the West Bengal sample, as mentioned earlier.

1.9 Although the study did not deliberately rule out NABARD-promoted SHGs in the West Bengal sample, it turned out *ex-post facto* that due to low penetration of such SHGs within the three clusters selected, almost an insignificant number of NABARD-promoted SHGs or SHG clients entered into the sample. In order to overcome this limitation and also to get some perspective on NABARD-promoted JLGs, several case studies were undertaken in a small number of selected districts in the states of Gujarat and Maharashtra, the lessons from which are extracted and incorporated in Chapter 5 of this study.

1.10 As the study could not cover primary data from more than one state due to resource constraint, as mentioned above, an attempt has been made to supplement the findings from West Bengal by covering the experiences from the twin states of Andhra Pradesh and Kerala, where the

SHG Movement is believed to have developed strong roots. However, the visits to these twin states were for short periods and the samples visited for mostly qualitative inferences had to be decided by the respective state governments. Even then, the field visits were restricted to understanding of SHGs rather than MFIs, as the study team could not procure permission to visit any NBFC-MFI (currently, the most dominant category among MFIs) other than Bandhan. However, the lessons extracted from the study team's exposure to AP and Kerala experiences are documented in Chapter 6.

1.11 In order to evolve a road map for sustainability of SHGs and JLGs, the study decided to look for illuminating examples across the length and breadth of the country, which can suggest potential areas where the Micro-credit Movement can be extended and at least some of its observed weaknesses can be overcome. Such illuminating examples are illustrated in Chapter 7 together with their implications for micro-finance as well as its future.

Appendix 1.1: Comparison of average values of initial endowments of SHGs[4]				
Variable Name	Comparison between New & Old		Comparison between Reconstituted & Old	
	p-values of t-test		p-values of t-test	
	Equal Variance	Unequal Variance	Equal Variance	Unequal Variance
Break-up of Hindu Upper Caste	0.8291	0.8324	0.3645	0.4095
Break-up of SC/ST/OBC	0.9814	0.9623	0.1926	0.2155
Break-up of Minority Caste	0.6526	.	0.9626	0.9653
Break-up of Illiterate	0.194	**0.0102**	0.4377	0.4653
Break-up of members who can sign	0.9799	0.9824	0.9013	0.8849
Break-up of members up to primary education	**0.0124**	0.0667	0.2238	0.4337
Break-up of members up to secondary education	**0.0291**	**0.0288**	0.4499	0.5346
Break-up of members up Above secondary education	0.2316	0.5008	0.0615	0.1449
Break-up of members below poverty line	0.8519	0.8315	0.3776	0.4774
Break-up of members according to Farm Activity	0.7604	0.7604	0.4695	0.2981
Break-up of members according to Allied Activity	0.1744	**0.026**	.	.
Break-up of members according to Labor Activity	0.6547	0.6974	0.7377	0.706
Break-up of members according to Artisan Activity	.	.	**<.0001**	.
Break-up of members according to Business Activity	0.4171	0.3143	0.4744	0.5955
Break-up of members according to Trade Activity	0.5821	0.3287	0.5821	0.3287
Break-up of members according to Service Activity	0.5821	0.3287	0.7758	0.7646
Break-up of members according to Other Activity	.	.	0.3333	.

[4] P-values are shown in dark only when the t-values are significantly different at 5% level for two-tailed test.

<table>
<tr><th colspan="5">Appendix 1.2: Comparison of average values of initial endowments of households under JLGs[5]</th></tr>
<tr><th rowspan="3">Variable Name</th><th colspan="2">Comparison between New & Old</th><th colspan="2">Comparison between Reconstituted & Old</th></tr>
<tr><th colspan="2">p-values of t-test</th><th colspan="2">p-values of t-test</th></tr>
<tr><th>Equal Variance</th><th>Unequal Variance</th><th>Equal Variance</th><th>Unequal Variance</th></tr>
<tr><td>No. of family members at the time of joining SHG/JLG</td><td>0.5101</td><td>0.6923</td><td>0.3433</td><td>0.4107</td></tr>
<tr><td>Whether extended(= 1)/ nuclear(= 0) at the time of joining SHG/JLG</td><td>0.4582</td><td>0.4343</td><td>0.6433</td><td>0.639</td></tr>
<tr><td>No. of earning members at the time of joining SHG/JLG</td><td>0.194</td><td>0.388</td><td>0.1072</td><td>0.0061</td></tr>
<tr><td>No. of students in family at the time of joining SHG/JLG</td><td>0.0467</td><td>0.0793</td><td>0.3616</td><td>0.2937</td></tr>
<tr><td>No. of students among male at the time of joining SHG/JLG</td><td>0.0742</td><td>0.0259</td><td>0.2263</td><td>0.1244</td></tr>
<tr><td>No. of students among female at the time of joining SHG/JLG</td><td>0.2844</td><td>0.283</td><td>0.4946</td><td>0.3768</td></tr>
<tr><td>Index of maximum education among male at the time of joining SHG/JLG</td><td>0.4621</td><td>0.397</td><td>0.7012</td><td>0.6624</td></tr>
<tr><td>Index of maximum education among female at the time of joining SHG/JLG</td><td>0.2032</td><td>0.2153</td><td>0.1135</td><td>0.2604</td></tr>
<tr><td>No. of members with special skill at the time of joining SHG/JLG</td><td>0.5418</td><td>0.4554</td><td>0.9423</td><td>0.9363</td></tr>
<tr><td>No. of children working fulltime/part-time outside household at the time of joining SHG/JLG</td><td>0.024</td><td>0.3434</td><td>.</td><td>.</td></tr>
<tr><td>No. of children working fulltime/part-time in family enterprise at the time of joining SHG/JLG</td><td>.</td><td>.</td><td>.</td><td>.</td></tr>
</table>

[5] 5 P-values are shown in dark only when the t-values are significantly different at 5% level for two-tailed test.

Chapter 2

Review of Literature[1]

Section 1: Introduction

2.1 Familiarity with the literature on microfinance and related institutions often displays diametrically opposite results as far as MFI or SHG impact assessment is concerned. Since objective and scientifically valid conclusions on impact assessments are rather rare, the study started with a critical review of the literature and conducted this study in the background of such a critique. This chapter is organized as follows. The next section provides a review of prominent views expressed on the subject, while the section following it sums up the comments and observations on the various methodologies used in micro-finance impact assessment literature. The final section concludes this chapter.

Section 2: Review of Some Prominent Studies in the Literature

2.2 Lamia Karim's study (2011) of four Non-Governmental Organisations in Bangladesh – Grameen Bank, Building Resources Across Communities (BRAC), Association for Social Advancement (ASA) and Proshika Human Development Center (Proshika) show that all these indigenous NGOs started functioning from the mid-1970s. In the 1970s, the local NGO movement was characterized by a sense of patriotism and communitarian ideals. Many NGO workers were former freedom fighters who had fought to liberate their country from Pakistani domination. Their ethos came from a missionary sense of altruism for the poor – landless and marginal farmers, women and children – combined with a sense of patriotism for their newly independent country. For these men and women, working for a NGO was re-conceptualized as a radical transformation of agrarian social relations from below. In the present day, these four organizations have become more powerful in terms of resources, widened their services and exponentially increased their member rolls. Their penetration rate is 90 percent in the rural economy. The Grameen Bank's philosophy on poverty alleviation was that the access to financial capital alone was the key, and skills are basically leant in the household or on the field of work. This was also adopted by the other three NGOs that Karim studied. However, Karim's contention is that the reality on the ground is far more complex, and these loans are entangled in other relationships of poverty, inequality and obligations. His visit to the family of Sufia Begum, who was one of the first recipients of loans by

[1] This Chapter is largely based on a review by Datta et al (2013).

Grameen Bank, shows the grim reality that these microfinance lending practices do not necessarily generate inter-generational wealth. In his interview of other women, he was told stories of instances when the initial unpaid efforts of poor women for getting membership for the bank were not reciprocated by the bank. Thus, there is a need for a deeper understanding of the relationships between the borrowers and the lenders and the sources of income as promoted by the bank.

2.3 Although there has been a lot of fanfare over 'micro-finance promise' as well as tall claims of success, on careful examination most claims are found to be based on 'anecdotal data', as pointed out by Morduch (1999), Karlan (2001), Barau and Woller (2004), Armendariz and Morduch (2010), Duvendack et al (2011), Banerjee et al (2011), which are far from rigorous evidence of micro-finance impacts. Aghion and Morduch (2005 and 2010) seem to have argued, thus microcredit has evolved over the last 30 years in the post-Grameen Bank era into microfinance covering a broad range of financial (including savings, insurance, remittance) and non-financial services like financial literacy training and skill development programs, with its focus on women continuing for understandable reasons, but there is hardly any clear and robust evidence of its tall claims of positive impacts. Following Duvendack et al (2011), this chapter has concentrated on prominent papers within the three broad categories in terms of research methodology followed – namely, those following (1) randomized control trials (RCTs), (2) pipeline designs (the current study is following), and (3) with/without comparisons (in panel or cross-section form). This section is devoted to a short review of the literature on socio-economic as well as women empowerment impacts of micro-finance together with a summary of the literature highlighting the technical limitations of various studies either in support of or against positive micro-finance impacts.

2.4 Duvendack et al (2011) has highlighted the study by Karlan and Zinnman (2009) in the context of South Africa. As a good application of the RCT methodology this experimentation on randomly assigned consumer credit at very high interest rates (200% per annum) shows significant net benefits for the borrowers – and thus casts doubt on the popular hypothesis about induced over-borrowing from unproductive and usurious lenders. They find corroborative evidence of binding liquidity constraints, leading to welfare improvement from expanded credit. By tracking the behaviour and outcomes of the treatment groups over 6-27 months after delivery of loans, this study also shows significant and positive effects on food consumption, economic self-sufficiency and some aspects of mental health and outlook, though they find some negative effects too - principally stress among the borrowers. So their evidence suggests that the marginal loan is profitable (p.461).

2.5 Banerjee et al (2011) does an RCT study making use of Spandana's expansion program in certain areas in the city of Hyderabad. They chose 52 out of 104 neighbourhoods of the city at random for Spandana to enter, while leaving out the rest 50% neighbourhoods as a comparison group. By comparing the performances of households in these two sets of neighbourhoods after 15-18 months from Spandana lending, they have found the following impacts: (1) Households in the treated group are found to have greater likelihood to start a business and purchase large durable goods like bicycles, refrigerators or televisions; (2) households starting a new business in Spandana neighborhood are found to be consuming less as compared to those who don't start a new business - thus the former group apparently 'tightening their belts to make the most of new opportunities'; (3) there is no evidence of women empowerment along measurable dimensions - for example, women exercising no greater control over household expenditure, no significant increase in spending on education or health, nor is there any rise in probability of kids' enrolment in private schools; and (4) the fraction of families starting new business increases from 5% to just over 7%. The authors believe that the impact of microfinance is 'not miraculous', but 'working'. Naturally, they have highlighted the need for more studies for reconfirmation and especially to determine long run impacts (p.171).

2.6 There are several prominent papers among the category of papers following pipeline approach, which seem to have long-standing effects. Coleman (1999) conducts a quasi-experimental study in north-east Thailand during 1995-1996 - after carefully overcoming the bias in estimating impact due to self-selection and endogenous program placement. It finds insignificant impact of microfinance on physical assets, savings, production, sales, productive expenses, labor time, and most measures of expenditure on healthcare and education. Impact is however found to be significantly positive on women's high-interest debt. Interestingly, this study brings out negative and significant impact on expenditure on men's healthcare, and no evidence on direct investment in productive activities with a positive rate of return (pp.132-133).

2.7 Copestake et al (2001) uses a case study to assess the impact of Peri-Urban Lusaka Small Enterprise Project's (PULSE) group-based microcredit program on poor, self-employed people in low income neighborhoods of Lusaka, Zambia. Their study finds significantly higher growth in profits and household income, and more diversification of business activities of borrowers, who have graduated from first loan to a second loan, as compared to otherwise similar business operators. The study also finds that about 50% borrowers, who leave the program after receiving the first loan, are worse off. The study attributes the failure to ‘rigid group enforcement of fixed loan repayment schedules without regard to income fluctuations arising from ill-health, theft, job loss and fluctuation in demand’(p.95).

2.8 Copestake et al (2005) find a significant effect on individual outcomes (like personal savings, control over household and business decision, resources, self- esteem and respect from others, attitudes and orientation towards the future) as well as on household level outcomes (like income, asset ownership, coping with shocks etc.), but no effect on business sales, profit, employment and diversification, using their data from a village banking program in Peru (pp. 713-714).

2.9 Based on empirical data from CETZAM’s (Christian Enterprise Trust of Zambia) microcredit program in Zambian Copper belt, Copestake (2002) finds simultaneous impacts of reduced absolute poverty and increased income inequality among clients compared to control households (p.753).

2.10 Based on evidence from Fincomun-Bimbo program in Mexico, Cotler and Woodruff (2008) assesses the impact of short term credit on micro-enterprises. They report 85% investment in working capital, while only a meagre percentage is used to buy fixed assets. The loans provide modest rate of profit. They argue that this is probably because profits are lower for farms receiving loans and also because returns to capital are lower than the effective annual interest rate of about 40%. They also report high rate of attrition after the first loan and also between 2nd and 3rd loan. Their study highlights the need for a longer term assessment.

2.11 Setboonsarng & Perpiev (2008) uses the Propensity Score-Matching Method (PSM) to address selectivity bias in an earlier study of microfinance program of Khushali Bank in Pakistan. They have examined whether microfinance is contributing both directly and indirectly to the Millennium Development Goals (MDGs), as claimed in an earlier study by Montgomery (2005). They find that the lending program contributed ‘significantly to income generation activities such as agricultural production, and in particular, animal raising’ (p. 22). But the program impacts on other MDGs like education, health, female empowerment etc. are found to be of limited significance, they argue that this is partly because the clients are mostly poor agricultural households with limited non-farm activities and as much as 70% of the clients are first time borrowers passing through only one loan cycle, and hence impacts on other MDGs are yet to be realized. The novelty of this study is that it attempts to measure women empowerment in terms of i) whether women have a say in schooling matters, ii) whether they have a say in health care, iii) whether they use contraceptive, and iv) whether there is any significance domestic violence. Another highly significant finding is borrowers’ increased use of pesticides, lending to improved productivity in income in the short run, but likely negative outcome on health and environment, if inappropriately used.

2.12 Deininger and Liu (2009) evaluate socio-economic impacts of SHGs in the Indian state of Andhra Pradesh, using a large data set of 6000 households and using all three methods - namely, a pipeline setting, propensity score matching and difference estimates for certain pieces of information, which can credibly be obtained via recall. Besides finding evidence of positive empowerment and nutritional effects at village-level matching, the results provide several of additional insights - first, social capital and economic empowerment increase equally for program participants and non-participants, thus generating positive social externalities of the program; second, there is significant impact on nutritional status between new and converted participants ; and third, there is significant gains in consumption for participants, though there is no commensurate increase in income and assets (pp.4-5). This study also measures female empowerment in terms of change in indices of social capital, economic empowerment and political participation.

2.13 Among prominent papers using with/without research methodology on cross-section or panel data, Pitt and Khandkar (1998) study, based on a quasi-experimental data of 87 rural Bangladeshi villages of 1991-1992 and covering three well known group-based credit programs - Grameen Bank, Bangladesh Rural Advancement Committee (BRAC) and Bangladesh Rural Development Board's (BRDB) Rural Development - RD-12 program, has estimated the impact of participation in microcredit program by gender on labor supply, schooling, household expenditure and assets. Their study identified credit as a significant determinant of many of these outcomes with credit provided to women having more likely influence than the same provided to men. They thus suggest that 'credit is not perfectly fungible within the household' (pp. 987-88).

2.14 Khandkar et al (1998) has examined the impact of microcredit programs of three most well-known projects in Bangladesh on income, production and employment. They use data from target and non-target households in both program and non-program villages collected during 1991-92. They report 21-33% increase in average household income in target villages. They also report general production gain from non-farm sector in all program areas, while production increases in the farm sector as well only in certain villages. Besides income and production increase, they find desirable impacts on employment level as well in program villages.

2.15 Dunn and Arbuckle (2001) uses quasi-experimental sample design to include both clients of ACP/Mibanco, Peru and a comparison group of non-clients with similar characteristics to assess the impact of microcredit at individual, household and enterprise levels. Their evidence is that the relatively small loans provided to clients have consistently improved enterprise performance as well as household welfare. Several key variables like enterprise revenue, fixed assets, business premise ownership, business licensing ownership etc. also show better outcomes with longer treatment under microcredit program.

2.16 Cohen and Snodgrass (2001) makes use of a panel data from surveys conducted in early 1998 and early 2000 to assess the impact of microfinance services on low-income women workers in the Indian city of Ahmedabad. The study includes clients of SEWA Bank as well as a control group of comparable non-members of SEWA. This study findings are: i) use of credit and savings services of SEWA raises both total and per-capita household income; ii) the financial services are found to be strongly associated with spending on housing improvements, expenditure on consumer durables and school enrolment - especially for boys; iii) there is at least some evidence of income diversification, rise in expenditure on food and greater ability to cope with financial shocks, though due to inadequate instruments many sample households are found deeply in debt; iv) repeat borrowers are found to enjoy greater increases in income, spending more money on household improvements, food, consumer durables, and having their girls enroll in primary schools; and v) no significant impact is seen at enterprise level from long term participation in SEWA Bank's micro-financial services even for repeat borrower (p. xiii).

2.17 Barnes (2001) measures impact of microfinance programs of Zambuko Trust, Zimbabwe on the basis of a panel data collected in 1997 and then repeated in 1999 with the same respondents. This study covers randomly selected sample of micro-entrepreneurs as well as their non-client counterparts from the same geographic area. The major findings are: i) participation has a positive impact on acquisition of assets by client households; ii) it has a positive impact on education of boys within 6-16 age group in clients households; iii) it has a positive impact on frequency of nutritious food consumption in extremely poor households; iv) the risk coping strategies (reallocation of income and drawing down past savings) are found to be similar across client and non-client households; v) there is positive impact on real monthly net revenue of matched enterprise of repeat continuing clients; vi) there is no significant impact on employment in matched enterprises; vii) value of assets of matched enterprise and household enterprise is higher for continuing and departing clients as compared to non-clients; and viii) there is positive impact on clients having individual savings account and the number of ways extremely poor continuing clients save (pp. xii-xiv).

2.18 McKernan (2002) uses quasi-experimental data from participants from three microfinance programs of Bangladesh during 1991-92 as well as non-participants from both program and non-program villages to report large positive and significant total effect on monthly self-employment profits (175%) and also large positive and significant non-credit effect of participation (125%). The results are also found to be robust for the landless poor.

2.19 Khandkar (2005) has performed a panel data analysis, through a 1998-99 follow-up survey to 1991-92 survey (whose results are reported in Pitt and Khandkar (1998)) to re-assess the earlier findings on poverty effects of microfinance in rural Bangladesh. The results indicate that microfinance continues to reduce poverty among poor borrowers and within the local economy though at a lower rate by raising per capita household consumption for both participants and non-participants (p. 23).

2.20 Menon (2006) uses data from rural Bangladesh of 1991-92 making use of both target and non-target households from eight thanas under Grameen Bank. The study lends support for the benefits of microfinance in smoothening of consumption fluctuations in the presence of seasonal shocks, though there is a threshold level beyond which benefits tend to go down.

2.21 Augsburg (2006) uses panel data of SEWA Bank members and non-members in Gujarat in India collected during 1998 and 2000, and applies propensity score matching technique to display positive and significant effect on members' income, while showing that taking only first loan does not - thus confirming the hypothesis that repeat borrowing has a stronger effect among program participants.

2.22 Cheming (2008) uses the same data set from Bangladesh earlier used by Pitt and Khandkar (1998), but applies more refined method of propensity matching score to show a positive but lesser (than earlier thought) input of microfinance on expenditure per capita, supply of labor, and level of school enrolment for boys and girls.

2.23 Turning to papers, which are dealing exclusively on the issue of women empowerment, Hashemi et al (1996) uses a survey data of 1300 married women under age 50 conducted in 1992 and comprising of four groups of Grameen Bank members, BRAC members, non-members and a comparison group who live in villages without Grameen Bank or BRAC program. This survey has sought household information on eight indicators on empowerment – namely, mobility, economic security, ability to make small and large purchases, involvement in major household decisions, relative freedom from domination within family, political and legal awareness, and participation in political campaign and protest. The cut off points for empowerment was chosen around 25th to 30th percentile point for most dimensions. The results indicate increase in women empowerment in all these dimensions, and also decreasing women's vulnerability to family violence (p.650).

2.24 Anderson and Eswaran (2005) uses data collected from Matlab, a rural area of Bangladesh to assess impact of micro-finance on female decision making power within the household. They have measured female autonomy in terms of the following: whether they require permission to purchase cooking oil/coconut oil/ice cream, whether they have say in decision to purchase at daily bazaar or to purchase beetle leaves/nut, or to purchase children clothes or to purchase sarees for themselves. The paper has also considered a few additional measures of female autonomy like whether they need to cover head outside or inside of house in presence of family men or outside men, whether they need to wear burqa outside or for visit to festival and whether they can have meals with husband. Using IV-2SLS estimation, they find that earned income and employment outside their husbands' firms contributes more to women autonomy than unearned income. Thus, they have concluded that it is when income is earned independent of husband's activities and possessed by women that contributes more to their autonomy. (p.32)

2.25 Pitt, Khandekar and Cartwright (2006) has attempted to see the impact of microfinance on several aspects of women autonomy - their ability to spend money independently and make household purchases, their access to funds, their capability to borrow, their capability to manage transactions for household, their mobility and networks, their activism with respect to public and private matters, household attitudes on women's empowerment, dowry and status, husband's behaviour, on opinion on women status, and their decision making power with respect to fertility and parenthood. Based on a special survey data from rural Bangladesh collected during 1998-99, they come to the conclusion that women's participation in microcredit program has helped increase women empowerment.

2.26 Based on data collected during 2001-03 on SHG-Bank linkage program in two villages of the state of Andhra Pradesh, India, Garikipati (2006) has shown that lending to women help reduce household vulnerability, but the impact on women empowerment is less emphatic. In this context, the study has considered drought related vulnerability, livelihood diversification, entrepreneur behavior, investment, and access to social capital and a composite non-vulnerable index. Empowerment, on the other hand, is measured in terms of women control over household assets, their role in household decisions, their control over major finances and division of domestic chores.

2.27 Ashraf et al (2006) uses randomised control trial of clients as well as appropriate non-clients of the Green Bank of Karaga, a rural bank in Philippines to examine the impact of a commitment savings product on female decision-making power within the household with respect to four categories: expenditure on large purchases, expenditure on personal items, assisting family members and number of children. They have confirmed positive impacts for women having below-median decision-making power in the base line - thus resulting in a shift towards purchase of female-oriented durable goods.

2.28 Although Mahmud et al (2012) does not examine the impact of microfinance on women empowerment, it has made a useful point by looking upon empowerment as a dynamic process whereby women acquire ability to control resources - material, human and social, which in turn confer opportunities and choice for them. It has identified four dimensions of women empowerment – namely, self-esteem, control of resources, decision-making power and mobility outside of home, and related them to four major types of determinants - their demographic, economic and social status and media exposure, as captured by age, asset quintile, schooling, and exposure to TV/Radio. Self-esteem is captured by a number of normative questions about how things ought to be in her opinion, whereas decision-making, mobility and control over resources are based on women's impression about what is happening actually. Thus, decision making power means women has a say in decisions on purchase of furniture and livestock, spending family savings, taking a loan, treatment for sick children, visiting doctor for self, her working outside from home, her visiting father's place, having more children, and using family planning, whereas mobility is measured through incidents of her visiting friends outside the village or visiting hospital or clinic during the last year. Her control over resources is captured by whether or not she has money she can spend as per her wishes (p. 613).

2.29 Anderson (2002) is a unique paper which attempts to link social capital creation capacity of microcredit to its impact on common pool resources. As microfinance tends to change household production and consumption, and also focuses on women, social capital creation as well as collective decision making, it is very natural to raise a question about impact of rural microcredit on relevant common pool resources like irrigation systems, other water resources, fishing pools, grazing lands, and forests. Through e-mail contacts, these authors could get response from 147 microfinance organisations, out of 765 members of the Microcredit Summit. The results seem to suggest that microfinance, if properly ‘directed towards management of CPRs, it may be equally effective’, like income and production enhancement (p.103).

2.30 From this review of literature, it appears that the impact of microfinance varies widely from study to study, thus meaning that the impacts are highly context-specific (Brau and Waller (2004)). As Armendariz and Morduch (2010) argues, even for carefully conducted impact evaluation studies, the impacts are more ‘measured’ than anecdotal evidence would suggest. In the absence of a clear consensus, any fresh study including the present one thus assumes significance in providing additional evidence on presence or absence of such impacts.

2.31 Before closing this chapter, however, it is important to sum up the problems identified in the literature about data and methodology used together with their flaws, as identified by three major reviews - one by Duvendack et al (2011), second by Brau and Waller (2006) and the third by Karlan (2001). Following these authors, we having pointed out the major limitations of prominent papers discussed above in terms of threats to validity of research design as well as methods of statistical analysis (see, Tables 2-3 on p.3d 1 of Duvendack et al (2011)).

Section 3: Observations on Methodology of Impact Assessment of Micro-finance

2.32 There is a general belief in the internal validity and credibility of randomized control trial (RCT) based findings. However, such studies are alleged not to yield ‘credible evidence in a timely and useful manner’ from policy point of view (Duvendack et al (2011), p.44). The last-mentioned authors also point out several threats to internal validity of RCT-based evidence with regard to their randomization procedure, adherence to treatment, attrition (drop-outs and graduates), behavioral responses of participants to randomization, and spill-over and spill-ins: First, unless randomization process is masked to both the agents conducting the study and the clients that they are being treated differently relative to some others in an experiment – i.e., unless disguising is possible, the randomization process tends to suffer. Second, it is very difficult to ensure that the participants are selected prior to non-participants. It raises the fear that control households may be influenced by MFIs or any MFI agents. Third, although the randomization process is supposed to pick up the participants on an intension-to-treat basis, very often the loan officers fail to blindly select participants - that is, totally ignoring certain apparently unobservable characteristics. Fourth, problems in adherence to treatment arises if there are possible but unintended dissimilarities in treatment across treated groups - for example, when loan officers visiting some treatment households more frequently as compared to others. Fifth, if some households, which are a part of the population frame, become subsequently unavailable during sample frame construction, an attrition and response bias creeps in. A 70% response rate, for example, means 30% attrition rate, and so, unless there is clear evidence of uniform characteristics between attrition and response, questions arise about validity of these studies. Sixth, even when control households are not visited by a particular MFI, such households may have been visited and influenced by some other MFIs. Moreover whenever a control household is surveyed, it may, in the absence of appropriate de-briefing, lead to a speculation that these households too will be provided loans and thus may change their behavior. Seventh, spill-overs and spill-ins are likely to take place when information about presence or absence of MFIs in particular locations do flow across observations, and thus influence the behavior of survey households. Finally, although no significant direct (e.g., health, education, subjective well-being) or indirect (impacts on consumption expenditures) impacts are found in these studies, there is still need to measure impacts on a broader set of behavior, including measurement of change in opportunity sets. As a result, it is doubtful whether based on RCT results 'we can accept the null hypothesis of no impact with a high level of confidence' (ibid, p.47).

2.33 The pipeline design generally suffers from non-random allocation and failure to have comparable control groups and drop-outs. Duvendack et al (2011, p.53) has raised the following questions to determine the sanctity of this methodology: whether units of analysis are randomly assigned to treatment/control, whether treated are randomly allocated, whether units are chosen by MFI or whether the samples themselves volunteer or self-select, whether the MFI screen members for loans, whether credit is distributed with group liability or other group selection process, whether the sample includes drop-outs and members who have graduated, whether the sample includes non-participants, whether the control group is chosen by the same process, procedures and conditions, and at the same time as the selection of the treatment group, and whether treatment and control group are chosen from different sets of geographical units within the same population domains through a random process. Naturally, a positive answer to all these questions is next to impossible to achieve in a real world situation where a lots of constraints creep in as historically datum, and the researcher is left with very little option other than applying refined statistical technique to arrive at unbiased results.

2.34 Panel or cross section data before/after and with/without methodology seems to have perused in many cases non-random allocations with the resulting risk of confounding selection and the program placement bias. Although elaborate analytical methods are used to compensate for the above-stated weaknesses in the research methodology, certain fundamental defects seems to have remained, as it can be seen from the following questions raised by Duvendack et al (2011,pp.58-59) in this context: whether the samples are randomly selected, whether sample units are self-selected into microfinance, whether peers play any role in selection of treated units, whether drop-out and graduates are included in treatment group, whether controls are randomly allocated, whether controls are selected at the same time and from the same geographical domain as treatment, and whether the control is adequately large vis-a-vis the treatment group for matching. Once again, as one can see, fully satisfactory answer to all these questions is hard to achieve in reality for understandable reasons.

2.35 The second review article on methodology by Brau and Woller (2004), after covering more than 350 articles came to the conclusion that 'impact assessment requires adoption of research methodologies capable of isolating specific effects out of a complicated wave of causal and mediating factors and high decibels for random environmental noise, as well as attaching specific units of measurement to tangible and intangible impact that may or may not lend themselves to precise definitions or measurement' (ibid, pp. 26-27).

2.36 Karlan (2001) has highlighted the problems in not using an adequate size of dropouts in the control group as well as problems in using new clients as control groups in cross-sectional studies. He argues that failure to accommodate drop outs along with treatment household leads to incomplete sample bias or attrition bias. Besides, there is selectivity bias, arising because of peer selection problem and institutional dynamics, which can be corrected. There is longitudinal study covering static as well as dynamic changes in new clients side by side with the same for treatment groups.

Section 4: Concluding Remarks

2.37 In view of the above-stated critique of the methodology used in MFI impact evaluation, it seems there is not even a single study which can strictly pass the tests – not merely in the context of MFI evaluation, but also in the context of any evaluation in general. Can the real-world afford to stop undertaking some well-intentioned studies just because it is not simply possible (because of resource constraints or otherwise) to follow strictly random experimental designs? Actually, a real-world MFI entrepreneur can quite legitimately try to assess the impact of his treatment and interventions on his clients (rather than trying to assess the impact of MFI treatment vis-à-vis the rest of the world at large), given whatever historical constraints he is subjected to. Just because historical constraints are there in drawing samples as per the strict statistical principles, should we stop undertaking any research study at all, or gather the courage to undertake a cautious and careful study to provide probably some biased and second-best or third-best results on impact assessment with some indication about the direction and sources of bias, so that the real world can at least move on? Needless to add, it is in the latter spirit the current study has been undertaken to unearth some operational clues to assess and improve performance of SHGs and JLGs in the years to come.

Chapter 3

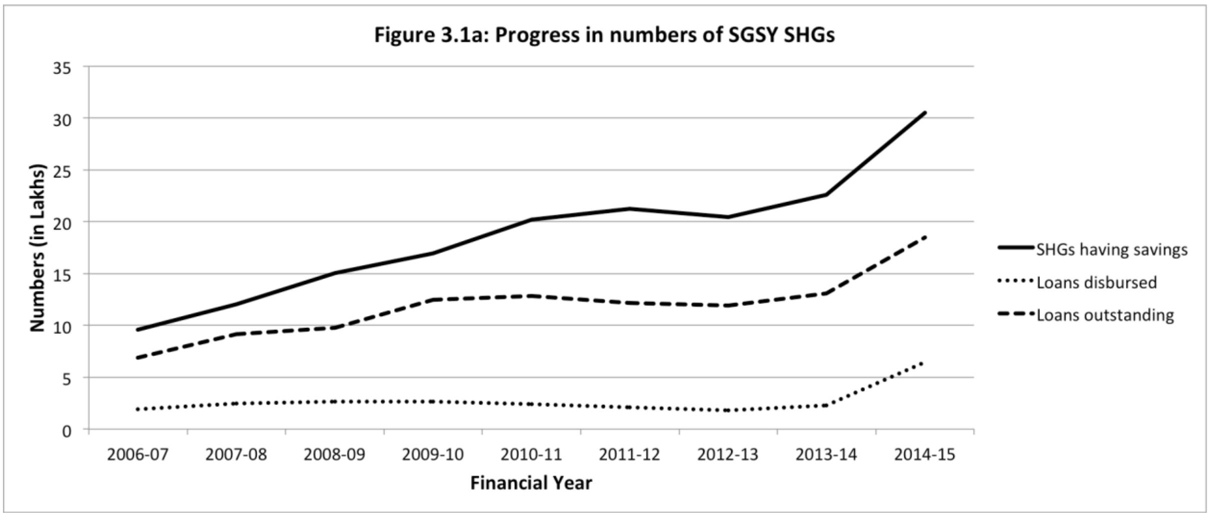
Findings from NABARD's Annual Micro-finance Status Reports

Section 1: Introduction

3.1 Probably NABARD's annual micro-finance status reports are the only source of presumably authentic and relatively exhaustive data on the state of micro-finance in this country. These status reports provide, among other things[1], some basic information on SHG-Bank linkage programme through SGSY (now-a-days NRLM) and NABARD – namely, on the activities of SHGs and MFIs and on innovative steps and support services of stakeholders of this sector. The data provided are based on returns submitted by participant banks like commercial banks (both public and private), RRBs, and cooperative banks. Besides providing data on savings with Banks, credit provided and NPAs across banking agencies and geographical areas, these annual reports also provide NABARD's analysis of the data thus compiled. In this chapter, however, an attempt is made to provide an independent analysis, while having a critical look at the data and the existing analysis. This chapter will also attempt to bring out the potential for publishing these valuable data sets in a more disaggregated form so as to permit more refined analysis and policy making for the future.

3.2 This chapter is organised as follows: Section 2 will describe and analyse the data on SHG-Bank Linkage Programmes supported by SGSY/NRLM and NABARD, while the next section will do the same for data on MFI-Bank Linkage Programmes for the last 9 years. The final section will conclude this chapter.

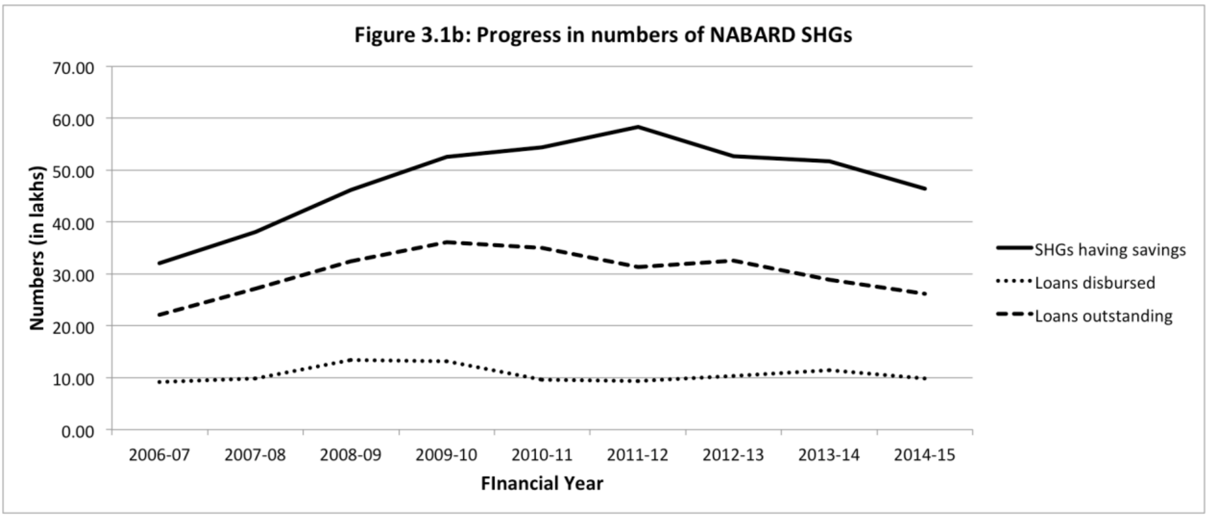
Section 2: Analysis of Secondary Data on SHG-Bank Linkage Programmes

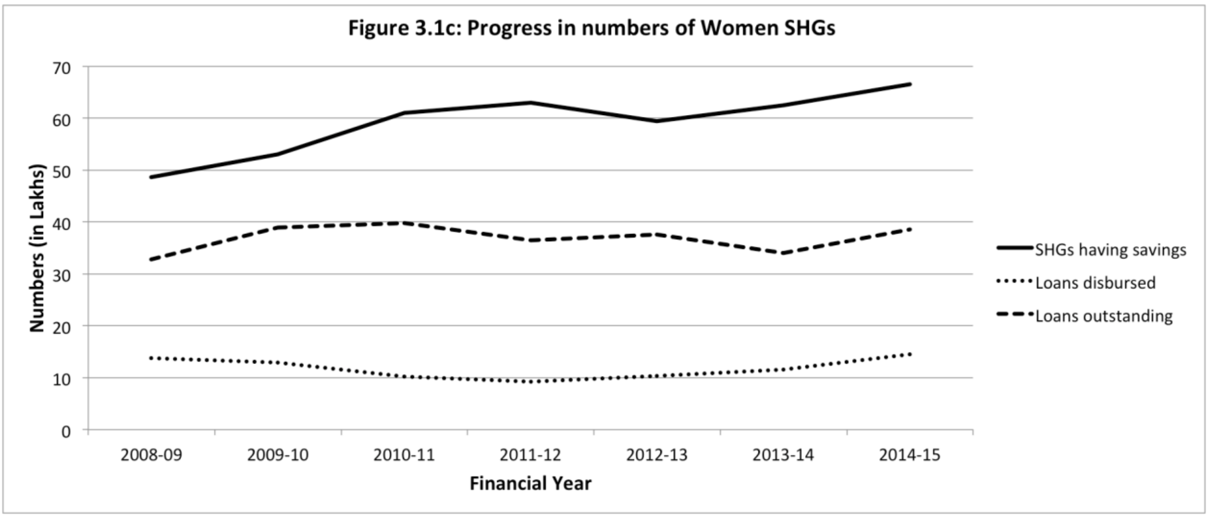


3.3 This section makes use of last nine years data from micro-finance status reports of NABARD to highlight the progress achieved under SHG-Bank Linkage Programme under SGSY/NRLM as well as NABARD. Figure 3.1a has plotted the number of SGSY SHGs for the last nine years. The three curves displayed in this figure show the number of SGSY SHGs having bank linkages, those having loans

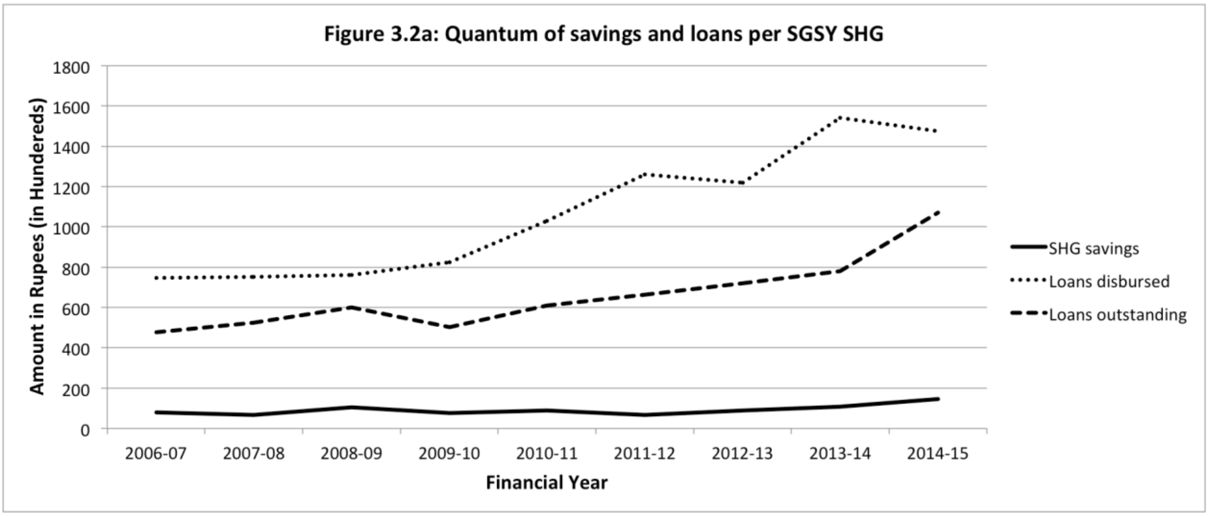
[1] NABARD Status Reports also provide information on MFI-Bank Linkage, as far as available to NABARD, though we fear that these data are far from comprehensive as MFIs access credit from various sources beyond banks and as such these agencies are not bound to provide details to NABARD.

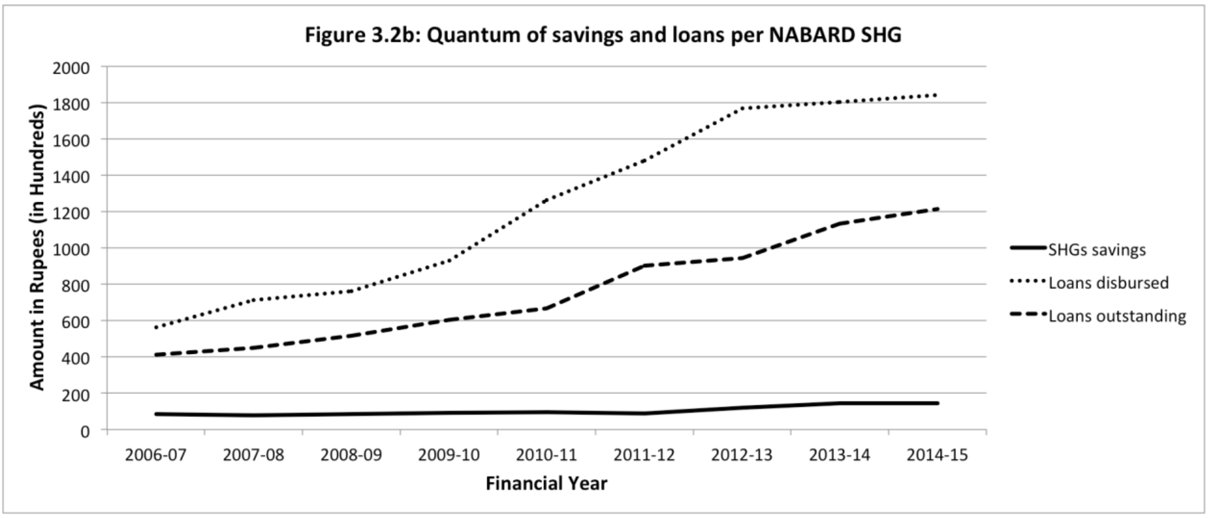
outstanding and those that have been disbursed loans. From this figure it appears that while the total number of SGSY SHGs is increasing at a fairly sharp rate, those with loans outstanding is increasing at a slower rate. The fact that the second curve is lying below the first is probably not a bad sign, but the fact that the second one is slowing down is a matter of concern, if it means decline in business rather than merely in repayment of loans. The curve displaying number of SHGs, which are disbursed loans remains stationary, and it improves slightly beyond 2013-14. This is an area of serious concern, especially when the total number of SGSY-SHGs is increasing at a sharp rate, thus implying an increase in the proportion of SHGs not being disbursed loans. Unfortunately, NABARD's status reports do not draw attention to this aspect of the problem, nor do they provide any explanation for it. We shall come back to this point shortly.

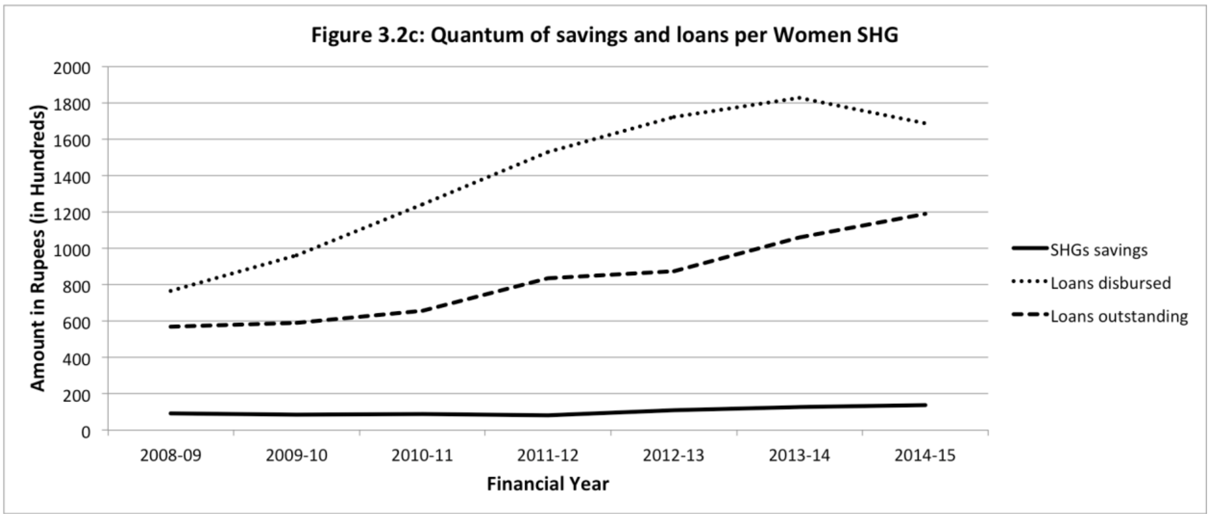




3.4 Figure 3.1b provides a counterpart of Figure 3.1a displaying exactly a similar picture, and thus raising similar concerns for NABARD-promoted SHGs. Once again, a similar pattern is displayed by number of women SHGs, as shown in Figure 3.1c.



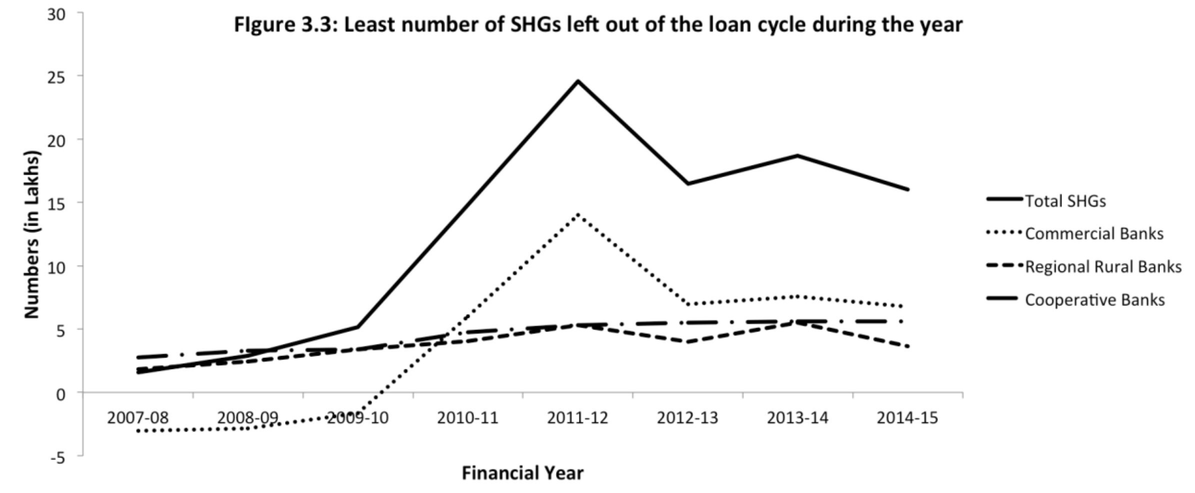




3.5 Figures 3.2a to 3.2c show the quantum of saving with banks, loan outstanding amount and loan disbursement amount per SGSY-SHG, NABARD-SHG and exclusively women SHG, respectively. These figures show that while average saving with banks for these three categories of SHGs is hardly showing any increase over the last seven years even in nominal terms, average outstanding loan figure as well as average fresh loan amount per SHG in nominal terms are displaying steady increase.

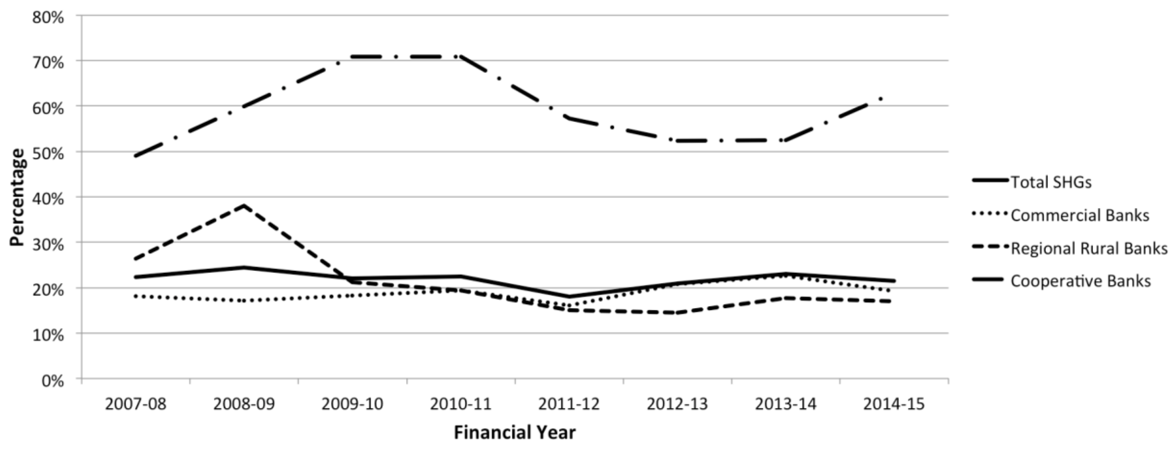
The fact that the curves for average fresh loan amounts are above and growing faster than the same for average outstanding amounts implies that there is net pumping in of money into the economy of the SHGs, presumably generating multiplier effects. The observation that the average SHG saving with banks is fairly constant over the years, in spite of apparent increase in gross SHG savings, means that the SHGs are probably utilizing a larger fraction of their own savings for internal lending, while holding only a fixed amount with banks for precautionary purposes. Although these are apparently welcome features, the fact that the loan outstanding curve grows faster than the fresh lending curve raises concern over timely repayment of past loans. Though banks seem to have kept fresh disbursement curve at a higher level over the loan outstanding curve by pinning hopes on fresh borrowers, the fact remains true that borrowers are generally slow or even delinquent on repayment of their loans, which contradicts the banks' hopes and expectations.

FIgure 3.3: Least number of SHGs left out of the loan cycle during the year



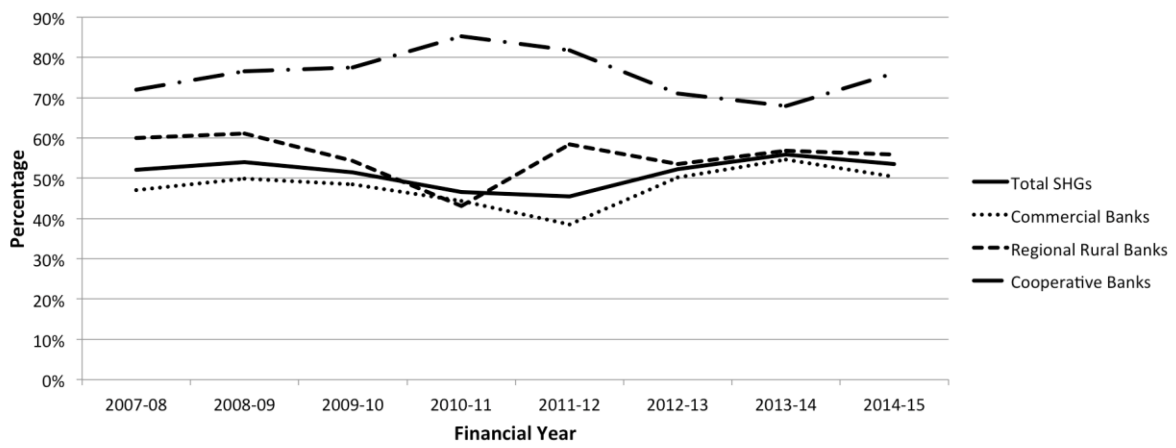
3.6 Figure 3.3 has attempted to plot based on published data of NABARD for the last eight years the number of SHGs having savings with banks, but which did not get any loan during the year, nor did have any loan outstanding during the same year, assuming that there may be an overlap between those getting fresh loans and those having loan outstanding during the same year. The resulting number would thus indicate the least number of SHGs, which in spite of having saving linkages, are getting out of the loan cycle (not clear whether due to demand failure or supply failure) during the year. These figures are displayed separately for all SHGs, and those associated with commercial banks, RRBs and cooperative banks. As this figure shows, the least number of SHGs apparently being left out from the loaning system for whatever reasons is increasing at a very steady rate for commercial banks, especially since 2009-10. Though this figure is increasing also for RRBs and cooperative banks, the rate of growth is milder. Whether the last-mentioned observation is due to better proximity and closeness of RRBs and cooperative banks vis-a-vis their clients as compared to commercial banks is an important hypothesis to test and probe for future policy making.

FIgure 3.4: SHG savings with bank as percentage of loan outstanding

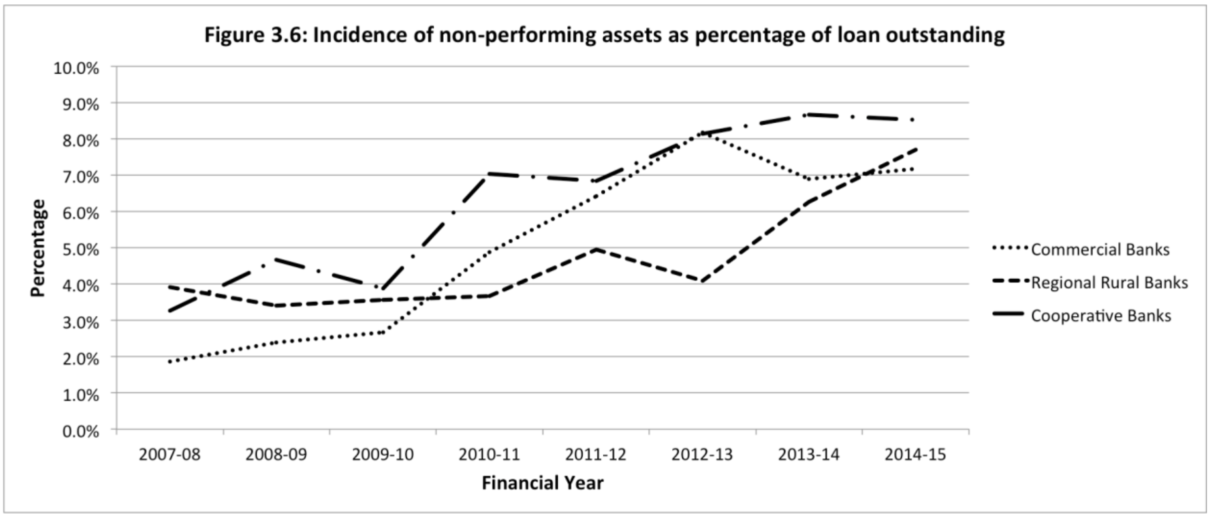


3.7 Figure 3.4 portrays SHG savings with bank as percentage of loan outstanding separately for all SHGs and those under commercial banks, RRBs and cooperative banks. All the curves in this figure display decline since 2010-11. However, the figures are larger for cooperatives than the same for RRBs and commercial banks. Whether this difference is indicative of the fact that SHGs promoted by cooperatives are getting less impetus for internal lending as compared to their counterparts promoted by RRBs and commercial banks is another important hypothesis to test and probe for necessary corrective action.

Figure 3.5: Fresh loans to SHGs as percentage of loan outstanding



3.8 Figure 3.5 displays fresh loans to SHGs as percentage of loan outstanding separately for all SHGs and those under commercial banks, RRBs and cooperative banks. As this figure shows, SHGs under all categories and especially those under commercial banks seem to be displaying steady decline since 2008-09. The percentage figures also show a similar decline for RRBs, though these have shot up during the last year. In case of cooperatives, this figure is steadily increasing till 2010-11, though there is a mild decline during the last year. Interestingly, these percentage figures are considerably higher for cooperative banks as compared to the other two types of organizations, and seem to be the least for commercial banks. It may be attributed to the fact that commercial banks follow the most conservative policy in lending as compared to RRBs, whereas the latter are generally more conservative in this regard relative to cooperative banks, which probably enjoy the maximum level of acquaintance with their customers.



Section 3: Microfinance in SHGs vis-à-vis MFIs

3.9 Figure 3.6 shows the incidence of non-performing assets as percentage of loan outstanding separately for SHGs under commercial banks, RRBs and cooperative banks. As this figure shows, the incidence of NPAs is much higher for cooperatives as compared to the other two categories of lending agencies. Further, it has grown steadily for commercial banks till 2012-13, though it started climbing down during the last two years. For cooperatives, trend in this figure is clearly upward, though there are occasional ups and downs and this figure shows some reversal of trend in the last two years. For RRBs this figure remained nearly steady below 4% till 2010-11, but it started rising steeply since then. NABARD Micro-finance Status Report for 2011-12 also provides region-wise NPAs for bank loans to SHGs for the last three years. During this period, NPAs as percentage of loan outstanding has increased from 2.94% on 31st March, 2010 to 6.09% on 31st March, 2012 for the country as a whole. The trend is upward except in the north and north-eastern regions, where these figures have declined to some extent during 2011-12. As of 31st March, 2012, this figure is highest (13.20%) for the Central Region, followed by 8.22% for the Western Region, 7.28% for the Eastern Region. This figure is still the lowest for the Southern Region (4.98%) and a bit higher for the North-eastern Region (5.17%) as on 31st March, 2012.

3.10 NABARD's Micro-finance Status Report of 2010-11 draws attention to an important aspect of the SHG-Bank Linkage Programme in Table 3.1, which is reproduced from the above stated report[2]. It shows that the number of households already covered as percentage of the estimated number of rural households (see column 9 of Table 3.1) that varies from 0.00 to 473.80, and the same coverage as percentage of estimated number of poor rural households varying from 0.00 to 2069.10 (see column 8 of Table 3.1). While the above stated NABARD report mentions that "the rural household coverage is less than 50 per cent in 19 states, while the coverage shows more than the number of rural households in 7 states (on account of multiple membership)" (*ibid* p.vii). Unfortunately, the next year's status report does not report on this aspect of the SHG-Bank Linkage Programme. At this juncture one can raise a few questions not only about the quality of data reporting, but also about the implementation of the programme, for possible caution in the future. First, as this linkage programme is going on not merely in rural areas, but also in urban and semi-urban areas, one is not

[2] Unfortunately, not possible to generate a counterpart of this table for later years due to unavailability of similar information from NABARD sources.

sure whether estimated number of rural households or poor rural households would be the correct denominator to arrive at the percentage figures in columns 8-9 of Table 3.1. Ideally, one should report the percentage figures separately for rural, semi-urban and urban areas, as coverage areas can clearly be demarcated into these categories following the official definitions. Second, any household, whether poor or not, can join an SHG and enjoy the benefits of SHG as an instrument of development and empowerment. So, it is not clear whether NABARD has captured only BPL families under its definition of 'poor' households. Third, there is a tendency not only on the part of credit-hungry households to get registered under as many SHGs/JLGs as possible to maximize credit inflows, but also on the part of organizers of SHGs/JLGs to take a lenient view towards capturing of clients in order to maximize monetary and non-monetary benefits for them. In this situation, it is not possible for any reader to find out whether unusually large percentage figures as reported above are due to callousness in data collection and reporting, or due to opportunism on the part of the borrowers and lenders under SHG-Bank Linkage Programme. Only careful scrutiny and reporting, as expected from NABARD as well as the state/central machineries of NRLM, can provide a rough but reasonable estimate of the extent of over-coverage of households interested to be part of this movement.

Section 4: Analysis of Secondary Data on MFI-Bank Linkage Programmes

3.11 Banks also provide financial resources to micro-finance borrowers through other institutions. Four different types of MFIs, which get the benefits of MFI-Bank Linkage Programmes, are: (i) NGO-MFIs registered under Societies' Registration Act, 1860 or the Indian Trust Act, 1880;

Table 3.1: State-wise coverage of rural households under SHG-Bank Linkage Programme

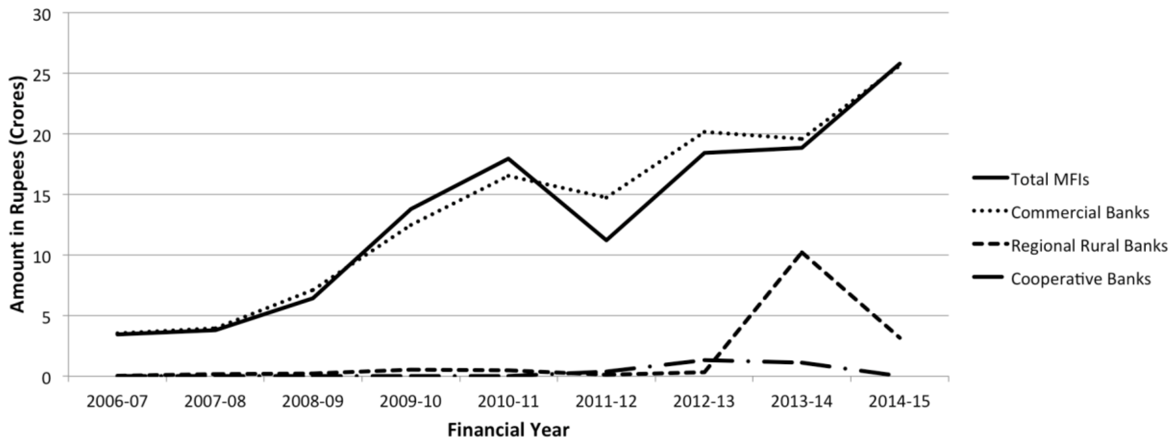
(1) States/Uts	(2) Estimated # of rural house-holds	(3) % shares of entities in (2)	(4) Estimated # of poor rural households	(5) % shares of entities in (4)	(6) # of house-holds already covered	(7) % shares of entities in (6)	(8) % of poor rural households already covered	(9) % of total rural households covered
Andaman Nicobar*	48882	0.03	9776	0.01	61332	0.07	627.30	125.50
Andhra Pradesh	11262358	6.66	2252472	3.23	17249523	19.09	765.80	153.20
Arunachal Pradesh	213833	0.13	71848	0.10	77972	0.09	108.50	36.50
Assam	5356103	3.17	1949622	2.80	2660570	2.94	136.50	49.70
Bihar	18415006	10.89	10257158	14.73	2809720	3.11	27.40	15.30
Chandigarh (UT)*	5801	0.00	1282	0.00	9723	0.01	758.40	167.60
Chhatisgarh	3920732	2.32	2160323	3.10	1226447	1.36	56.80	31.30
Dadra & Nagar Haveli	36605	0.02	17534	0.03	0	0.00	0.00	0.00
Daman & Diu	12066	0.01	5780	0.01	0	0.00	0.00	
Delhi	83864	0.05	13083	0.02	34114	0.04	260.80	40.70
Goa	110283	0.07	30989	0.04	91887	0.10	296.50	83.30
Gujarat	6934163	4.10	2711258	3.89	1588638	1.76	68.60	26.80
Haryana	3306299	1.95	819962	1.18	412355	0.46	50.30	12.50
Himachal Pradesh	1233561	0.73	308390	0.44	541047	0.60	175.40	43.90
Jammu & Kashmir	1826964	1.08	257602	0.37	66458	0.07	25.80	3.60
Jharkhand	5007389	2.96	2583813	3.71	941799	1.04	36.40	18.80
Karnataka	7510506	4.44	2816440	4.04	7892781	8.73	280.20	105.10

Kerala	3491101	2.06	705202	1.01	7153888	7.92	1014.40	204.90
Lakshadweep	2824	0.00	570	0.00	1865	0.00	326.90	66.00
Madhya Pradesh	10507580	6.21	5632063	8.09	1531072	1.69	27.20	14.60
Maharashtra	12309088	7.28	5896053	8.47	7719934	8.54	130.90	62.70
Manipur	379925	0.22	149310	0.21	109924	0.12	73.60	28.90
Meghalaya	473794	0.28	66331	0.10	109620	0.12	165.30	23.10
Mizoram	105807	0.06	24336	0.03	53980	0.06	221.80	51.00
Nagaland	2801372	1.66	280137	0.40	99824	0.11	35.60	3.60
Orissa	6990247	4.13	4250070	6.10	6215124	6.88	146.20	88.90
Puducherry	78868	0.05	18061	0.03	373699	0.41	2069.10	473.80
Punjab	3463360	2.05	765403	1.10	475858	0.53	62.20	13.70
Rajasthan	10308047	6.09	3690281	5.30	2687126	2.97	72.80	26.10
Sikkim	91192	0.05	28999	0.04	5414	0.01	18.70	5.90
Tamil Nadu	7437846	4.40	2789192	4.00	14456886	16.00	518.30	194.40
Tripura	542010	0.32	241195	0.35	373916	0.41	155.00	69.00
Uttar Pradesh	31022204	18.34	13246481	19.02	5533738	6.12	41.80	17.80
Uttaranchal	1405117	0.83	493196	0.71	359897	0.40	73.00	25.60
West Bengal	12442735	7.36	4753125	6.82	7170310	7.93	150.90	57.60
All India	169137532	100.00	69646147	100.00	90366441	100.00	129.80	53.40

Source: Reproduced from NABARD: State of Micro-finance in India, 2010-11, pp.viii-ix.

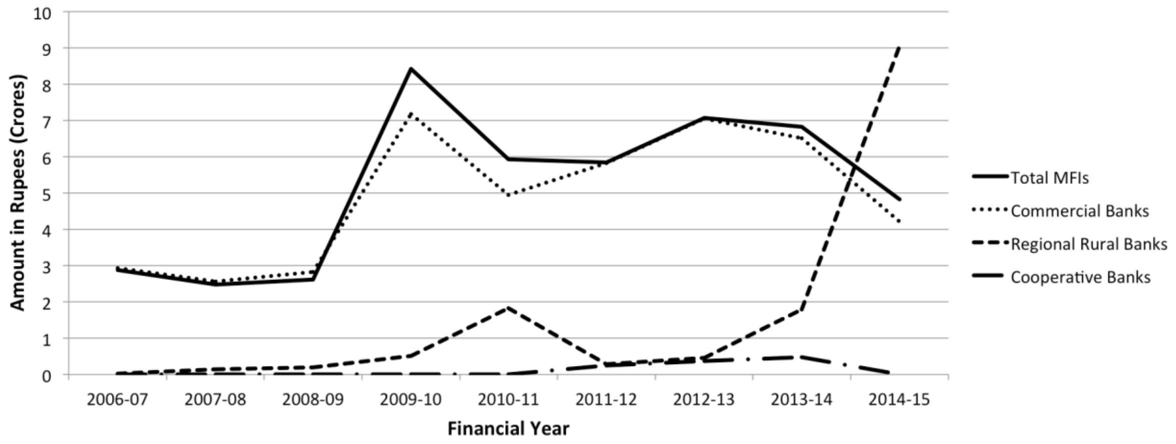
(ii) Cooperative MFIs registered under the State Cooperative Societies' Act/Mutually Aided Cooperatives Societies' Act/Multi-State Cooperative Societies' Act; (iii) NBFC-MFIs (not for profit) incorporated under Section 25 of the Companies Act, 1956; and (iv) NBFC-MFIs (for profit) incorporated under the Companies Act, 1956 and registered with the RBI. During 2011-12 fresh loans have been disbursed to 465 MFIs under this programme, while 1960 MFIs were having loan outstanding with their banks/financial institutions.

Figure 3.7: Average loan amount disbursed per MFI



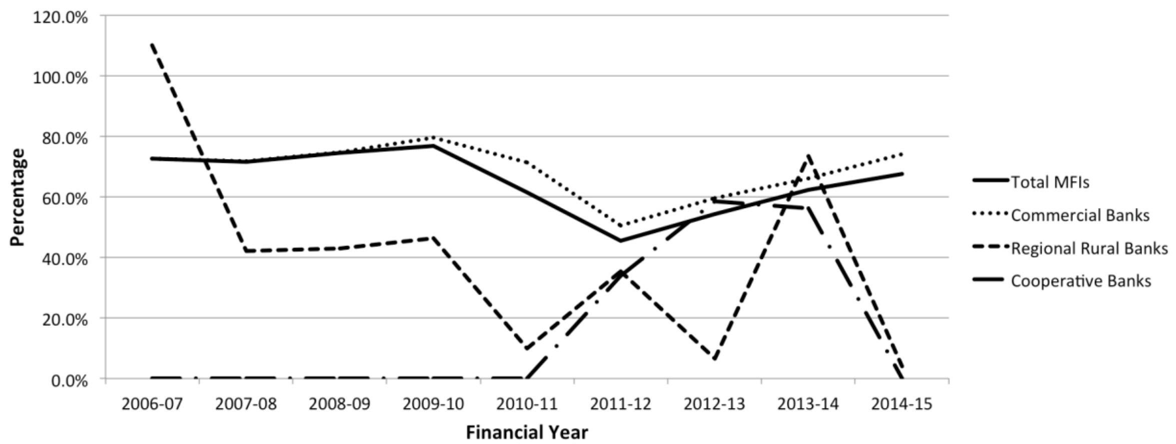
3.12 Figure 3.7 shows average loan amount disbursed per MFI under this linkage programme. The picture displayed in this figure shows that the average loan disbursement has increased steadily from all banks and especially for commercial banks, though these figures have started falling since 2010-11 – maybe because of the AP crisis in October 2010. The figures for RRBs, though still insignificant, have gone up mildly since 2008-09, and have improved again in 2012-13. The figures for coop banks have remained insignificant compared to the rest.

Figure 3.8: Average loan outstanding per MFI



3.13 Figure 3.8 displays average loan outstanding per MFI. This figure shows sharp rise between 2008-09 and 2009-10, and then a momentary decline for commercial bank-funded MFIs for a year, followed by a mild recovery till 2011-12 and rises afterwards. In case of RRBs, though the figures are relatively small, it has increased slightly up to 2010-11, beyond which it has improved significantly. In case of MFIs supported by cooperative banks, this figure, though remaining negligible for all practical purposes, became positive only since 2010-11, but it too seems declining mildly in the last two years. Loan outstanding from MFI for all sources in fact is reaching the peak in 2009-10 just before the Andhra Pradesh crisis.

Figure 3.9: Fresh loans from banks to MFIs as percentage of loan outstanding



3.14 The trend of fresh loans to MFIs as percentage of loan outstanding is a broadly declining one for RRBs from the beginning, though it displays some sign of reversal since 2012-13 (Figure 3.9). For cooperatives, this figure became visible only since 2010-11, reaching its peak in 2012-13 and then with a sharp decline. For commercial banks, this figure has showed a mild rise till 2009-10, beyond which it started declining. Since lending by commercial banks constitutes the largest component in this portfolio, this figure for all MFIs has followed a pattern similar to that for commercial banks.

3.15 Although Figures 3.1 - 3.9 are prepared out of NABARD's Micro-finance Status Reports of 2006-15, it is important to draw attention to the quality of data reporting, its scrutiny and tabulation once again with reference to the table, which is reproduced below as Table 3.2. There are at least two problems with this kind of data. First, as credit is provided in different dates during a year, a loanee may appear not only under loans disbursed during the year, but also as an entity whose loan is outstanding, though not overdue, by the end of the same year. So, there may be an overlap between the number of MFIs that are disbursed loans and those that have loans outstanding, as reported in Table 3.2. As a result, it is not clear to the reader whether these two figures together will constitute the total number of MFIs, which are under the MFI-Bank Linkage Programmes. Consequently, the reader can no way find out from this kind of reporting whether some MFIs are getting out of the loan cycles, as the study has brought out in the context of SHGs in the preceding section. Second, the figures reported in this table are highly unstable. For example, number of MFIs disbursed loans by cooperative banks during 2009-10 is zero, whereas it becomes NA during the next year, but again it shows up as 4 during 2011-12. It appears the reporting system is not mandatory for the MFIs with respect to their banks/financial institutions. As a result, it appears neither the funding agencies nor NABARD have any control over reporting of data, not to speak of ensuring the quality of data. If this suspicion is correct, reporting of data of this quality may do more damage than providing help to this sector. The MFI industry, and especially those MFIs under strict RBI control, must take cognizance of the problem and undertake urgent, pre-emptive steps to resolve this problem to prevent policy failures.

Section 5: Conclusions

3.16 The foregoing analysis makes it amply clear that there is a serious dearth of secondary data on micro-finance related matters. NABARD and SGSOI/NRLM, which are the two main agencies promoting the SHG movement, have tremendous responsibility in making authentic data available for analysis, monitoring and policy-making. Unfortunately, the states have so far failed to produce the requisite data. NABARD which has been trying to put together secondary data on micro-finance, has to go a long way to make their data usable and authentic for the purpose in hand. NBFC-MFIs are extremely reluctant to share their data, though they are making use of public funds in the form of priority sector lending of commercial banks, which are being diverted towards them. Moreover, NBFC-MFIs are often caught in fierce cut-throat competition with each other without knowing the reality or the truth about where they stand. So, both public and private sector banks/agencies promoting SHGs and the NBFC-MFI themselves must arrange to make the relevant data available to the public not only in public interest, but also in their own interests.

Table 3.2: Loans to MFI's by Banks/Financial Institutions

Financing Agency	Period	Loans disbursed to MFIs during the year		Disbursement per MFI	Loan outstanding against MFIs as on 31st March		Outstanding per MFI
		No.of MFIs	Amount (Rs.crore)	Amount (Rs.crore)	No.of MFIs	Amount (Rs.crore)	Amount (Rs.crore)
All Commercial Banks	2008-09	522	3718.93	7.12	1762	4977.89	2.83
	2009-10	645	8038.61	12.46	1407	10095.32	7.18
	2010-11	460	7601.02	16.52	2153	10646.84	4.95
	2011-12	336	4950.98	14.74	1684	9810.98	5.83
	2012-13	368	7422.66	20.17	1769	12467.72	7.05
	2013-14	484	9468.83	19.56	2197	14307.57	6.51

	2014-15	541	13858.64	25.62	4445	18720.61	4.21
Regional Rural Banks	2008-09	59	13.4	0.23	153	31.2	0.20
	2009-10	46	24.14	0.52	103	52.22	0.51
	2010-11	9	4.16	0.46	23	42.01	1.83
	2011-12	113	13.28	0.12	128	37.51	0.29
	2012-13	14	4.58	0.33	153	70.66	0.46
	2013-14	16	163.18	10.20	124	222	1.79
	2014-15	15	47.69	3.18	131	1186.62	9.06
Cooperative Banks	2008-09	NA	NA		NA	NA	
	2009-10	0	0		3	0.01	0.00
	2010-11	NA	NA		NA	NA	
	2011-12	4	1.61	0.40	19	4.75	0.25
	2012-13	3	4	1.33	18	6.83	0.38
	2013-14	4	4.48	1.12	17	7.97	0.47
	2014-15	0	0		0	0	
SIDBI	2008-09	NA	NA		NA	NA	
	2009-10	88	2665.75	30.29	146	3808.2	26.08
	2010-11	2	843.78	421.89	139	3041.77	21.88
	2011-12	12	239.42	19.95	129	1597.11	12.38
	2012-13	41	408.27	9.96	102	1880.63	18.44
	2013-14	41	646.01	15.76	84	1979.9	23.57
	2014-15	33	1283.8	38.90	86	2593.23	30.15
Total by all agencies	2008-09	581	3732.33	6.42	1915	5009.09	2.62
	2009-10	779	10728.5	13.77	1659	13955.75	8.41
	2010-11	471	8448.96	17.94	2315	13730.62	5.93
	2011-12	465	5205.29	11.19	1960	11450.35	5.84
	2012-13	426	7839.51	18.40	2042	14425.84	7.06
	2013-14	545	10282.49	18.87	2422	16517.43	6.82
	2014-15	589	15190.13	25.79	4662	22500.46	4.83

Source: Reproduced from NABARD: State of Micro-finance in India, 2011-12, p.15.

Chapter 4

Findings from Analysis of Primary Data from West Bengal

Section 1: Introduction

4.1 As mentioned earlier in Chapter 1, the study had to be content with collection of primary data from only one state of West Bengal, due to several binding constraints. However, subject to this resource constraint as well as the given objectives, the study has attempted to provide best possible answers on the question of sustainability of SHGs and JLGs by drawing a random sample of 72 groups and 144 borrower households from three selected clusters of this state using a Pipeline Approach, which involves statistical approximation based on fairly reasonable assumptions about the behaviour of the population. Only statistical tables supported by selective Student's t and paired t tests, rather than more rigorous regression equations are prepared to find out whether and to what extent the historical performance of SHGs/JLGs and their clients conform to the notion of sustainability, and what else needs to be done to reach that goal.

4.2 This chapter is organised as follows. Section 2 details the methodology of analysis of primary data as followed in this chapter, explaining why a clear distinction across pre-determined /exogenous, input/output and outcome variables is necessary in evaluation of any intervention measure to avoid confusion between causes (i.e., pre-determined initial conditions or intervention measures), immediate effects (which may be looked upon as direct output from intervention) and final goals (appropriately called outcomes, which constitute the final goal of an intervention). Section 3 attempts to bring out the stylized facts arising out of the statistical tables made out of group level data, while the next section tries to do the same with respect to the tables made out of member household level data. Given the broad parameters of the sample data, three characteristics are identified – namely, whether the group/member corresponds to SHG or JLG, older or newer groups, and reconstituted or non-reconstituted categories within older groups. Analysis of primary data is limited to assessing through t-test whether these three above-stated demarcating variables have any impact on group or individual member household performance. Two types of t-test are performed: first, Student's t-test to see whether or not inter-temporal changes (i.e., before and after joining in group) in relevant output/outcome variables are significantly different from (mostly, greater than) zero; second, paired t-tests to see whether or not spatial changes within the three above-stated demarcating variables are significantly different or not. Thus both inter-temporal and spatial variations in variables are explained only in terms of these three above-stated characteristics, while the underlying variables are classified conceptually into exogenous, input, output and outcome variables to facilitate analysis[1]. This is elaborated in the following sections. The final section summarizes and concludes this chapter.

Section 2: Methodology of Primary Data Analysis

4.3 Often government reporting system highlights financial outlays (and not even application of physical inputs) on its programs as proximate measures of success to the neglect of input-output relations in the direct production process as well as the influence of surroundings in the system, which influence output and especially, outcomes (like poverty alleviation), which a government is mostly interested in. This routine and mechanistic approach often creates disappointment, confusion and camouflages the fault lines, thus perpetuating dismal performance. In sharp contrast and protest to this mindless approach, this study decided to classify observed variables into four broad categories: exogenous and independent ones (X) which often represent initial conditions, for example, at the time of joining SHG/JLG, and thus determine along with inputs/interventions in the process (also independent X variables) the consequences in the form of output and outcome. Input variables which arise from the process are like SHG or JLG loans; output variables, which are generated directly from the process under consideration are, for example, coverage of beneficiaries or effectiveness of training under SHGs/JLGs; and outcome or goal variables, which do not arise directly out of the program or process, but arise through interplay with other system variables to shape the consequences, we are ultimately interested in are, for example, reduction in % of BPL families within SHGs/JLGs in the present context. The outcome variables are the ultimate Y or dependent variables we want to explain, though output variables too are dependent variables, but sometimes these output variables may play intermediate role in shaping the final outcomes. The objective of analysis is to see whether the three demarcating factors identified earlier have any significant effect on output and outcome variables in the system. Impact of these demarcating factors on X variables, too, is studied to find out whether or not these exogenous and input variables are neutral to such factors, or these too are influenced by them. In case of the latter (i.e., exogenous

[1] The reader must however be alerted at this stage that t-tests are neither necessary, nor sufficient conditions to ensure that a demarcating variable has true significant impact on the explained variables, whose variations are being analyzed - for the simple reason that other explanatory variables, which are simultaneously varying may exert positive or negative impact on the explained variables to either support or even counteract and neutralize the t-test results. This limitation, as pointed out in the introductory chapter, couldn't be removed through application of a rigorous multivariate regression analysis in spite of best wishes and long waiting in the absence of requisite quality of research assistance support.

or input variables vary significantly across the demarcating factors), variation in dependent variables Y may also be partly attributed to variation in such X variables[2].

4.4 Through intuitive analysis, the study has identified several exogenous, input, output and outcome variables based on collected primary data at group and member household levels, as displayed in Charts 4.1 and 4.2a-b, respectively. Panels A, B, C and D under Chart 4.1 enlist the exogenous, input, output and outcome variables at group level, respectively. While Chart 4.2a enlists only exogenous, input and output variables at individual member household level, Chat 4.2b spells out the outcome variables at multifarious layers, given our concern over sustainability of groups and group members.

Chart 4.1: Categorization of variables at group level

Panel A: Exogenous (X) variables		**Panel B: Input variables (X)**	
GAGE	Age of the group in years	AVLN	Average loan/member from Bank/NBFC
PCUPC	% of Hindu upper caste in group	AVMT	Average # of group meetings per annum
PCSCE	% of SC/ST/OBC in group	AVATPC	Average % attendance in group meetings
PCILLJ	% illiterate members at joining	AVGNT	Average grant in Rs per group
PCBPLJ	% BPL members at joining	AVTRN	Average man days of training rec'd from all sources per year
PCLABJ	% labor members at joining	AVTNN	Average training days from NGO/NBFC per year
Panel C: Output variables (OUP)		AVVTE	Average no of visits to Bank/NBFC to get one successful loan
PCMEM	% loanee member per year	AVVIP	Average no of visits of important personnel from NGO/NBFC per year
EFFTN	% effectiveness of training (formal & informal)	AVEXP	Average annual external expert visits through NGO/NBFC
PCTBEN	% stipulated benefits realized from group	DELAY	Months between joining & first external loan (from Bank/NBFC)
GASUC	% share of group activity successfully continuing		
Panel D: Outcome (OUC) variables			
PCREP	% loans repaid per year	DIFLAB*	Difference in % labor before & after
DIFILL*	Difference in % illiterate before & after	CBEHAV	Change in higher organization's behavior towards group
DIFBPL*	Difference in % BPL before & after		

Note: Only starred (*) variables indicate intertemporal change between now and formation of group.

4.5 The methodology followed in Section 3 is to examine impact differences between (i) SHGs and JLGs, (ii) newer and older groups, and (iii) reconstituted and non-reconstituted groups on group level exogenous variables in the first place to find out whether and to what extent the sample drawn are similar or different at the base level. The base level exogenous features examined are group age

[2] Unfortunately, for reasons given earlier, we are not in a position to perform multivariate regression analysis to determine unambiguously the impact and its extent of all X variables (beyond the three parameters as mentioned above) on all Y variables – whether output or outcome in nature.

in years (GAGE), % of Hindu upper caste (PCUPC), % of scheduled caste/tribe and other backward castes (PCSCE), % of illiterate members at joining (PCILLJ), % of BPL members at joining (PCBPLJ), and % of exclusively labor members at joining (PCLABJ) within groups. Then impact differences are assessed on variables which may be termed as input variables. The input variables identified are: average annual loan per member from Bank/NBFC (AVLN), average number of group meetings per annum (AVMT), average % attendance in group meetings (AVATPC), average group grant received per annum (AVGNT), average annual man-days of training received from all sources (AVTRN) and from NGO/NBFC (AVVTE), average number of annual visits of important personnel from NGO/NBFC (AVVIP), average annual number of outside expert visits through NGO/NBFC (AVEXP), time delay in months between joining in group and first external loan (DELAY) on the presumption that these input factors are likely to influence performance. The objective of this assessment is to see if there are significant differences in input application. Four output factors, which seem to result directly from application of inputs, are identified: % of loanee members in group (PCMEM), % effectiveness of training imparted as assed by groups (EFFTN), % of stipulated benefits realized (PCTBEN) and % share of group activity successfully continuing (GASUC). Five outcome variables are identified at group level, which don't arise directly as output from application of inputs through SHG/JLG, but result from interaction with several other factors: % loan repaid (PCREP), difference in % illiteracy (DIFILL), % of BPL (DIFBPL), % of labor member (DIFLAB) and change in higher-tier organization's attitude towards members in group (CBEHAV) between joining and now. Attempts are made through Student's t and paired t tests whether the demarcating parameters like belonging to SHG vs. JLG, or newer vs. older groups, or reconstituted vs. non-reconstituted groups make any significant difference to the relevant variables – namely, whether the underlying intertemporal/spatial (i.e., across two categories) changes are significantly different or not. As delays in availability of loans to SHGs are found to be especially large, a more systematic analysis of the different components of such delays are also made in this section to throw further light on this matter.

4.6 As Charts 4.2a-b below indicate, a similar exercise at client level is attempted in Section 4 below. Here too observed data is categorized into exogenous, input/output and outcome variables – the first two in Panels A and B of Chart 4.2a, while the different modules of Panel C in Chart 4.2b attempts to gauge household level outcomes or performances in terms of changes in basic family attributes – its demography and education (Panel I), family expenditure pattern (Panel II), its food security, diet and clothing status (Panel III), its tangible and intangible asset holding (Panels IV & V), its savings and insurance position (Panel VI), its income together with income composition (Panel VII), access to credit sources and broad pattern of credit use (Panel VIII), status of micro-business enterprise (Panel IX) and the nature of family and social dynamics (Panel X). The details about the comprehensive type of variables constructed and analysed based on the primary data collected are described Charts 4.2a-b below. As mentioned earlier, while paired t-tests are performed on all these variables after spatial classification of households into their belonging into SHG vs. JLG, younger vs. older categories, and reconstituted vs. non-reconstituted categories (within older groups) to see the implications of these three important attributes, Student's t-test is performed only on those variables, which capture inter-temporal changes between now and the time they had joined the groups to ascertain whether or not these changes are significantly different from or larger than zero.

Chart 4.2a: Categorization of exogenous & input/output variables at member household level

Panel A: Exogenous (X) variables		**Panel B: Input/output variables**	
CREL	Caste & Religion	PNVISIT	Average annual visits by office staff to member residence
DURMEM	Duration of membership in years	BEHAVE	Behavior of organization's staff toward member (0-4)
FAMMJ	# of family members at joining	OTHTSL	# of other loans at present
PCEARNJ	% earning members at joining	CUMLOAN**	Cumulative loan amount (Rs) till last cycle
PCSTUDJ	% students in family at joining	AVLOAN**	Average annual loan amount (Rs) till last cycle
PCSTUDFJ	% female students in family at joining	OUTLOAN**	Outstanding liability (Rs) (i.e. loan plus interest), till last cycle
PCSKILLJ	% members with special skill at joining	AVOUT**	Average annual outstanding liability amount (Rs)
PCCHWOJ	% children working outside at joining		
PCCHWIJ	% children working inside at joining		

***Note: while the first 3 variables in Panel B can be interpreted as exclusive inputs from the side of the SHGs/JLGs, this is not true of the last 4 star-marked variables, which may be looked upon as output variables, as they involve interaction between the members and their groups, rather than unilaterally decided by the supply side.*

Chart 4.2b: Categorization of outcome variables at member household level

Module I: Change in Demography & Education		**Module II: Expenditure Status after the change**	
DEXTEND***	Dummy for change in extended family status (-1, 0, 1)	FOODYE	Average yearly expenditure on Food
DEARNM***	Increase in % of earning members in family	CLOTHYE	Average yearly expenditure on Clothing
DSTUDM***	Increase in % of male students in family	EDUYE	Average yearly expenditure on Education
DSTUDF***	Increase in % of female students in family	HELTHYE	Average yearly expenditure on Health
DMAXEDM***	Increase in index of maximum education in male students	REPAYYE	Average yearly expenditure on Loan Repayment
DMAXEDF***	Increase in index of maximum education in female students	PCCON	% share of consumption in expenditure reached
DSPSKILL***	Increase in % of members with special skills	PCHLEDU	% share of health & education expenditure arrived at
DCHLDWO***	Increase in % of children in family working outside	PCREPAY	% share of loan repayment expenditure arrived at
DCHLDWF***	Increase in % of children in family enterprise		

Module III: Status of family food security, diet & clothing		Module IV: Improvement in tangible capital assets	
FSTAT	Current food security status (0,1)	ASSTDUM***	Dummy for improvement in non-productive household assets (0,1)
DIETDUM***	Dummy for any improvement in diet (0,1)	PCASST	% diversification in types of non-productive household assets
CLTHDUM***	Dummy for any improvement in clothing (0,1)	PRODDUM***	Dummy for improvement in any productive asset (0,1)
PCDIET	% components dietary improvement achieved	PCPROD	% diversification in types of productive assets
PCCLTH	% components of clothing improvement achieved	AGRIDUM***	Dummy for any improvement in agriculture assets (0,1)
		LIVEDUM***	Dummy for any improvement in livestock assets (0,1)
		NFRDUM***	Dummy for any improvement in non-farm assets (0,1)
		MACHDUM***	Dummy for any improvement in machinery assets (0,1)
Module V: Holding of intangible/social capital assets		**Module VI: Improvement in saving & insurance coverage**	
FAMDUM***	Dummy for improvement in familiarity status (0,1)	SAVDUM***	Dummy for any improvement in savings (0,1)
NETDUM***	Dummy for improvement in social networking (0,1)	INSDUM***	Dummy for any improvement in insurance (0,1)
PCFAM	% diversification in familiarity with different key functionaries	PCSAV	% diversification in saving types
PCNET	% diversification in networking with key social bodies	PCINS	% diversification in insurance types

*Note: Wherever applicable, variables marked *** stand for intertemporal changes between joining in group and now.*

Chart 4.2b (contd…): Categorization of outcome variables at member household level

Module VII: Current composition & overall improvement in income		Module VIII: Improvement in access to sources of credit and incidence of its differential use	
PCAGINC	% share of agricultural income achieved	IMFOR***	% improvement in share of credit from formal sources
PCLAINC	% share of labor income achieved	IMSFOR***	% improvement in share of credit from semi-formal sources
PCNFINC	% share of non-farm income achieved	IMINFOR***	% improvement in share of credit from informal sources
PCSEINC	% share of service income achieved	FORBB	% share of formal source achieved
PCINC***	% improvement in income	SFORBB	% share of semi-formal source credit achieved
		INFORBB	% share of informal source credit achieved
		LUSDUM	Incidence of loan use for both consumption and production vis-à-vis consumption only
Module IX: Status of business enterprise		**Module X: Improvement in family & social dynamics**	
PCPROB	% of different problems faced by enterprise	SPREL***	Improvement in spousal relationship (-1,0,1)
AVGSALE	Average sales per month	FAMREL***	Improvement in member's relationship with family members other than spouse (-1,0,1)
CVSALE	Coefficient of variation for sales per month	NEBREL***	Improvement in neighborly relationship (-1,0,1)
AVGPRF	Average profits per year	CCPART	Change in participation in community social/religious/cultural activities (-1,3)

CVPRF	Coefficient of variation for profits per year	PCSPOUS	% dimensions of improved spousal relationship
PCPRFUS	% of avenues where profit utilized	PCINTRA	% dimensions of improved intra-family relationship
PCWAYS	% of different ways changes made to enterprise	PCFEST	% order of participation in community activities
		PCGMEET	% of different reasons group meetings are liked now-a-days
		POWCRM***	Improvement in member's decision-making power in family credit matters (-1,0,1)
		POWEXM***	Improvement in member's decision-making power in family expenditure related matters (-1,0,1)
		POWCLM***	Improvement in member's decision-making power in children related matters (-1,0,1)

*Note: Wherever applicable, variables marked *** stand for intertemporal changes between joining in group and now.*

Section 3: Findings from Analysis of Group Level Data

4.7 This Chapter has attempted to provide best possible answers on the question of sustainability of SHGs and JLGs by drawing a random sample of 72 groups and 144 borrower households from three selected clusters of the state of West Bengal using a Pipeline Approach, which involves statistical approximation based on fairly reasonable assumptions about the behaviour of the population. Only statistical tables supported by selective Student's t and paired t tests, rather than more rigorous regression equations are prepared to find out whether and to what extent the historical performance of SHGs/JLGs and their clients conform to the notion of sustainability, and what else needs to be done to reach that goal[1]. The methodology followed for primary data analysis made a clear distinction across pre-determined/exogenous, input/output and outcome variables in evaluation of any intervention measure to avoid confusion between causes (i.e., pre-determined initial conditions or intervention measures), immediate effects (which may be looked upon as direct output from intervention) and final goals (appropriately called outcomes), unlike in many evaluation studies of government programs, where nominal outlays and not even application of physical inputs and efforts are cited as measures of program output. Given the broad parameters of the sample data, three characteristics are identified – namely, whether the group/member corresponds to SHG

[1] This is to remind those who have still high faith in relevance of t-tests that such tests are neither necessary, nor sufficient conditions to ensure significant effect of an independent variable on a dependent one not merely because there is almost always a set of other independent variables which instead of remaining constant do exert positive or negative influence over the dependent variable, but also because the choice of dependent and independent variables must pass through rigorous statistical tests rather than being based on mere presumptions.

or JLG, older or newer groups, and reconstituted or non-reconstituted categories within older groups[2]. Analysis of primary data is limited to paired-t testing of hypotheses that these three above-stated demarcating variables have any impact on group or individual member household performance. Two types of t-tests are performed: first, Student's t-test to see whether or not inter-temporal changes (i.e., before and after joining in group) in relevant output/outcome variables are significantly different from (mostly, greater than) zero; second, paired t-tests to see whether or not spatial changes within the three above-stated demarcating variables are significantly different or not.

4.8 In group level analysis, the base level exogenous features examined are group age in years (GAGE), % of Hindu upper caste (PCUPC), % of scheduled caste/tribe and other backward castes (PCSCE), % of illiterate members at joining (PCILLJ), % of BPL members at joining (PCBPLJ), and % of exclusively labor members at joining (PCLABJ) within groups. The input variables identified at group level are: average annual loan per member from Bank/NBFC (AVLN), average number of group meetings per annum (AVMT), average % attendance in group meetings (AVATPC), average group grant received per annum (AVGNT), average annual man-days of training received from all sources (AVTRN) and from NGO/NBFC (AVVTE), average number of annual visits of important personnel from NGO/NBFC (AVVIP), average annual number of outside expert visits through NGO/NBFC (AVEXP), time delay in months between joining in group and first external loan (DELAY) on the presumption that these input factors are likely to influence performance. Four output factors, which seem to result directly from application of inputs, are identified: % of loanee members in group (PCMEM), % effectiveness of training imparted as assed by groups (EFFTN), % of stipulated benefits realized (PCTBEN) and % share of group activity successfully continuing (GASUC). Five outcome variables are identified at group level, which don't arise directly as output from application of inputs through SHG/JLG, but result from interaction with several other factors: % loan repaid (PCREP), difference in % illiteracy (DIFILL), % of BPL (DIFBPL), % of labor member (DIFLAB) and change in higher-tier organization's attitude towards members in group (CBEHAV) between joining and now. Attempts are made through Student's t and paired t tests whether the underlying intertemporal/spatial (i.e., across two categories) changes are significantly different or not. As delays in availability of loans to

[2] Reconstitution is a property of older groups, which sometimes become defunct due to lack of cohesion within the group often leading to dropping out of some members. When such groups are revived through entry of fresh members and/or straightening out of prior problems, they are called re-constituted groups. Obviously, beneficial group effects would often get truncated for re-constituted as compared to non-reconstituted groups. So, it becomes an interesting point to check whether and to what extent reconstituted groups perform as compared to their non-reconstituted counterparts.

SHGs are found to be especially large, a more systematic analysis of the different components of such delays are also made in this section to throw further light on this matter.

4.9 A similar exercise is made at client level by categorizing observed data into exogenous, input/output and outcome variables. Household level outcomes or performances are judged in terms of changes in basic family attributes – its demography and education (Panel I), family expenditure pattern (Panel II), its food security, diet and clothing status (Panel III), its tangible and intangible asset holding (Panels IV & V), its savings and insurance position (Panel VI), its income together with income composition (Panel VII), access to credit sources and broad pattern of credit use (Panel VIII), status of micro-business enterprise (Panel IX) and the nature of family and social dynamics (Panel X). While paired t-tests are performed on all these variables after spatial classification of households into their belonging into SHG vs. JLG, younger vs. older categories, and reconstituted vs. non-reconstituted categories (within older groups), Student's t-test is performed only on those variables, which capture inter-temporal changes between now and the time they had joined the groups to ascertain whether or not these changes are significantly different from or larger than zero.

4.10 The major findings arising out of group level analysis are as follows:

- While seeking to find out whether or not SHGs and JLGs are significantly different in terms of important initial characteristics like their age, caste and religious composition, extent of illiteracy, BPL membership and extent of exclusively labour households, it is found that only composition of higher caste Hindu members is significantly higher and composition of BPL members significantly lower for JLGs as compared to their SHG counterparts. It means SHG and JLG groups can be treated as similar in terms of their initial attributes except for these two characteristics, implying that NBFC-promoted JLGs seem to have attracted relatively more of higher caste Hindu members and less of exclusively labour households than SHGs. This statistically significant bias of JLGs vis-à-vis SHGs ought to be kept in mind while interpreting observed differences in performances of these groups (Table 4.1a). While assessing impact of older groups (2 years and above in existence) vis-à-vis newer ones (less than 2 years in existence), no significant difference is found in initial exogenous variables, except by definition, in terms of duration (Table 4.1b). Between old reconstituted and old non-reconstituted groups, again, there is no significant difference is found in initial conditions, except in terms of their duration (Table 4.1c)[3].

[3] In both cases it is significantly larger for older and old non-reconstituted groups.

Table 4.1a: T-test results on relevant group level exogenous (X) variables between SHGs & JLGs									
		Values for SHG (n=36)			Values for JLG (n=36)				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
GAGE	Age of the group in years	2.00	6.61	13.00	1.00	6.28	13.00	0.48	0.63
PCUPC	% of Hindu upper caste in group	0.00	21.53	100.00	0.00	36.15	100.00	-1.71	0.09
PCSCE	% of SC/ST/OBC in group	0.00	60.44	100.00	0.00	51.67	100.00	0.91	0.36
PCILLJ	% illiterate members at joining	0.00	10.97	63.64	0.00	6.43	50.00	1.31	0.19
PCBPLJ	% BPL members at joining	0.00	63.90	100.00	0.00	40.35	100.00	3.04	0.00
PCLABJ	% labor members at joining	0.00	29.79	100.00	0.00	28.04	100.00	0.24	0.81

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.1b: T-test results on group level exogenous (X) variables for younger vs older groups									
		Values for younger groups (n1=6)			Values for older groups (n2=66)				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
GAGE	Age of the group in years	1.00	1.50	2.00	3.00	6.89	13.0	-13.76	<.0001
PCUPC	% of Hindu upper caste in group	0.00	41.00	100.0	0.00	27.73	100.0	0.67	0.53
PCSCE	% of SC/ST/OBC in group	0.00	33.33	100.0	0.00	58.62	100.0	-1.15	0.30
PCILLJ	% illiterate members at joining	0.00	6.41	38.46	0.00	8.90	63.63	-0.37	0.72
PCBPLJ	% BPL members at joining	0.00	48.77	100.0	0.00	52.43	100.0	-0.20	0.32
PCLABJ	% labor members at joining	0.00	32.92	100.0	0.00	15.83	100.0	1.00	0.36

Note: The number of observations for SHG (n1) and JLG (n2) each is 36 for all variables except AVATPC and DELAY, in which cases (n1,n2) are (32,19) and (29,36), respectively. T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.1c: T-test results on relevant group level exogenous (X) variables between old reconstituted & old non-reconstituted groups									
		Values for old reconstituted groups (n=13)			Values for old non-reconstituted groups (n=53)				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
GAGE	Age of the group in years	3.00	5.69	8.00	3.00	7.19	13.0	-2.53	0.02
PCUPC	% of Hindu upper caste in group	0.00	32.92	100.00	0.00	26.46	100.0	0.57	0.58
PCSCE	% of SC/ST/OBC in group	0.00	50.77	100.00	0.00	59.93	100.0	-0.72	0.48
PCILLJ	% illiterate members at joining	0.00	10.86	50.00	0.00	8.43	63.64	0.43	0.67
PCBPLJ	% BPL members at joining	9.09	45.91	100.00	0.00	54.03	100.0	-0.84	0.41
PCLABJ	% labor members at joining	0.00	17.81	100.00	0.00	15.34	100.0	0.28	0.78

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- In terms of provision of a disciplined system of inputs like loan per member, holding of group meetings, ensuring attendance in group meetings, supply of grants and trainings, number of visits to bank/NBFC required per successful loan, arrangement of internal monitoring and exposure to expert visits and time required to provide external loan after starting of the group, which are likely to affect performance in terms of immediate results (referred to as output from the process) as well as desired outcomes, the attributes where JLGs, being for-profit institutions, seem to have done significantly better than non-profit and government process-dependent SHGs, are: supply of average size of loan per member per annum (Rs.8917 vs. Rs.1259), number of member trips to NBFC for a successful loan (0 vs. 1.23 for SHGs), average annual monitoring (13.89 days vs. 0.03 days), and much quicker delivery of external loan (0.67 months vs. 22.41 months). The only attribute where SHGs have contributed significantly better than JLGs is in average size of grant given per group (Rs.1593 vs. Rs.29.53), which may simply mean that SHGs are being tempted more than their counterpart JLGs through supply of paltry amount of assistance to some of them! (Table 4.2a). In terms of application of process inputs, though older groups seem to have received in general (i.e., in most of the identified parameters) more favourable treatment than the younger ones, it is statistically significant only in terms of training days in general (AVTN) and training from promoting organizations (AVTNN) (4.07 vs. 1.57 and 0.24 vs.0.00, respectively), and average interactions with promoting organizations (AVINT) or number of visits of important personnel (AVVIP) (5.76 vs. 0.00, and 7.59 vs. 0.00, respectively). Thus, application of inputs seems to have stabilized at higher level for older groups. Newer groups, however, are significantly better off compared to older ones in terms of easier receipt of loans, as measured by incidence of visits for a successful loan (RVISIT), as better treatment of newer groups in providing loans is expected (0.17 vs. 0.60) (Table 4.2b). Among the various inputs, average annual interactions of NGO/NBFC with group (AVINT) and average number of annual visits of important personnel from NGO/NBFC are significantly larger for old non-reconstituted groups than old reconstituted groups. The reverse is true for only average annual training days from NGO/NBFC – apparently to put more efforts towards reconstituted groups (Table 4.2c).

Table 4.2a: T-test results on relevant group level input (INP) variables between SHGs & JLGs

		Values for SHG (n=36)			Values for JLG (n=36)				
Variable	Definition	min	mean	max	min	mean	max	T value	P value
AVLN	Average loan per member from Bank/NBFC	0	1259	5805.2	0.00	8916.9	24231	-8.25	0.00
AVMT	Average number of group meetings per annum	0.00	25.62	52.00	0.00	31.32	53.00	-1.49	0.14
AVATPC	Average % attendance in group meetings	8.00	84.27	100.00	77.50	89.13	100.00	-1.26	0.21
AVGNT	Average grant in Rs per group	0.00	1593	5000.0	0.00	29.53	1063.0	4.65	0.00
AVTRN	Average man days of training rec'd from all sources	0.00	4.75	18.00	0.00	2.98	16.00	1.33	0.19
AVTNN	Average training days from NGO/NBFC per year	0.00	0.23	2.00	0.00	0.21	1.00	0.22	0.83
AVVTE	Average no of visits to Bank/NBFC to get one loan	0.00	1.23	3.25	0.00	0.00	0.00	6.69	0.00
AVVIP	Average no of visit of important personnel from NGO/NBFC per year	0.00	0.03	0.50	0.00	13.89	78.80	-3.32	0.00
AVEXP	Average annual expert visits through NGO/NBFC	0.00	0.01	0.25	0.00	0.00	0.00	1.00	0.32
DELAY	Months between joining & first external loan	6.00	22.41	41.00	0.00	0.67	6.00	9.78	0.00

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.2b: T-test results on relevant group level input (INP) variables for younger vs. older groups

		Values for younger groups (n1=6)			Values for older groups (n2=66)				
Variable	Definition	min	mean	max	min	mean	max	T value	P value
AVLN	Average loan per member from Bank/NBFC	150	1158	2600	0.00	1256	3000	-0.26	0.80
AVMT	Average number of group meetings per annum	0.00	50.0	52.0	52.0	52.0	52.0	-0.07	0.95
AVATPC	Average % attendance in group meetings	38.5	85.19	100.0	8.00	86.79	100.0	-0.16	0.87
AVGNT	Average grant in Rs per group	0.00	1667	5000	0.00	733.4	5000	0.87	0.42
AVTN	Average man days of training rec'd	0.00	1.67	4.0	0.00	4.07	18.0	-2.45	0.02
AVTNN	Average training days from NGO/NBFC per year	0.00	0.00	0.00	0.00	0.24	2.0	-3.80	0.0003
AVVTE	Average no of visits to Bank/NBFC to get one loan	0.00	0.83	2.0	0.00	0.59	3.25	0.57	0.58
RVISIT	Incidence of visits for obtaining loans	0.00	0.17	1.0	0.00	0.60	4.0	-2.19	0.05
AVINT	Average annual interactions with NGO/NBFC	0.00	0.00	0.00	0.00	5.76	85.6	-2.78	0.007
AVVIP	Average no of visit of important personnel from NGO/NBFC per year	0.00	0.00	0.00	0.00	7.59	78.8	-3.14	0.003
AVEXP	Average annual expert visits through NGO/NBFC	0.00	0.00	0.00	0.00	0.004	0.25	-1.0	0.32
DELAY	Months between joining & first external loan	0.00	6.33	18.0	0.00	11.97	41.0	-1.54	0.16

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- Of four different output measures of SHG/JLG lending process identified in this study – namely, extent of loanee members within group (PCMEM), extent of effectiveness of training of all kinds (as perceived by the group called EFFTN), extent of stipulated benefits realized by group (PCTBEN), and % share of group activity, if any, which is successfully continuing (GASUC), it is no wonder that all these measures are, on average, higher for SHGs as compared to JLGs, though there none of these differences is statistically significant due to huge variations within and across groups of either category. Only in case of % loanee members within group, the average figure is significantly higher for JLGs than SHGs (81.97 vs. 47.38), which is understandable due to strong profit motivation of NBFCs coupled with their fairly autonomous operations free of government and/or bank bureaucracy (Table 4.3a). Among the same four output indices identified, the older groups seem to have performed significantly better, as expected, in terms of effectiveness of training in general (EFFTN) (51.14 vs. 33.33 for newer groups). However, the reverse is true in terms of % stipulated benefits realized (PCTBEN) (98.33 for newer groups vs. 88.64 for older ones) which may be due to greater efforts being put into newer groups (Table 4.3b). In terms of these output indices, no significant difference is observed between old reconstituted and old non-reconstituted groups (Table 4.3c). Of four different output measures of SHG/JLG lending process identified in this study – namely, extent of loanee members within group (PCMEM), extent of effectiveness of training of all kinds (as perceived by the group called EFFTN), extent of stipulated benefits realized by group (PCTBEN), and % share of group activity, if any, which is successfully continuing (GASUC), it is no wonder that all these measures are, on average, higher for SHGs as compared to JLGs, though there none of these differences is statistically significant due to huge variations within and across groups of either category. Only in case of % loanee members within group, the average figure is significantly higher for JLGs than SHGs (81.97 vs. 47.38), which is understandable due to strong profit motivation of NBFCs coupled with their fairly autonomous operations free of government and/or bank bureaucracy (Table 4.3a). Among the same four output indices identified, the older groups seem to have performed significantly better, as expected, in terms of effectiveness of training in general (EFFTN) (51.14 vs. 33.33 for newer groups). However, the reverse is true in terms of % stipulated benefits realized (PCTBEN) (98.33 for newer groups vs. 88.64 for older ones) which may be due to greater efforts being put into newer groups (Table 4.3b). In terms of these output indices, no significant difference is observed between old reconstituted and old non-reconstituted groups (Table 4.3c).

Table 4.2c: T-test results on relevant group level input (INP) variables between old reconstituted & old non-reconstituted groups

		Values for old reconstituted groups (n=13)			Values for old non-reconstituted groups (n=53)				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**Max**	**T value**	**P value**
AVLN	Average loan per member from Bank/NBFC	1.13	11.13	28.60	0.00	12.91	3.00	-0.59	0.56

AVMT	Average number of group meetings per annum	0.00	25.00	52.00	0.00	26.00	52.00	-0.42	0.68
AVATPC	Average % attendance in group meetings	78.75	87.98	97.50	0.00	86.49	100.0	0.59	0.56
AVGNT	Average grant in Rs per group	0.00	769	5000	0.00	725	5000	0.08	0.94
AVTRN	Average man days of training rec'd	0.00	3.66	17.75	0.00	4.96	18.0	-0.27	0.79
AVVTE	Average no of visits to Bank/NBFC to get one loan	0.00	0.84	3.25	0.00	0.53	6.25	0.76	0.46
RVISIT	Incidence of visits for obtaining loans	0.00	1.18	4.00	0.00	0.46	1.29	1.68	0.12
AVINT	Average annual interactions with NGO/NBFC	0.00	1.38	9.00	0.00	6.83	85.6	-2.00	0.05
AVTNN	Average training days from NGO/NBFC per year	0.00	0.64	2.00	0.00	0.14	1.00	2.06	0.06
AVVIP	Average no of visit of important personnel from NGO/NBFC per year	0.00	0.07	0.50	0.00	9.44	87.8	-3.16	0.003
AVEXP	Average annual expert visits through NGO/NBFC	0.00	0.02	0.25	0.00	0.00	0.00	1.00	0.34
DELAY	Months between joining & first external loan	0.00	12.92	37.00	0.00	11.74	41.00	0.29	0.78

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.3a: T-test results on relevant group level output (OUP) variables between SHGs & JLGs

		Values for SHG			Values for JLG				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
PCMEM	% loanee member per year	6.67	47.38	100.0	0.00	81.97	100.00	-5.18	0.00
EFFTN	% effectiveness of training (formal & informal)	0.00	46.53	100.0	0.00	52.78	100.00	-1.05	0.30
PCTBEN	% stipulated benefits realized from group	60.00	87.22	100.0	20.00	91.67	100.00	-1.24	0.22
GASUC	% share of group activity successfully continuing	0.00	0.47	1.00	0.00	0.56	1.00	-0.70	0.49

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.3b: T-test results on group level output (OUP) variables for younger vs. older groups

		Values for younger groups (n1=6)			Values for older groups (n2=66)				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
PCMEM	% loanee member per year	18.75	78.13	100.0	0.0	63.45	100.0	0.98	0.37
EFFTN	Effectiveness of training (formal & informal)	0.0	33.33	50.0	0.0	51.14	100.0	-2.00	0.089
PCTBEN	% stipulated benefits realized from group	90.0	98.33	100.0	20.0	88.64	100.0	3.80	0.0009
GASUC	Share of group activity successfully continuing	0.0	0.50	1.00	0.0	0.51	1.0	-0.07	0.95

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.3c: T-test results on relevant group level output (OUP) variables between old reconstituted & old non-reconstituted groups

		Values for old reconstituted groups (n=13)			Values for old non-reconstituted groups (n=53)				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
PCMEM	% loanee member per year	14.06	58.89*	100.0	0.00	64.57*	100.0	-0.56	0.58
EFFTN	Effectiveness of training (formal & informal)	0.00	48.08*	100.0	0.00	51.89*	100.0	-0.48	0.64
PCTBEN	% stipulated benefits realized from group	20.00	82.31*	100.0	50.0	90.19*	100.0	-1.15	0.27
GASUC	Share of group activity successfully continuing	0.00	0.46*	1.00	0.00	0.53*	1.00	-0.42	0.68

Note: * and ^ signs are applied on means of output and outcome variables, where the results of Student's t show that the underlying changes are and aren't significantly different from zero (at 5% level for two-tailed test), respectively. T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- Out of the five outcome variables identified – namely, % of loan repayment (PCREP), difference in illiteracy rate (DIFILL), difference in % BPL members (DIFBPL), difference in % of exclusively labour members (DIFLAB), and change in higher tier organization's behaviour towards group (VBEHAV), only the last one displays statistically significant improvement over time in JLGs over SHGs (this index being 2.64 for JLGs vs. 2.11 for SHGs). In terms of intertemporal changes after joining in groups, there is significantly positive improvement in terms of reduction in % of illiterate members (DIFILL) and % of exclusively labour households (DIFLAB) – relatively more for SHGs in the former case (7.47% vs. 4.48% for JLGs) – apparently due to SHGs' greater developmental focus, and relatively more for JLGs in the latter case – apparently due to latter's greater business development focus (14.67% vs. 8.65% for SHGs). Thus, instruments of SHG/JLG while successful in reducing illiteracy and casualization of labour, are not strong enough to force reduction in % of BPL members (Table 4.4a). In terms of the same five outcome variables identified, only decline in % of exclusively labour members (DIFLAB) is found to be significantly higher for older compared to newer groups (12.72 vs. 0.00), meaning greater reduction in casualization of labour in the former than in the latter. Moreover, reduction in illiteracy (DIFILL) and in casualization of labour (DIFLAB) are significantly larger than zero, as per Student's t-test, only for older groups. That significant benefits flow mostly to older rather than newer groups is a pointer towards the existence of a gestation lag for flow of benefits to stabilize and make any noticeable impact on the program beneficiaries (Table 4.4b). In terms of these outcome variables, while there is significantly positive intertemporal improvement for old reconstituted groups in all indices, this is not true for old non-reconstituted groups in terms of reduction of illiteracy and BPL members. These improvement outcomes are not however significantly different between reconstituted and non-reconstituted groups (Table 4.4c).

Table 4.4a: T-test results on relevant group level outcome (OUC) variables between SHGs & JLGs

		Values for SHG			Values for JLG				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
PCREP	% loans repaid per year	5.81	74.91	100.00	0.00	78.34	100.00	-0.40	0.69
DIFILL	Difference in % illiterate before & after	-3.62	7.47*	63.64	-0.24	4.48*	38.46	0.99	0.33
DIFBPL	Difference in % BPL before & after	-42.86	4.02^	90.00	-10.37	1.37^	33.33	0.76	0.45
DIFLAB	Difference in % labor before & after	-3.03	8.65*	60.00	0.00	14.67*	71.43	-1.31	0.19
CBEHAV	Change in higher organization's behavior towards group	1.00	2.11	3.00	1.00	2.64	3.00	-3.22	0.00

Note: The number of observations for SHG (n1) and JLG (n2) each is 36 for all variables except PCREP, in which case (n1,n2) is (28,34). * and ^ signs are applied on means of output and outcome variables, where the results of Student's t show that the underlying changes are and aren't significantly different from zero, respectively. T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.4b: T-test results on relevant group level outcome (OUC) variables for younger vs. older groups

		Values for younger groups (n1=6)			Values for older groups (n2=66)				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
PCREP	% loans repaid per year	0.0	50.59	100.0	0.0	79.0	100.0	-1.67	0.15
DIFILL	Difference in % illiterate before & after	0.0	6.41^	38.46	-3.62	5.94*	63.64	0.07	0.95
DIFBPL	Difference in % BPL before & after	0.0	0.0^	0.0	-42.86	2.94^	90.0	-1.56	0.12
DIFLAB	Difference in % labor before & after	0.0	0.0^	0.0	-3.03	12.72*	71.43	-5.15	<.0001
CBEHAV	Change in higher organization's behavior towards group	1.0	2.33	3.0	1.0	2.38	3.0	-0.13	0.90

Note: * and ^ signs are applied on means of output and outcome variables, where the results of Student's t show that the underlying changes are and aren't significantly different from zero (at 5% level for two-tailed test), respectively. T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.4c: T-test results on relevant group level outcome (OUC) variables between old reconstituted & old non-reconstituted groups

		Values for old reconstituted groups (n=13)			Values for old non-reconstituted groups (n=53)				
Variable	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**T value**	**P value**
PCREP	% loans repaid per year	0.00	75.81*	100.0	0.00	79.77*	100.0	-0.39	0.70
DIFILL	Difference in % illiterate before & after	-3.62	2.33*	29.41	-0.24	6.82^	63.64	-1.52	0.14
DIFBPL	Difference in % BPL before & after	-14.3	11.44*	33.75	-42.29	3.31^	90.00	-0.47	0.65
DIFLAB	Difference in % labor before & after	-3.03	11.44*	61.91	-2.38	12.31*	71.43	0.31	0.76
CBEHAV	Change in higher organization's behavior towards group	1.00	2.46*	3.00	1.00	2.36*	3.00	0.49	0.63

Note: * and ^ signs are applied on means of output and outcome variables, where the results of Student's t show that the underlying changes are and aren't significantly different from zero (at 5% level for two-tailed test), respectively. T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Section 4: Findings from Analysis of Household Level Data

4.11 As in case of group level data, analysis of household level data involves categorization of created variables into exogenous (mostly initial conditions), input/output and outcome (from

SHG/JLG lending process) variables to see whether and to what extent the last two categories of variables vary across three main beneficiary characters – namely, whether belonging to SHGs or JLGs, or older vs. newer groups, or to reconstituted or non-reconstituted groups. The major findings in this context are:

- With respect to the household level initial conditions considered in this study – namely, household caste and religion status (CREL), duration of membership (DURMEM), family size (FAMMJ), % of students and especially students (PCSTUDJ and PCSTUDFJ), % of members with special skill (PCSKILLJ), % of children working outside/inside the household (PCCHWOJ and PCCHWIJ), both SHG and JLG categories of beneficiary households are found similar except for duration of membership (DURMEM) and % of children members working inside (PCCHWIJ), which are significantly higher for SHGs as compared to JLGs (7.23 vs. 5.73, and 2.85 vs. 0.00, respectively) (Table 4.5a). Between older and newer group members and among exogenous variables, only membership duration, naturally, and % of students in family at joining are significantly larger for older group households (Table 4.5b). Non-reconstituted households are similar to their reconstituted counterparts in all dimensions of exogenous variables except duration of membership, which is significantly more for non-reconstituted groups (Table 4.5c). Thus, the initial conditions are far from similar across the three demarcating variables – a matter which can't be ignored in a more rigorous multivariate regression analysis.

Table 4.5a: Results of t-test on household-level exogenous (X) variables (values at the time of joining SHG/JLG) across SHG & JLG categories

		Values for SHG Category			Values for JLG Category				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
CREL	Caste & Religion	0.00	0.26	1.00	0.00	0.29	1.00	-0.37	0.71
DURMEM	Duration of membership in years	0.54	7.23	13.72	0.14	5.73	11.74	3.09	0.00
FAMMJ	# of family members at joining	1.00	4.97	15.00	2.00	4.82	13.00	0.45	0.65
PCSTUDJ	% students in family at joining	0.00	33.86	600.00	0.00	31.54	66.67	0.27	0.79
PCSTUDFJ	% female students in	0.00	19.77	400.00	0.00	17.41	66.67	0.37	0.71

	family at joining								
PCSKILLJ	% members with special skill at joining	0.00	10.51	100.00	0.00	6.63	50.00	1.57	0.12
PCCHWOJ	% children working outside at joining	0.00	0.83	40.00	0.00	0.32	23.08	0.74	0.46
PCCHWIJ	% children working inside at joining	0.00	2.85	100.00	0.00	0.00	0.00	1.83	0.07

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.5b: Results of t-test on household-level exogenous (X) variables (values at the time of joining SHG/JLG) across newer and older members within SHGs/JLGs

		Values for newer members (n=15)			**Values for older members (n=129)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
CREL	Caste & Religion	0.00	0.4	1.0	0.00	0.26	1.0	1.0	0.33
DURMEM	Duration of membership in years	0.14	1.32	2.50	3.16	7.08	13.72	-17.72	<0.0001
FAMMJ	# of family members at joining	3.0	5.2	13.0	1.0	4.86	15.0	0.47	0.65
PCEARNJ	% earning members at joining	14.29	29.42	40.0	6.67	31.98	100.0	-1.13	0.27
PCSTUDJ	% students in family at joining	0.00	21.98	60.0	0.00	33.95	16.0	-1.78	0.09
PCSTUDFJ	% female students in family at joining	0.00	14.01	-50.0	0.00	19.12	14.0	-0.94	0.35
PCSKILLJ	% members with special	0.00	5.78	33.33	0.00	8.89	100.0	-0.9	0.38

	skill at joining								
PCCHWOJ	% children working outside at joining	0.00	1.54	13.08	0.00	0.47	14.0	0.68	0.51
PCCHWIJ	% children working inside at joining	0.00	2.67	40.0	0.00	1.28	100.0	0.5	0.63

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.5c: Results of t-test on household-level exogenous (X) variables (values at the time of joining SHG/JLG) across reconstituted & non-reconstituted group members

		Values for reconstituted group members (n=25)			Values for non-reconstituted group members (n=104)				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
CREL	Caste & Religion	0.00	0.32	1.0	0.00	0.25	1.0	0.67	0.51
DURMEM	Duration of membership in years	3.16	5.58	8.86	3.25	7.44	13.72.	-4.29	<.0001
FAMMJ	# of family members at joining	1.0	4.84	10.0	1.0	4.87	15.0	-0.06	0.95
PCEARNJ	% earning members in family	16.67	32.27	100.0	6.67	31.91	100.0	0.08	0.93
PCSTUDJ	% students in family at joining	0.00	51.31	60.0	0.00	4.19	66.67	0.93	0.36
PCSTUDFJ	% female students in family at joining	0.00	30.58	40.0	0.00	16.37	66.70	0.90	0.38
PCSKILLJ	% members with special skill at joining	0.00	10.0	100.0	0.00	8.63	50.0	0.31	0.76
PCCHWOJ	% children working outside at	0.00	0.80	20.0	0.00	0.38	40.0	0.47	0.64

	joining								
PCCHWIJ	% children working inside at joining	0.00	5.60	100.0	0.00	0.24	25.0	0.31	0.20

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- Of the several identified input/output variables of the lending process – namely, average number of visits to member by office staff (PNVISIT), index of behaviour of office staff towards members (BEHAVE), # of other loans by the member (OTHSL), cumulative and average loan to member (CUMLOAN & AVLOAN), cumulative & average outstanding liability of member (OUTLOAN & AVOUT), only PNVISIT, CUMLOAN, AVLOAN, OUTLOAN and AVOUT are found to be significantly higher for JLG members than for SHG members (1.33 vs. 0.48, 22694 vs. 12651, 6285 vs. 3233, 7363 vs. 4250, 3573 vs. 1001, respectively), while only OTHTSL is significantly higher for SHG members than for JLG members (0.33 vs. 0.10). These differences seem to be reflecting relatively greater urge and lesser constraints in operation on the part of the organisers of JLGs than that of SHGs towards meeting the demand of borrowers (Table 4.6a). In this context, PNVISIT, AVLOAN and AVOUT are significantly larger for older group members, while CUMLOAN, OUTLOAN and OTHTSL are significantly larger for newer group members, as expected (Table 4.6b). Regarding differential impact of members from old non-reconstituted groups vis-à-vis their reconstituted counterparts on input/output variables, In this regard, only PNVISIT and CUMLOAN are significantly larger for old non-reconstituted members than their reconstituted counterparts, which is also consistent with our expectations (Table 4.6c).

Table 4.6a: Results of t-test on household-level input/output (INP/OUP) variables (values achieved after joining SHG/JLG) across SHG & JLG categories

		Values for SHG Category			Values for JLG Category				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PNVISIT	Average annual visits by office staff to member residence	0	0.48	7.46	0.13	1.33	14.12	-2.63	0.01
BEHAVE	Behavior of organization's staff toward member (0-4)	0.00	1.99	4.00	1.00	1.83	3.00	1.10	0.27
OTHTSL	# of other loans at present	0.00	0.33	4.00	0.00	0.10	3.00	1.80	0.08
CUMLOAN	Cumulative loan amt (Rs) till last cycle	0.00	12651.4	85000	1000	22694.4	85000	-2.90	0.00

AVLOAN	Average annual loan amount (Rs) till last cycle	0.00	3232.61	93264	207.37	6285.40	56471	-1.72	0.09
OUTLOAN	Outstanding liability (Rs) (i.e. loan plus interest), till last cycle	0.00	4249.83	22200	0.00	7363.48	22200	-2.64	0.01
AVOUT	Average annual outstanding liability amount (Rs)	0.00	1001.22	16495	0.00	3572.53	60529	-2.18	0.03

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.6b: Results of t-test on household-level input/output (INP/OUP) variables (values achieved after joining SHG/JLG) across newer and older members within SHGs/JLGs

		Values for newer members (n=15)			Values for older members (n=129)				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PNVISIT	Average annual visits by office staff to member residence	0.00	3.57	14.12	0.00	0.60	9.89	2.93	0.01
BEHAVE	Behavior of organization's staff toward member (0-4)	1.00	1.8	3.0	0.00	1.92	4.0	-0.75	0.46
OTHTSL	# of other loans at present	0.00	0.00	0.00	0.00	0.24	4.0	-3.26	0.001
CUMLOAN	Cumulative loan amt (Rs) till last cycle	0.00	8520	50000	0.00	18737	85000	-2.76	0.017
AVLOAN	Average annual loan amount (Rs) till last cycle	0.00	19800	93264	0.00	3010	29348	2.36	0.033
OUTLOAN	Outstanding liability (Rs) (i.e. loan plus interest), till last cycle	0.00	3692	9100	0.00	6042	22200	-1.97	0.058
AVOUT	Average annual outstanding liability amount (Rs)	0.00	11811	60529	0.00	1161	16495	2.17	0.048

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.6c: Results of t-test on household-level input/output (INP/OUP) variables (values achieved after joining SHG/JLG) across reconstituted & non-reconstituted group members

		Values for reconstituted group members (n=25)			Values for non-reconstituted group members (n=104)				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PNVISIT	Average annual visits by office staff to member residence	0.00	0.28	1.09	0.00	0.67	9.89	-2.5	0.01
BEHAVE	Behavior of organization's staff toward member (0-4)	0.00	1.64	3.0	0.00	1.99	4.0	-1.76	0.09
OTHTSL	# of other loans at present	0.00	0.16	4.0	0.00	0.26	4.0	-0.55	0.58
CUMLOAN	Cumulative loan amt (Rs) till last cycle	0.00	12768	40000	0.00	20172	85000	-2.13	0.04
AVLOAN	Average annual loan amount (Rs) till last cycle	0.00	2287	8085	0.00	3184	29348	-1.40	0.17
OUTLOAN	Outstanding liability (Rs) (i.e. loan plus interest), till last cycle	0.00	5014	22200	0.00	6292	22200	-0.75	0.46
AVOUT	Average annual outstanding liability amount (Rs)	0.00	941	4043	0.00	1214	16495	-0.76	0.45

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- While considering several outcome variables dealing with changes in demographic and educational status of member households – namely, extended family status (DEXTEND), % of earning members (DEARNM), % of male & female students in family (DSTUDM & DSTUDF), index of maximum education among males & females (DMAXEDM & DMAXEDF), % of members with special skill (DSPSKILL), and % of children working outside and inside family (DCHLDWO & DCHLDWF), statistically significant changes are observed only in DEARNM (larger in JLG members than in SHG members - 8.86 vs. 2.95) and DMAXEDF (larger for JLG members - 0.33 vs. 0.14). Intertemporal changes in maximum education index of males and females in member household (DMAXEDM & DMAXEDF) are, however, significantly larger than zero (as per Student's t-test) for both groups. This slight difference in result is probably attributable to a relatively greater developmental focus of SHGs as compared to JLGs (Table 4.7a). While examining possible differential impact of older vs. newer groups on household level outcome in demography and education, it appears older and newer group members seem alike, as none of the constructed indices are found to be significantly different as per paired t-test (Table 4.7b). In this context, however, significant differences are noted only in changes in household extension status (improved in reconstituted cases, while declined in non-reconstituted cases) and in household earning status (declined for reconstituted cases, but improved for non-reconstituted cases) (Table 4.7c). It seems there is no simple explanation for the observed results in Tables 4.7b-c.

Table 4.7a: Results of t-test on household-level outcome (OUC) variables (change before & after joining SHG/JLG) across SHG & JLG categories

Table 4.7a (Module I): Change in outcome variables - demography & education									
		Values for SHG Category			Values for JLG Category				
Variables	Definition	min	mean	max	min	mean	max	t-value	p-value
DEXTEND	Dummy for change in extended family status (-1, 0, 1)	-1.00	-0.03^	1.00	-1.00	-0.03^	0.00	0.00	1.00
DEARNM	Increase in % of earning members in family	-66.67	2.95^	85.71	-16.67	8.86^	86.54	-1.83	0.07
DSTUDM	Increase in % of male students in family	-166.66	-1.61^	50.00	-58.33	1.05^	75.00	-0.82	0.41
DSTUDF	Increase in % of female students in family	-383.33	-2.89^	66.67	-33.33	6.29^	275.0	-1.27	0.21
DMAXEDM	Increase in index of maximum education in male students	0.00	0.24*	3.00	-2.00	0.14*	2.00	1.01	0.32
DMAXEDF	Increase in index of maximum education in	-1.00	0.33*	2.00	-2.00	0.14*	2.00	1.95	0.05

	female students								
DSPSKILL	Increase in % of members with special skills	-83.33	0.81^	52.38	-25.00	1.39^	33.33	-0.29	0.77
DCHLDWO	Increase in % of children in family working outside	0.00	0.14^	10.00	0.00	1.07^	51.92	-1.15	0.25
DCHLDWF	Increase in % of children in family enter-prise	-83.33	-0.81^	25.00	0.00	0.00^	0.00	-0.67	0.51

Note: * and ^ signs are applied on means, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.7b: Results of t-test on household-level outcome (OUC) variables (change before & after joining SHG/JLG) across newer and older members within SHGs/JLGs

Module I: Change in demography & education									
		Values for newer members (n=15)			**Values for older members (n=129)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
DEXTEND	Dummy for change in extended family status (-1, 0, 1)	-1	-0.07^	0.00	-1	-0.02^	1	-0.62	0.54
DEARNM	Increase in % of earning members in family	-8.33	4.64^	86.54	-66.67	6.05*	85.71	-0.23	0.82
DSTUDM	Increase in % of male students in family	0.00	1.87^	17.31	-166.7	-0.53^	75.0	1.07	0.29
DSTUDF	Increase in % of female students in family	-8.33	2.38^	33.33	-383.3	1.62^	275	0.16	0.87
DMAXEDM	Increase in index of maximum education in male students	0.00	0.13^	2.0	-2.0	1.19*	3.0	-0.42	0.68

DMAXEDF	Increase in index of maximum education in female students	0.00	0.13^	1.0	-2.0	0.25*	2.0	-1.08	0.29
DSPSKILL	Increase in % of members with special skills	0.00	0.16E -16^	2.37E-16	-83.33	1.23^	52.38	-1.1	0.27
DCHLDWO	Increase in % of children in family working outside	0.00	3.46^	51.92	0.00	0.27^	25.0	0.92	0.37
DCHLDWF	Increase in % of children in family enter-prise	0.00	0.00	0.00	-83.33	-0.45^	25.0	0.67	0.50

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.7c: Results of t-test on household-level outcome (OUC) variables (change before & after joining SHG/JLG) across reconstituted & non-reconstituted group members

Module I: Change in demography & education									
		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
DEXTEND	Dummy for change in extended family status (-1, 0, 1)	0.00	0.04^	1.0	-1.0	-0.04^	1.0	1.69	0.10
DEARNM	Increase in % of earning members in family	-66.67	-1.46^	41.67	-25.0	7.85*	85.71	-2.14	0.04
DSTUDM	Increase in % of male students in family	-166.7	-6.29*	20.0	-58.33	0.86^	75.0	-1.01	0.32
DSTUDF	Increase in % of female students in family	-383.3	-11.7^	33.33	-40.0	4.81^	275.0	-1.03	0.31
DMAXEDM	Increase in index of maximum education in	0.00	0.16^	2.0	-2.0	0.20*	3.0	-0.37	0.71

	male students								
DMAXEDF	Increase in index of maximum education in female students	-1.0	0.20*	2.0	-2.0	0.26*	2.0	-0.45	0.65
DSPSKILL	Increase in % of members with special skills	-83.33	-2.98^	12.22	-25.0	0.24*	52.38	-1.46	0.15
DCHLDWO	Increase in % of children in family working outside	0.00	0.00	0.00	0.00	0.34^	25.0	-1.30	0.20
DCHLDWF	Increase in % of children in family enter-prise	-83.33	-3.33^	0.00	0.00	0.24*	25.0	-1.07	0.30

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- Regarding family expenditure position at the end of the treatment period in terms of several parameters as reflected in average expenditure on food, clothing, education, health and loan repayment (FOODYE, CLOTHYE, EDUYE, HELTHYE, and REPAYYE, respectively), and % shares of consumption, health cum education and loan repayment expenses in total expenditure (PCCON, PCHLEDU, and PCREPAY, respectively), only CLOTHYE, HEALTHYE and PCHLEDU have significantly larger values for SHG members than JLG members (5435 vs. 4431, 5740 vs. 3129, and 23.36 vs. 17.70, respectively), while values of REPAYYE and PCREPAY are consistently and significantly larger for JLG members than SHG members (9762 vs. 6973 and 21.62 vs. 14.76, respectively) – quite consistent with relatively stronger developmental orientation of SHGs and much higher interest burden of JLG borrowing (Table 4.8a). Between older and newer group members, however, no significant difference is noticed in terms of current family expenditure status (Table 4.8b). Between old reconstituted and non-reconstituted group members, and among various attributes of family expenditure status considered, only average food expenditure and % share of consumption expenditure are found to be significantly larger for reconstituted cases. This is probably indicating greater stabilization in non-reconstituted categories. The opposite is true for loan repayment expenditure and its % share (which raises a matter of concern) (Table 4.8c).

Table 4.8a (Module II): Family expenditure position arrived at after change									
		Values for SHG Category			Values for JLG Category				
Variables	Definition	min	mean	max	min	mean	max	t-value	p-value
FOODYE	Average yearly expenditure on Food	0.00	26095	60000	2000	24263	60000	0.59	0.56
CLOTHYE	Average yearly expenditure on Clothing	500.00	5435	12000	0.00	4431	12000	1.73	0.09
EDUYE	Average yearly expenditure on Education	0.00	4863	18000	0.00	4540.00	18000	0.39	0.70
HELTHYE	Average yearly expenditure on Health	300.00	5740	15000	200.00	3129.17	15000	4.05	0.00
REPAYYE	Average yearly expenditure on Loan Repayment	0.00	6973	30000	0.00	9762.04	30000	-1.88	0.06
PCCON	% share of consumption in expenditure reached	10.20	61.89	93.94	10.68	60.69	94.58	0.36	0.72
PCHLEDU	% share of health & education expenditure arrived	4.41	23.36	50.00	1.82	17.70	59.45	2.76	0.01
PCREPAY	% share of loan repayment expenditure arrived	0.00	14.76	73.47	0.00	21.62	86.83	-2.19	0.03

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.8b (Module II): Family expenditure position arrived at after change									
		Values for newer members (n=15)			**Values for older members (n=129)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
FOODYE	Average yearly expenditure on Food	3000	25767	48000	0.00	25111	60000	0.15	0.89
CLOTHYE	Average yearly expenditure on Clothing	500	6449	12000	0.00	4757	12000	1.67	0.11
EDUYE	Average yearly expenditure on Education	0.00	5729	18000	0.00	4582	18000	0.63	0.54
HELTHYE	Average yearly expenditure on Health	1000	4487	15000	200.0	4429	15000	0.05	0.96
REPAYYE	Average yearly expenditure on Loan Repayment	0.00	8276	30000	0.00	9074	30000	-0.74	0.47
PCCON	% share of consumption in expenditure reached	23.16	62.76	92.08	10.20	61.11	94.58	0.27	0.79
PCHLEDU	% share of health & education expenditure arrived	2.49	22.22	49.98	1.82	20.33	59.45	0.49	0.63
PCREPAY	% share of loan repayment expenditure arrived	0.00	15.01	51.41	0.00	18.56	86.83	-0.77	0.45

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- Regarding food security, diet and clothing status of SHG and JLG households, as captured by current food security (FSTAT), diet improvement (DIETDUM), clothing improvement (CLTHDUM), and diversification in diet and clothing (PCDIET & PCCLTH) status, it is observed that intertemporal changes are significantly greater than zero for DIETDUM and CLTHDUM as per Student's t-test for both groups, while the extent of diversification in clothing (PCCLTH) is only significantly more in JLGs than SHGs (96.81 vs. 91.70) (Table 4.9a). The fact that the current food security is significantly better for newer group than for older group members is either reflecting a selectivity bias in newer group members (meaning more affluent members entering new groups) or that the newer group members are feeling lesser pinch of loan repayment burden as compared to their older counterparts (Table 4.9b). Regarding food security, diet and clothing status, no significant difference is noticed between old reconstituted vs. non-reconstituted group members (Table 4.9c).

Table 4.8c (Module II): Family expenditure position arrived at after change

		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
FOODYE	Average yearly expenditure on Food	4000	32212	60000	0.00	23404	60000	1.93	0.06
CLOTHYE	Average yearly expenditure on Clothing	0.00	4550	12000	0.00	4807	12000	-0.39	0.70
EDUYE	Average yearly expenditure on Education	0.00	4951	15000	0.00	4493	18000	0.47	0.64
HELTHYE	Average yearly expenditure on Health	500.0	5158	15000	200.0	4253	15000	0.93	0.36
REPAYYE	Average yearly expenditure on Loan Repayment	0.00	3657	30000	0.00	9719	30000	-3.32	0.002
PCCON	% share of consumption in expenditure reached	35.0	70.90	93.94	10.20	58.76	94.58	3.36	0.002
PCHLEDU	% share of health & education expenditure arrived	5.43	23.21	50.0	1.82	19.64	59.47	1.28	0.21

PCREPAY	% share of loan repayment expenditure arrived	0.00	5.89	30.0	0.00	21.60	86.83	-5.86	<.0001

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.9a (Module III): Family food security status & improvement in diet & clothing after change									
		Values for SHG Category			**Values for JLG Category**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
FSTAT	Current food security status (0,1)	0.00	0.97	1.00	0.00	0.99	1.00	-0.58	0.56
DIETDUM	Dummy for any improvement in diet	0.00	0.97	1.00	0.00	0.97	1.00	0.00	1.00
CLTHDUM	Dummy for any improvement in clothing	1.00	1.00	1.00	1.00	1.00	1.00	No variation	
PCDIET	% compo-nents dietary improvement achieved	0.00	86.46	100.00	0.00	86.11	100.0	0.09	0.93
PCCLTH	% compo-nents of clothing improvement achieved	20	91.70	100.00	37.50	96.81	100.0	-2.29	0.02

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.9b (Module III): Family food security status achieved & improvement in diet & clothing after change									
		Values for newer members (n=15)			**Values for older members (n=129)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
FSTAT	Current food security status (0,1)	1.0	1.0	1.0	0.00	0.98	1.0	1.75	0.08
DIETDUM	Dummy for any improvement in diet	0.00	0.87*	1.0	0.00	0.98*	1.0	-1.29	0.22
CLTHDUM	Dummy for any improvement in clothing	No variation							

PCDIET	% components dietary improvement achieved	0.00	83.33	100.0	0.00	86.63	100.0	-0.35	0.73
PCCLTH	% components of clothing improvement achieved	37.5	90.67	100.0	20.0	94.67	100.0	-0.87	0.40

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.9c (Module III): Family food security status achieved & diversification in diet & clothing after change

		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
FSTAT	Current food security status (0,1)	0.00	0.96	1.0	0.00	0.98	1.0	-0.49	0.63
DIETDUM	Dummy for any improvement in diet	1.00	1.0	1.0	0.00	0.98	1.0	1.42	0.16
CLTHDUM	Dummy for any improvement in clothing	No variation, all values=1.0							
PCDIET	% components dietary improvement achieved	25.0	84.0	100.0	0.00	87.26	100.0	-0.71	0.48
PCCLTH	% components of clothing improvement achieved	50.0	96.0	100.0	20.0	94.35	100.0	0.59	0.56

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- Among indices constructed to indicate improvement in different types of asset holding – namely, household assets (ASSTDUM), productive assets (PRODDUM), agricultural assets (AGRIDUM), livestock asset (LIVEDUM), non-farm assets (NFRDUM) and machine assets (MACHDUM), as well as diversification in holding of household assets (PCASST) and productive assets (PCPROD), intertemporal change is found to be significantly above zero in all assets for both groups of households. As per paired t-tests, SHG households seem to have performed significantly better in terms of improvement in agricultural (AGRIDUM) and livestock (LIVEDUM) assets compared to their JLG counterparts (0.57 vs. 0.31 and 0.64 vs.

0.32, respectively). This is also true about diversification in holding of productive assets (0.57 for SHG households vis-à-vis 0.31 for their JLG counterparts. However, the opposite is true about improvement in holding of non-farm (NFRDUM) and machine assets (MACHDUM) (0.38 vs. 0.08, and 0.24 vs. 0.21, respectively). Thus, while SHG households have concentrated more on acquiring agricultural and livestock assets, JLG households seem to have concentrated more on improving their holding of non-farm and machine assets (Table 4.10a). Compared between older and newer group households, while intertemporal improvement in tangible assets is significantly positive in all aspects and both groups, except for non-farm assets and newer group, older members seem to have done significantly better in respect of temporal improvement in and diversification of household assets, and also in temporal improvement of non-farm assets (Table 4.10b). Between old reconstituted vs. non-reconstituted group households, positive and significant intertemporal improvements are observed in holding of all types of tangible assets for both categories. However, significantly better results are achieved with respect to improvement in productive assets by non-reconstituted group, as expected, and with respect to diversification of household assets by reconstituted groups (Table 4.10c).

Table 4.10a (Module V): Improvement in tangible capital assets before & after joining SHG/JLG

		Values for SHG Category			Values for JLG Category				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
ASSTDUM	Dummy for improvement in non-productive household assets (0,1)	0.00	0.88*	1.00	0.00	0.89*	1.00	-0.26	0.80
PCASST	% diversification in types of non-productive household assets	0.00	47.0	116.67	0.00	49.77	116.7	-0.50	0.62
PRODDUM	Dummy for improvement in any productive asset (0,1)	0.00	0.86*	1.00	0.00	0.82*	1.00	0.68	0.50
PCPROD	% diversification in types of productive assets	0.00	21.4	50.00	0.00	14.03	50.00	3.46	0.00

AGRIDUM	Dummy for any improvement in agriculture assets (0,1)	0.00	0.57*	1.00	0.00	0.31*	1.00	3.29	0.00
LIVEDUM	Dummy for any improvement in livestock assets (0,1)	0.00	0.64*	1.00	0.00	0.32*	1.00	4.02	0.00
NFRDUM	Dummy for any improvement in non-farm assets (0,1)	0.00	0.08*	1.00	0.00	0.38*	1.00	-4.41	0.00
MACHDUM	Dummy for any improvement in machinery assets (0,1)	0.00	0.21*	1.00	0.00	0.24*	1.00	-0.40	0.69

Note: * and ^ signs are applied on means, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.10b (Module V): Improvement in intangible/social capital assets before & after joining SHG/JLG

		Values for newer members (n=15)			Values for older members (n=129)				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
ASSTDUM	Dummy for improvement in non-productive household assets (0,1)	0.00	0.47*	1.0	0.00	0.93*	1.0	-3.43	0.0038
PCASST	% diversification in types of non-productive household assets	0.00	15.6	116.7	0.00	52.20	116.7	-4.47	0.0003
PRODDUM	Dummy for improvement in any productive asset (0,1)	0.00	0.80*	1.0	0.00	0.85*	1.0	-0.4	0.69
PCPROD	% diversification in types of productive assets	0.00	14.7	50.0	0.00	18.06	50.0	-0.81	0.43

AGRIDUM	Dummy for any improvement in agriculture assets (0,1)	0.00	0.53*	1.0	0.00	0.43*	1.0	0.76	0.46
LIVEDUM	Dummy for any improvement in livestock assets (0,1)	0.00	0.33*	1.0	0.00	0.50*	1.0	-1.22	0.24
NFRDUM	Dummy for any improvement in non-farm assets (0,1)	0.00	0.00	0.00	0.00	0.26*	1.0	-6.63	<.001
MACHDUM	Dummy for any improvement in machinery assets (0,1)	0.00	0.27*	1.00	0.00	0.22*	1.0	0.40	0.53

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.10c (Module V): Improvement in intangible/social capital assets before & after joining SHG/JLG

		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
ASSTDUM	Dummy for improvement in non-productive household assets (0,1)	0.00	0.96*	1.0	0.00	0.92*	1.0	0.77	0.44
PCASST	% diversification in types of non-productive household assets	0.00	63.33	100.0	0.00	49.52	100.0	1.88	0.07
PRODDUM	Dummy for improvement in any productive asset (0,1)	0.00	0.68*	1.0	0.00	0.88*	1.0	-2.04	0.05
PCPROD	% diversification in types of productive assets	0.00	15.2	50.0	0.00	18.75	50.0	-1.03	0.33

AGRIDUM	Dummy for any improvement in agriculture assets (0,1)	0.00	0.32*	1.0	0.00	0.45*	1.0	-1.23	0.23
LIVEDUM	Dummy for any improvement in livestock assets (0,1)	0.00	0.36*	1.0	0.00	0.53*	1.0	-1.54	0.13
NFRDUM	Dummy for any improvement in non-farm assets (0,1)	0.00	0.24*	1.0	0.00	0.26*	1.0	-0.20	0.84
MACHDUM	Dummy for any improvement in machinery assets (0,1)	0.00	0.20*	1.0	0.00	0.22*	1.0	-0.23	0.81

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- While dealing with improvement in SHG/JLG households' holding of intangible assets or social capital – namely, familiarity with important village personnel (FAMDUM), social networking through involvement in important village organizations (NETDUM), and diversification in holding of the two above-stated assets (PCFAM & PCNET), it is found that intertemporal improvement in the two types of intangible assets is significantly larger than zero under both groups. Not only that; these two assets seem to have grown relatively more in SHG households than in JLG households, given relatively greater developmental focus of the former (0.97 vs. 0.90 and 0.54 vs. 0.40, respectively) (Table 4.11a). For older and newer group members, there is positive and significant temporal improvement in familiarity and networking status for both categories, but there is no other significant difference between them (Table 4.11b). While assessing impact of group reconstitution on holding of intangible asset holding, both constituted and non-reconstituted groups seem to have achieved positive and significant temporal improvement in familiarity and networking, though it is significantly larger for reconstituted group members. The latter result may be due to greater urge on the part of reconstituted group members to quickly acquaint and establish themselves in the society (Table 4.11c).

Table 4.11a (Module V): Improvement in intangible/social capital assets before & after joining SHG/JLG									
		Values for SHG Category			**Values for JLG Category**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
FAMDUM	Dummy for improvement in familiarity status (0,1)	0.00	0.97*	1.00	0.00	0.90*	1.00	1.73	0.09
NETDUM	Dummy for improvement in social net-working (0,1)	0.00	0.54*	1.00	0.00	0.40*	1.00	1.67	0.10
PCFAM	% diversification in familiarity with different key functioneries	0.00	29.3	83.33	0.00	26.85	58.33	0.90	0.37
PCNET	% diversification in networking with key social bodies	0.00	10.7	42.86	0.00	8.53	57.14	1.10	0.27

Note: * and ^ signs are applied on means, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.11b (Module V): Improvement in intangible/social capital assets before & after joining SHG/JLG									
		Values for newer members (n=15)			**Values for older members (n=129)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
FAMDUM	Dummy for improvement in familiarity status (0,1)	0.00	0.87*	1.0	0.00	0.95*	1.0	-0.85	0.41
NETDUM	Dummy for improvement in social net-working (0,1)	0.00	0.40*	1.0	0.00	0.48*	1.0	-0.58	0.57
PCFAM	% diversification in familiarity with different key functionaries	0.00	23.9	58.33	0.00	28.55	83.33	-1.1	0.28
PCNET	% diversification in networking with key social bodies	0.00	6.7	28.57	0.00	9.97	57.40	-1.27	0.22

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.11c (Module V): Improvement in intangible/social capital assets before & after joining SHG/JLG									
		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
FAMDUM	Dummy for improvement in familiarity status (0,1)	1.0	1.0	1.0	0.00	0.93*	1.0	2.73	0.008
NETDUM	Dummy for improvement in social net-working (0,1)	0.00	0.6*	1.0	0.00	0.45*	1.0	1.33	0.19
PCFAM	% diversification in familiarity with different key functionaries	8.33	26.67	75.0	0.00	29.01	83.33	-0.68	0.50
PCNET	% diversification in networking with key social bodies	0.00	11.43	42.86	0.00	9.62	59.14	0.69	0.49

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- While examining improvement in savings (SAVDUM), insurance (INSDUM), and diversification in savings and investment (PCSAV & PCINS), the results display significantly greater than zero improvement in savings and insurance coverage between joining in groups and now for both SHG and JLG households. However, these improvements are not significantly different between these two groups. Nevertheless, diversification in savings and insurance coverage seems to be significantly greater for SHG households than JLG ones (27.8% vs. 21.18% and 19.4% vs. 11.39%, respectively) (Table 4.12a). In older and newer group members, there is positive and significant temporal improvement in savings and insurance status for both, but there is no significant difference between the two (Table 4.12b). Table 4.12c displays significantly positive improvements in saving and insurance holding over time in both reconstituted and non-reconstituted categories of households. However, diversification in savings portfolio is significantly more in reconstituted category – probably reflecting greater urge in them to look for better alternatives to fill in the loss due to reconstitution.

Table 4.12a (Module VI): Improvement in saving & insurance before & after joining SHG/JLG									
		Values for SHG Category			**Values for JLG Category**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
SAVDUM	Dummy for any improve-ment in savings (0,1)	0.00	0.88*	1.00	0.00	0.81*	1.00	1.13	0.26
INSDUM	Dummy for any improve-ment in insu-rance (0,1)	0.00	0.57*	1.00	0.00	0.46*	1.00	1.33	0.18
PCSAV	% diversification in saving types	0.00	27.8	75.00	0.00	21.18	50.00	2.43	0.02
PCINS	% diversification in insurance types (0,1)	0.00	19.4	60.00	0.00	11.39	60.00	2.63	0.01

Note: * and ^ signs are applied on means, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.12b (Module VI)Improvement in saving & insurance before & after joining SHG/JLG									
		Values for newer members (n=15)			**Values for older members (n=129)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
SAVDUM	Dummy for any improve-ment in savings (0,1)	0.00	0.67*	1.0	0.00	0.86*	1.0	-1.49	0.15
INSDUM	Dummy for any improve-ment in insu-rance (0,1)	0.00	0.40*	1.0	0.00	0.53*	1.0	-0.92	0.37
PCSAV	% diversification in saving types	0.00	18.3	50.0	0.00	25.19	75.0	-1.49	0.15
PCINS	% diversification in insurance types (0,1)	0.00	10.7	40.0	0.00	15.97	60.0	-1.27	0.22

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.12c (Module VI): Improvement in saving & insurance before & after joining SHG/JLG									
		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
SAVDUM	Dummy for any improvement in savings (0,1)	0.00	0.88*	1.0	0.00	0.80*	1.0	0.32	0.75
INSDUM	Dummy for any improvement in insurance (0,1)	0.00	0.60*	1.0	0.00	0.51*	1.0	0.81	0.42
PCSAV	% diversification in saving types	0.00	31.5	62.5	0.00	23.68	75.0	1.93	0.06
PCINS	% diversification in insurance types (0,1)	0.00	16.8	60.0	0.00	15.77	60.0	0.25	0.80

Note: * and ^ signs are applied on means, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- As far as diversification of income sources (PCAGINC, PCLAINC, PCNFINC, and PCSEINC for incomes from agriculture, labour, non-farm and service, respectively) as well as extent of improvement in overall income since joining (PCINC) are concerned, the findings are that while diversification in agricultural and labour incomes is found to be significantly more pronounced in SHG households than in JLG ones (36.50% vs. 17.58%, and 35.07% vs. 9.42%, respectively), the opposite is true about diversification in non-farm income (70.83% for JLG households and 24.98% for SHG ones). There is hardly any significant difference in the indices of diversification in service income between the two categories. This is expected given differences in emphasis or orientation of SHGs and JLGs. However, between joining and now there appears to be significantly positive improvement in overall income for either category, though it is significantly more for JLG households (17.3%) as compared to SHG ones (13.02%) (Table 4.13a). For older and newer group members, there is positive and significant temporal improvement in overall income for both, which is however significantly more for older category, but there is no significant difference between the two categories in any other type of income diversification (Table 4.13b). Though Module Table 4.13bc displays significantly positive intertemporal improvement in overall income for both reconstituted and non-non-reconstituted group households, it is not significantly different across these two groups, nor is there any other significant change in this Module.

Table 4.13a (Module VII): Changed composition of income & overall improvement in income after joining SHG/JLG									
		Values for SHG Category			Values for JLG Category				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PCAGINC	% share of agricultural income achieved	0.00	36.50	100.00	0.00	17.58	100.0	2.99	0.00
PCLAINC	% share of labor income achieved	0.00	35.07	100.00	0.00	9.42	100.0	4.92	0.00
PCNFINC	% share of non-farm income achieved	0.00	24.98	100.00	0.00	70.83	100.0	-7.15	0.00
PCSEINC	% share of service income achieved	0.00	3.46	100.00	0.00	2.17	85.71	0.50	0.62
PCINC	% improvement in income	0.00	17.3*	50.00	0.00	13.02*	25.00	2.47	0.02

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.13b (Module VII): Changed composition of income & overall improvement in income after joining SHG/JLG									
		Values for newer members (n=15)			Values for older members (n=129)				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PCAGINC	% share of agricultural income achieved	0.00	45.52	100.0	0.00	24.87	71.00	1.60	0.13
PCLAINC	% share of labor income achieved	0.00	11.98	80.0	0.00	23.17	100.0	-1.49	0.15
PCNFINC	% share of non-farm income achieved	0.00	42.50	100.0	0.00	51.96	100.0	-0.71	0.49

PCSEINC	% share of service income achieved	0.00	5.71	85.7	0.00	2.42	100.0	0.56	0.58
PCINC	% Improvement in income	0.00	10.8*	25.0	0.00	15.63*	50.0	-1.87	0.08

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.13c (Module VII): Changed composition of income & overall improvement in income after joining SHG/JLG

		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PCAGINC	% share of agricultural income achieved	0.00	22.45	100.0	0.00	25.46	100.0	-0.37	0.71
PCLAINC	% share of labor income achieved	0.00	30.59	100.0	0.00	21.37	100.0	1.06	0.30
PCNFINC	% share of non-farm income achieved	0.00	46.96	100.0	0.00	53.18	100.0	-0.63	0.53
PCSEINC	% share of service income achieved	0.00	6.82	100.0	0.00	1.36	100.0	1.11	0.28
PCINC	% improvement in income	0.00	13.54	50.0	0.00	16.11	50.0	-1.04	0.31

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- While dealing with temporal improvement (IMFOR, IMSFOR and IMINFOR, respectively) as well as current shares of credit (FORBB, SFORBB, and INFORBB, respectively) from the three major sources – formal, semi-formal (i.e., SHGs & JLGs) and informal, besides the nature of use of credit – whether mostly for consumption alone or for production too, as captured by an index called LUSDUM (0-1), we find the following: significantly positive intertemporal change in share of formal credit for SHG households, but not for JLG ones; shares of semi-formal credit achieving significantly positive intertemporal change for both categories of households; and informal credit share registering significantly positive improvement only for

JLG households, as expected. Moreover, intertemporal change in % shares of formal credit is significantly more pronounced for SHG households than for JLG ones (10.4 vs. 0.00), while the opposite is true for intertemporal change in % shares of semi-formal (21.76 vs. 2.8) and informal (4.17 vs. -2.8) credit. In fact, decline in % share of informal credit over time for SHGs is a note-worthy achievement, though it is not statistically significant. Currently, % share of formal credit is significantly larger for SHG households (10.07 vs. 3.47), the same for semi-formal credit is significantly larger for JLG households (11.57 vs. 3.70) and the same for informal credit significantly larger for SHG households (27.5 vs. 17.5), as compared to their counterparts in the other category of households. Thus, even though formal credit seems to have made some inroads into SHG households, they are still dependent on informal sources for a large chunk of their credit needs. Incidence of joint use of credit (i.e., for production alongside consumption) seems significantly more for JLG (0.35) than SHG (0.22) households (Table 4.14a). While examining possible differential impact of older vs. newer group members on access to credit, we find positive and significant temporal improvement in % share of formal and semi-formal credit for older members, but there is no significant change anywhere else in Table 4.14b. While assessing the impact of group reconstitution on access to credit, we find positive significant improvement in % shares of formal and semi-formal credit in both reconstituted and non-reconstituted groups. Temporal improvement in formal credit share and diversification in formal credit sources are also significantly more for reconstituted groups – maybe because of greater renewed efforts towards reconstituted group members (Table 4.14c).

Table 4.14a (Module VIII): Improvement in access to sources of credit and incidence of differential use of credit

		Values for SHG Category			Values for JLG Category				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
IMFOR	% improvement in share of credit from formal sources	-25.00	10.4*	50.00	-25.00	0.00^	25.00	5.48	0.00
IMSFOR	% improvement in share of credit from semi-formal sources	-33.33	2.8*	33.33	0.00	21.76*	66.67	-8.01	0.00
IMINFOR	% improvement in share of credit from informal sources	-60.00	-2.8^	40.00	0.00	4.17*	60.00	-2.84	0.01

FORBB	% share of formal source achieved	0.00	10.07	50.00	0.00	3.47	50.00	3.45	0.00
SFORBB	% share of semi-formal source credit achieved	0.00	3.70	66.67	0.00	11.57	66.67	-3.01	0.00
INFORBB	% share of informal source credit achieved	0.00	27.50	80.00	0.00	17.50	80.00	2.41	0.02
LUSDUM	Incidence of loan use for both consum-ption and production vis-à-vis consumption only	0.00	0.22	1.00	0.00	0.35	1.00	-1.67	0.10

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.14b (Module VIII): Improvement in access to sources of credit and incidence of differential use of credit

		Values for newer members (n=15)			Values for older members (n=129)				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
IMFOR	% improve-ment in share of credit from formal sources	-25.0	8.33^	50.0	-25.0	4.85*	25.0	0.73	0.48
IMSFOR	% improve-ment in share of credit from semi-formal sources	0.00	6.67^	33.33	-33.33	12.92*	66.67	-1.61	0.13
IMINFOR	% improve-ment in share of credit from informal sources	0.00	4.0^	20.0	-60.0	0.31^	60.0	1.45	0.16
FORBB	% share of formal source achieved	0.00	3.3	25.0	0.00	7.17	25.0	-1.53	0.14
SFORBB	% share of semi-formal source credit achieved	0.00	11.1	66.67	0.00	7.24	66.67	0.71	0.49

INFORBB	% share of informal source credit achieved	0.00	24.0	80.0	0.00	22.33	80.0	0.24	0.81
LUSDUM	Incidence of loan use for both consum-ption and production vis-à-vis consumption only	0.00	0.47	1.00	0.00	0.26	1.00	1.46	0.16

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.14c (Module VIII): Improvement in access to sources of credit and incidence of differential use of credit									
		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
IMFOR	% improve-ment in share of credit from formal sources	0.00	10.0*	25.0	-25.0	3.61*	25.0	2.34	0.03
IMSFOR	% improve-ment in share of credit from semi-formal sources	0.00	13.3*	33.33	-33.33	12.82*	66.67	0.14	0.89
IMINFOR	% improve-ment in share of credit from informal sources	-60.0	0.00^	60.0	-60.0	0.38^	40.0	-0.09	0.93
FORBB	% share of formal source credit achieved	0.00	3.0	25.0	8.17	0.00	50.0	-2.49	0.02
SFORBB	% share of semi-formal source credit achieved	0.00	4.0	33.33	8.01	0.00	66.67	-1.47	0.15
INFORBB	% share of informal source credit achieved	0.00	23.2	80.0	22.12	0.00	80.0	0.18	0.86

LUSDUM	Incidence of loan use for both consum-ption and production vis-à-vis consumption only	0.00	0.28	1.00	0.26	0.00	1.00	0.20	0.84

Note: * and ^ signs are applied on means of changes, where th33.33e results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- When we turn to the current status of clients' micro-business, we see that micro-enterprises of JLG households are significantly above their counterparts in SHG households in terms of average sale per month (AVSALE) (1576 vs. 614), average annual profit (AVGPRF) (5483 vs. 3586), diversification in profit use (PCPRFUS) (54.4% vs. 27.31%), and in terms of diversified ways of improvement in enterprise (PCWAYS) (50.35% vs. 20.95%). SHG enterprises seem to face significantly more problems than JLG ones (PCPROB) (21.69% vs. 3.53%). Qualitative differences in clients, on the one hand, and in service towards them by the promoting organizations, on the other, seem to have generated this difference. However, JLG enterprises face significantly more risks in terms of CV of monthly sales (CVSALE) (525% vs. 205%) and CV of annual profit (CVPRF) (1828% vs. 1195%) as compared to their SHG counterparts. Obviously, both types of organizations are yet to evolve effective tools to bring down such large variation in their sales and profit, as reported to the study team for the last three years of their functioning (Table 4.15a). There is absolutely no significant difference in enterprise status between the older and newer group members, which is a bit surprising as it appears to negate the basic pipeline effect on business enterprise development (Table 4.15b). Group reconstitution too has no significant effect on micro-business performance (Table 4.15c).

Table 4.15a (Module IX): Status of business enterprise

		Values for SHG Category			**Values for JLG Category**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PCPROB	% of different problems faced by enterprise	0.00	21.69	100.00	0.00	3.53	38.46	4.89	0.00
AVGSALE	Average sales per month	0.00	613.9	10000	0.00	1576.15	20999	-2.59	0.01

CVSALE	Coefficient of variation for sales per month	0.00	204.6	3333.3	0.00	525.38	7000	-2.59	0.01
AVGPRF	Average profits per year	0.00	3586	29500	0.00	5483.36	30000	-1.87	0.06
CVPRF	Coefficient of variation for profits per year	0.00	1195	9833	0.00	1827.79	10000	-1.87	0.06
PCPRFUS	% of avenues where profit utilized	0.00	27.31	100.00	0.00	54.40	100.0	-6.21	0.00
PCWAYS	% of different ways changes made to enterprise	0.00	20.95	87.50	0.00	50.35	93.75	-7.20	0.00

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.15b (Module IX): Status of business enterprise

		Values for newer members (n=15)			Values for older members (n=129)				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PCPROB	% of different problems faced by enterprise	0.00	26.67	84.62	0.00	10.97	100.0	1.62	0.13
AVGSALE	Average sales per month	0.00	17.67	10350	0.00	1017	20999	1.04	0.31
CVSALE	Coefficient of variation for sales per month	0.00	589	3450	0.00	339	7000	1.04	0.31
AVGPRF	Average profits per year	0.00	1715	38050	0.00	1487.8	10000	0.37	0.71
CVPRF	Coefficient of variation for profits per year	0.00	5146	24000	0.00	4464	30000	0.37	0.71
PCPRFUS	% of avenues where profit utilized	0.00	48.33	100.0	0.00	33.99	100.0	1.12	0.28
PCWAYS	% of different ways changes made to enterprise	0.00	27.92	88.75	0.00	36.67	93.75	-1.62	0.12

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.15c (Module IX): Status of business enterprise									
		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
PCPROB	% of different problems faced by enterprise	0.00	8.92	100.0	0.00	11.46	100.0	-0.53	0.60
AVGSALE	Average sales per month	0.00	762	2500	0.00	1078	20999	-1.12	0.26
CVSALE	Coefficient of variation for sales per month	0.00	254	833.3	0.00	359.4	7000	-1.12	0.26
AVGPRF	Average profits per year	0.00	4991	30000	0.00	4337	30000	0.47	0.64
CVPRF	Coefficient of variation for profits per year	0.00	1664	10000	0.00	1445.6	10000	0.47	0.64
PCPRFUS	% of avenues where profit utilized	0.00	40.33	91.67	0.00	39.90	100.0	0.06	0.95
PCWAYS	% of different ways changes made to enterprise	0.00	32.50	87.50	0.00	37.68	93.57	-0.79	0.44

Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

- The study has examined family and social dynamics outcomes of households through construction of several indices to capture temporal improvement in spousal relations (SPREL), intra family relations (FAMREL), neighbourly relations (NEBREL), community participation (CCPART), and in member's decision making with respect to family credit, family expenditure and children matters (POWCRM, POWEXM and POWCLM, respectively). It has also constructed indices to examine diversified reasons for improvement in spousal relation, intra-family relation, community participation and group cohesion (PCSPOUS, PCINTRA, PCFEST and PCGMEET, respectively). In this context, the findings are: positively and significant temporal improvements are noted for both categories of households in all the above-stated dimensions (following Student's t-tests), though significant spatial improvements (following paired t-tests) are observed more in JLG households than in SHG ones only in terms of spousal relations, family relations, neighbourly relations, and in client's decision-making power on expenditure and children related matters. But significantly more reasons are found for improvement in intra-family relations and community participation in SHG households than in JLG ones. Improvement in most family and social dynamics of SHG/JLG households is no doubt a great achievement, though it may not have spanned all dimensions, which will probably take more time. Relatively greater improvement in relations and empowerment of clients in JLG households as compared to SHGs ones is probably due to relatively greater business success of JLG enterprises, in spite of greater risks they are exposed to. Given their stronger social and developmental focus, no wonder SHG households have achieved improvement in intra-family relation and community participation in significantly more dimensions than their counterparts in JLGs (Table 4.16a). Regarding impact of duration of group, there is positive and positive and significant intertemporal improvement in all types of relationship and empowerment for both older and newer groups except in case of empowerment in credit related matters for newer groups. Moreover, older members seem to have done significantly better in terms of improvement in spousal, intra-family and neighbourly relations, and also in more dimensions of intra-family relations. Newer members have done significantly better only in terms of multiple dimensions of group cohesiveness, as is expected of them (Table 4.16b). Regarding effect of group truncation, although both groups seem to have achieved positive and significant changes over time in all types of relations and empowerment indices, there is no significant difference in the achievement of these two groups with respect to family and social dynamics (Table 4.16c).

Table 4.16a (Module IX): Improvement in family & social dynamics

		Values for SHG Category			**Values for JLG Category**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
SPREL	Improvement in spousal relationship (-1,0,1)	-1.00	0.72*	1.00	0.00	0.90*	2.00	-2.59	0.01
FAMREL	Improvement in member's relationship with family members other than spouse (-1,0,1)	-1.00	0.78*	1.00	0.00	0.90*	1.00	-1.67	0.10
NEBREL	Improvement in neighborly relationship (-1,0,1)	0	0.86*	1	0	0.97*	1	-2.45	0.01

CCPART	Change in participation in community social/religious/cultural activities (-1,3)	0.00	0.60*	3.00	0.00	0.56*	3.00	0.34	0.73
PCSPOUS	% dimensions of improved spousal relationship	0.00	77.1	100.00	0.00	77.50	100.0	-0.11	0.91
PCINTRA	% dimensions of improved intra-family relationship	12.50	65.2	100.00	6.25	57.68	87.50	1.91	0.06
PCFEST	% order of participation in community activities	0.00	72.5	100.00	0.00	82.41	100.0	-2.20	0.03
PCGMEET	% of different reasons group meetings are liked now-a-days	18.18	78.7	100.00	0.00	82.32	100.0	-1.18	0.24
POWCRM	Improvement in member's decision-making power in family credit matters (-1,0,1)	-1.00	0.38*	1.00	-1.00	0.50*	1.00	-0.96	0.34
POWEXM	Improvement in member's decision-making power in family expenditure related matters (-1,0,1)	-1.00	0.57*	1.00	-1.00	0.89*	1.00	-3.39	0.00
POWCLM	Improvement in member's decision-making power in children related matters (-1,0,1)	-1.00	0.68*	1.00	-1.00	0.92*	1.00	-2.82	0.01

Note: * and ^ signs are applied on means of changes, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. The number of observations for SHGs and JLGs are 72 each (n1=n2=72) except for PCINC, PCAGINC, PCLAINC, PCNFINC and PCSEINC for which n1 is 71, 70, 70, 70 and

70, respectively, and for OUTLOAN & AVOUT, for which n2 is 71, 71 respectively. For PCINTRA, n1=66 and n2=61.

Table 4.16b (Module IX): Improvement in family & social dynamics									
		Values for newer members (n=15)			**Values for older members (n=129)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
SPREL	Improvement in spousal relationship (-1,0,1)	0.00	0.47*	1.0	-1.0	0.85*	2.0	-2.8	0.013
FAMREL	Improvement in member's relationship with family members other than spouse (-1,0,1)	0.00	0.53*	1.0	12.5	0.88*	2.0	-2.47	0.025
NEBREL	Improvement in neighborly relationship (-1,0,1)	-1.0	0.60*	1.0	0.00	0.94*	1.0	-2.05	0.059
CCPART	Change in participation in community social/religious/cultural activities (-1,3)	0.00	0.73*	3.0	00.0	0.56*	3.0	0.64	0.53
PCSPOUS	% dimensions of improved spousal relationship	0.00	74.67	100.0	0.00	77.60	100.0	-0.46	0.65
PCINTRA	% dimensions of improved intra-family relationship	6.25	45.59	93.75	12.5	62.98	100.0	-1.82	0.10
PCFEST	% order of participation in community activities	16.67	72.22	100.0	0.00	78.04	100.0	-0.89	0.38
PCGMEET	% of different reasons group meetings are liked now-a-days	63.64	88.48	100.0	0.00	79.56	100.0	2.68	0.012

POWCRM	Improvement in member's decision-making power in family credit matters (-1,0,1)	-1.0	0.04^	1.0	-1.0	0.44*	1.0	-0.17	0.87
POWEXM	Improvement in member's decision-making power in family expenditure related matters (-1,0,1)	-1.0	0.73*	1.0	-1.0	0.73*	1.0	0.04	0.97
POWCLM	Improvement in member's decision-making power in children related matters (-1,0,1)	-1.0	0.08*	1.0	-1.0	0.80*	1.0	1.22	0.54

Note: * and ^ signs are applied on means, where the results of Student's t show that the underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

Table 4.16c (Module IX): Improvement in family & social dynamics									
		Values for reconstituted group members (n=25)			**Values for non-reconstituted group members (n=104)**				
Variables	**Definition**	**min**	**mean**	**max**	**min**	**mean**	**max**	**t-value**	**p-value**
SPREL	Improvement in spousal relationship (-1,0,1)	0.00	0.84*	1.0	-1.0	0.86*	2.0	-0.19	0.85
FAMREL	Improvement in member's relationship with family members other than spouse (-1,0,1)	-1	0.84*	2.0	0.00	0.88*	2.0	-0.38	0.71
NEBREL	Improvement in neighborly relationship (-1,0,1)	0.00	0.96*	1.0	0.00	0.93*	1.0	0.58	0.56

CCPART	Change in participation in community social/religious/cultural activities (-1,3)	0.00	0.64*	3.0	0.00	0.54*	3.0	0.55	0.58
PCSPOUS	% dimensions of improved spousal relationship achieved	0.00	71.2	100.0	0.00	79.13	100.0	-1.19	0.24
PCINTRA	% dimensions of improved intra-family relationship achieved	18.75	60.42	100.0	17.5	63.65	100.0	-0.69	0.49
PCFEST	% order of participation in community activities achieved	0.00	78.67	100.0	0.00	77.88	100.0	0.12	0.90
PCGMEET	% of different reasons group meetings are liked now-a-days	18.18	74.55	100.0	0.00	0.77	100.0	-1.32	0.20
POWCRM	Improvement in member's decision-making power in family credit matters (-1,0,1)	-1	0.48*	1	-1	0.43*	1	0.28	0.78
POWEXM	Improvement in member's decision-making power in family expenditure related matters (-1,0,1)	-1	0.71*	1	-1	0.73*	1	-0.15	0.88
POWCLM	Improvement in member's decision-making power in children related matters (-1,0,1)	-1	0.75*	1	-1	0.81*	1	-0.43	0.67

Note: * and ^ signs are applied on means, where the results of Student's t show that th1e underlying changes are and aren't different from zero, respectively. Note: T and P values which are significant for pair t-test at least at 5% level of significance for one-tailed test are yellow-marked in the last two columns.

4.12 As primary data analysis would probably remain incomplete unless we probe deeper into the type and reasons of delay in activating the bank-SHG linkage process[4], the reasons behind drop out of clients under both SHGs and JLGs, and income shock absorption pattern of both groups, this is done in the next few paragraphs. An important performance criterion utilized to evaluate the performance of SHGs and JLGs at group level is delay in completing the processes for providing linkages between SHGs and Banks on the one hand and JLGs and MFIs on the other. The delay parameters pertain to (i) having bank linkage after group formation; (ii) starting internal lending after group formation; (iii) getting first loan from the bank/MFI; (iv) completing the first test after group formation; and (v) completing the second test after group formation. However, only the last delay parameter is applicable in case of JLGs. The main findings in this context are as follows:

- The average delay in having bank linkage is smallest (2.21 months) for older groups as compared to the same for other two groups (about 8 months).
- The average delay in starting internal loaning system is 9 months for reconstituted group and 12.17 months for older group, while delay in getting the first loan from bank after group formation is more or less the same for reconstituted and older groups (about 22-23 months).
- Between old and reconstituted groups, the average delay in completing the first test is considerably less for the former group than the latter (17 vs. 24 months), while the opposite is true with respect to delay in completing the second test (71 vs. 40 months). Not only these average figures are disproportionately high, so also are their coefficients of variation (CVs), which raise doubts about reliability of these average figures.
- Both Coop and BCKV-promoted SHGs are yet to apply tests. Besides, the former have not yet implemented internal loaning system while the latter are yet to realize any bank loan, obviously signifying that the sooner these SHGs join either of the two broad processes, the better[5].

[4] Delay in completing process of Bank-SHG linkage being too time consuming, the study probed it further in greater details for 22 SHGs, which could provide the requisite information.

[5] Only one NABARD-promoted SHG from the cluster of North 24 Parganas operating with support from an NGO called Youth Development Centre got selected in our random sample. Although we have not differentiated it from the dominant category of SHGs under SGSY/NRLM scheme in our tabular presentations, we have taken note of the distinctive performance of this SHG as well as the sample households from this SHG, while arriving at the conclusions in the last section of this chapter.

- NGO-promoted SHGs seem to be taking on average lesser time than PRI-promoted ones in getting bank linkage as well as in passing second test, though the reverse is true with respect to delay in passing the first test.
- In providing the first bank loan Coop-backed SHGs have displayed maximum efficiency (taking 20 months) as compared to the other two categories (Table 4.17).

Table 4.17: Mean & CV of delay variables across categories for SHGs						
	Reconstituted (n=7)		New (n=7)		Old (n=22)	
Variable	Mean	CV	Mean	CV	Mean	CV
1. Delay in having bank linkage after group formation (in months)	7.86	184.35	8	184.22	2.21	132.82
2. Delay in starting internal loaning system after group formation (in months)	9	20.29	NA	NA	12.17	131.27
3. Delay in getting first loan from bank/NBFC after group formation (in months)	23	54.39	NA	NA	22.42	53.86
4. Delay in passing first test after group formation (in months)	24	43.30	NA	NA	17.11	73.48
5. Delay in passing second test after group formation (in months)	40	24.75	NA	NA	71	62.97

Note: NA means 'not applicable/available'.

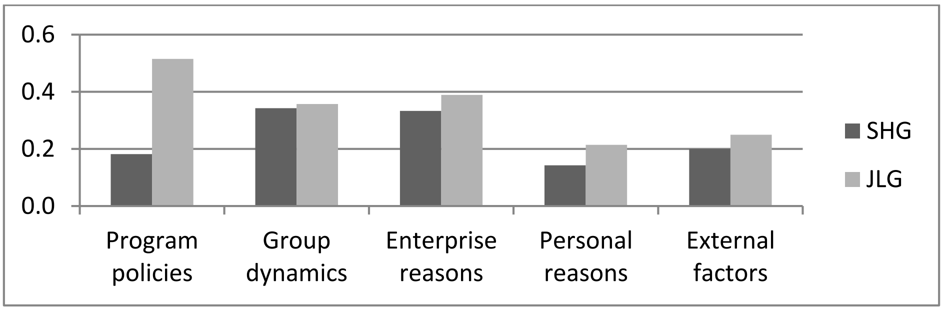
4.13 Turning to JLGs promoted by NBSC-MFIs, the delay in getting the first loan is nil (i.e., almost instant) for new groups, 0.6 month for older groups and 1.5 months for reconstituted groups. These figures are in striking contrast to those in the context of SHGs for the same parameters, as this study has found[3].

4.14 The study finds unfavourable group dynamics and enterprise-related problems as the two major reasons for drop outs among SHG clients (with 32 – 33% importance), while external factors, programme policies and personal reasons seem to have lesser importance (claiming 20%, 18%, and 14% importance, respectively). Among JLG clients, the most prominent reasons for drop out are: programme policies (51% weightage), enterprise reason (39% weightage) and unfavourable group dynamics (34% weightage), while external factors and personal reasons have only 25% and 14% weights, respectively. If difficulties in interpersonal comparison across SHG and JLG clients are ignored, one can argue that each of the aforesaid reasons play stronger role among JLG rather than

[3] Excessive delay in delivery of services to SHGs is generally due to casual approach of under-staffed commercial banks, who generally look upon SHG loans highly lender transaction-cost intensive, meagre in size, non-profitable, and thus not lucrative from their business point of view, unless strong NGOs can counter this tendency through suitable strategies. Youth Development Center in Sandeshkhali-II for example put their volunteers to assist bank officials in dealing with SHGs. The RPs appointed by *Panchayats*, on the other hand, are sometimes alleged to be asking for commission from SHG members for similar service.

SHG clients. JLG clients are found to be much more sensitive to programme policies than SHG clients (Figure 4.1).

Figure 4.1: Classification of reasons for drop-out across SHGs/JLG clients



4.15 While probing the extent of income shocks and shock-absorption capacity of SHG and JLG members, the following observations are made:

- The CV of income is higher for old SHG members than for new ones, but the highest value of CV is observed for reconstituted SHG members. In case of JLG households, the value of CV is consistently higher for old group members than for their counterparts in other two groups. Thus, income fluctuations seem to have increased with longer loan cycles, even though average incomes rise with longer credit interventions.
- Regarding incidence of earning shortfall during the last three years (measured along horizontal axis), it seems that the risk distribution has become flatter (with probabilities of very small and very large shortfalls being higher, and those of moderate shortfalls lower) for old group members as compared to new group members in case of SHGs, as typified by Figure 4.2a. Interestingly, the risk distribution of income shortfalls (also measured horizontally) in case of JLGs seems to have shifted to the right, thus signifying that while the risk of small shortfalls has gone down, that for large shortfalls has increased, as typified in Figure 4.2b. For both SHGs and JLGs, therefore, there is need for not only insurance, but also even reinsurance for protecting them against large income shortfall risks.

Figure 4.2a: Stylized pattern of probability distributions of earning shortfall in old and new SHG clients

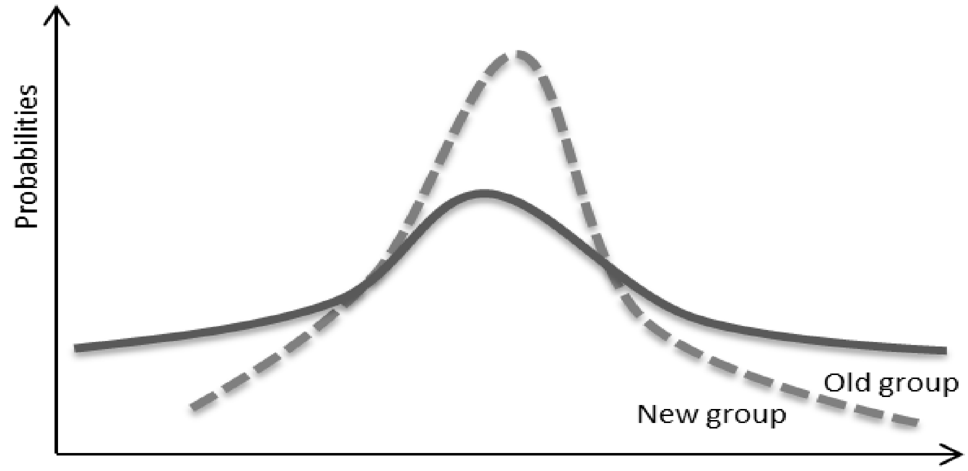
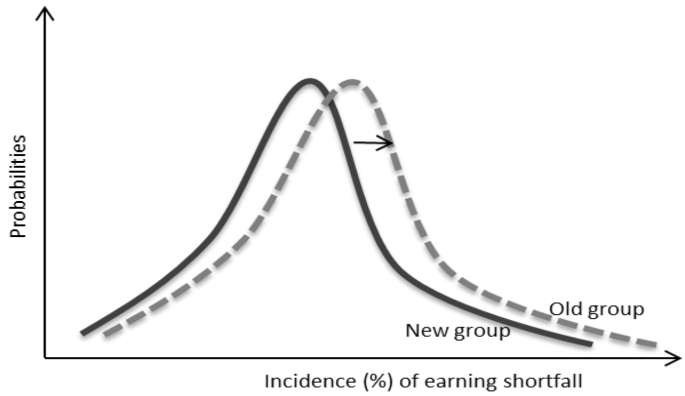


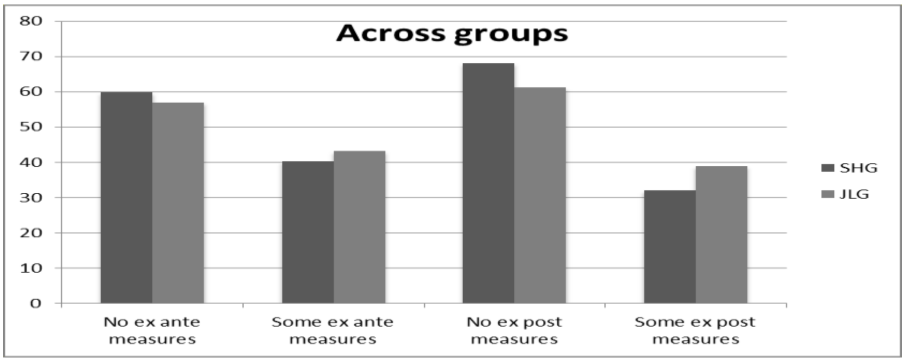
Figure 4.2b: Stylized pattern of probability distributions of earning shortfall in old and new JLG clients



- Living in extended families and networking through friends/relatives for possible mutual support are the two major *ex ante* steps undertaken by the SHG households against income shortfalls, the incidence of these two reasons together being highest (30%) for old group members, moderate (21%) for reconstituted group members and lower (14%) for new group members. Similar is the situation with JLG members in old groups (with 46% incidence) and reconstituted groups (with 42% incidence); for JLGs case, however, members of new groups don't undertake these steps – they take precautionary steps to avoid health hazards (with weightage of only 10%).
- In terms of posterior steps, the prominent options used by old and reconstituted SHG members are: relying on past savings and mortgaging of assets, with weightage of 14% each. Members of new SHGs however, use two different posterior steps: selling of assets and reducing consumption of basic goods like food, clothing, etc. which have a combined weightage of 21%. Thus, new SHG members are worse of as compared to those under old

and reconstituted SHGs, as the latter are not required to cut down their basic goods consumption, nor to sell off their assets outright. For old and reconstituted JLG members, the two prominent posterior steps to handle income shocks are: relying on past savings and mortgaging of assets, and borrowing from friends/relatives at zero interest, with their combined weightage being 30% and 33%, respectively. The prominent posterior option used by new JLG members is relying on past savings. Thus, in case of JLGs too, old and reconstituted members are not required to sell off their assets outright, nor to depend exclusively on interest-free loans from friends/relatives. For both JLGs and SHGs, it is clearly found that older groups have performed better than newer groups in terms of undertaking some positive *ex ante* measures or ex post measures. However, the incidence of both *ex ante* and *ex post* measures is higher for JLGs than SHGs (Figures 4.3).

Figure 4.3: Bar charts of the incidence of ex ante and ex post actions across SHG/JLG members



Section 5: Conclusions

4.16 The observed strengths of SHGs and JLGs in the context of West Bengal are several. First, both SGSY/NRLM and NBFC-MFI categories of SHGs/JLGs have created a vast network in the state, which is by no means a small achievement. Second, they have made small loans available to small clients for purposes, which are non-standard and hence non-appreciated and maybe even looked down upon as petty and unworthy of any cash flow analysis by the *babus* of the formal credit sector. In course of field testing of questionnaires, the study has come up with a fairly comprehensive list of the various purposes for which loans are made by this intermediate category of micro-credit institutions (Appendix 4.1), which we have termed as semi-formal to distinguish them from formal credit, on the one hand, where the relevant clients have hardly any access, and from informal credit, on the other, where these clients can easily access credit, but often at usurious terms and conditions. Third, access to formal sector credit may have lesser borrower transaction cost for large loans and against marketable collateral, these anonymous and faceless clients without marketable collateral and non-standard projects are getting loans at much lower monetary and non-monetary transaction cost for themselves. Fourth, it appears there is better targeting of beneficiaries under SHG/JLG programmes, as compared to other flagship government schemes in the country. Fifth, while most government schemes including priority sector lending policy of formal banking sector have failed to pump in enough money and provide impetus for growth of the so-called unorganized and non-formal sector in rural hinterlands and semi-urban/urban pockets, pumping in credit through SHG/JLG route seems to be generating the much required multiplier effect towards financial inclusion. Sixth, as the findings of this study demonstrate, there is significant, though certainly limited economic as well as social benefits of SHGs/JLGs. Finally, unlike what is commonly believed, there is considerable complementarity between SHG and JLG loans – while SHGs concentrate relatively more on consumption loans as well as loans for agriculture and allied activities (as much as 81%), the JLGs seem to be concentrating more on loans for cottage industries, trade and business and services (to the tune of 88%) as it can be seen from the relative weightage of loans for various purposes as found through scrutiny of individual loans (Table 4.18).

Table 4.18: Classification of purposes of Semi-formal loan cases across sample SHG/JLG members

Purpose	**Consumption**	**Agriculture / Allied**	**Cottage industries**	**Services**	**Trade and business**	**Investment**	**Total**
SHGs	16	17	2	1	4	1	41
	39.0%	41.5%	4.9%	2.4%	9.8%	2.4%	
JLGs	1	5	12	7	25	0	50
	2.0%	10.0%	24.0%	14.0%	50.0%	0.0%	

4.17 Although SHGs and JLGs have become a part and parcel of the West Bengal economy and especially for poor and backward families which are mostly excluded from formal banking sector, and although this instrument has raised a lot of hopes in the minds of these people as well as policy makers, there is no denying the fact that these institutions suffer from certain serious weaknesses, which ought to be addressed through suitable policy and removed at the earliest for their sustainability. Since there are differences in the nature of their weaknesses, we shall deal with this subject separately for SHGs and JLGs.

4.18 In case of SHGs, the vast network created seems to contain a large amount of 'fat', far more than any reasonable estimates, apparently because of multiple entries and a large number of defunct units. Second, officials do not claim to have created some higher tier organizations to reinforce the SHG movement, nowhere within the sample areas we could come across any such organization, nor did the respondents talk of their roles. Third, maintenance of records demands a lot to be done, especially at group and individual level, except for SHGs promoted by one Youth Development Centre (YDC) in Sandeskhali-II Block of North 24 Parganas, and those promoted by one Rural Cooperative at Gontra village in the district of Nadia. Even though we have encountered in the sample only one NABARD-promoted SHG operating under YDC, its relatively better functioning and maintenance of records seems to be partly due to better designing and monitoring of NABARD-promoted SHGs, and mostly due to the presence of a relatively well functioning NGO which is allowed under NABARD scheme to perform the handholding role at least in initial stages. Fourth, even the instrument of SHG can be adopted by any group to achieve growth through mutual support. Probably the SHGs promoted by Gontra Cooperative and the extension wing of BCKV in the village of Goragachha could be better off if they could utilize the benefits of internal lending as well as of external lending and support to strengthen training and awareness creation. Fifth, two types of general complaints seem to be plaguing the SHG movement in West Bengal – (i) serious lack of timely initiative on the part of bank officials to guide and help the SHGs as reflected in disproportionate delays in achievement of prescribed land marks like passing of first test, second test, etc. and opening of cash-credit account for the groups; and (ii) alleged failure of Resource Persons (RPs) to conduct business as prescribed to them by the state government as well as the state unit of NRLM to serve the interest of SHGs more than that of their own cadres. Given the fact that there are large subsidies and grants in SHG schemes, it is no surprise that there will be some rent-seeking behaviour on the part of the clients, their monitors or hand-holders (be they government bureaucracy, NGOs, banks or RPs appointed with the good intention of providing professional help), as a result of which the opportunistic goals of these helpers may supersede the cherished goals of the schemes. Unless and until good and strong federations of SHGs are created through careful selection and screening of not only clients but also other functionaries on the one hand, and through development and application of rigorous MIS on the other, deviation and indiscipline accompanied by no or limited success are likely to continue. Last but not the least, in spite of frequent clamour against the bank officials for providing not enough loans on time, the fact remains that there is inadequate effective demand for productive investment by clients, which alone can lead to higher and steady income flows from newer and value added products. Neither the bank officials, nor the PRIs, nor the officials or RPs, and not even most of the NGOs do have enough capability and urge to play leadership role to plug in these lacunae in the SHG movement.

4.19 Although the JLGs, as observed in case of Bandhan in West Bengal, seem to have much more disciplined in terms of record-keeping, performance evaluation and guidance – apparently because of stricter RBI regulations, stringent bank/donor monitoring and above all the compulsions of competition and profit making, they too seem to be suffering from certain serious limitations. First, though they have apparently better records, they do not make it public, even though MFIs also draw a large chunk of public sector bank resources earmarked for priority sector lending. It appears that the JLGs under Bandhan have subsumed a large part of borrower transaction cost by minimisation of borrower's trip to branch office for loans and repeat loans, as long as repayments are regular, the lender's transaction cost must have increased. So whether and to what extent the NBFC-MFIs are making super-normal profits, as often alleged in the literature, remain an unresolved issue because gross profits, operational costs and transaction cost as opposed to transformation cost (i.e., cost of transformation of borrowings from the market into small JLG loans) are not yet been estimated for this sector with reasonable accuracy. Second, availability of large pool of educated but unemployed youths in West Bengal has no doubt helped Bandhan to recruit from this pool its credit officers at a fairly low cost with great advantages of socio-economic proximity of these officials to its clients. But this short term advantage may not be sustainable in the future unless the expectations and aspirations of this pool of ground level workers are fulfilled through increased flow of monetary benefits and training opportunities to build up their human capital. Third, though economic benefits to clients seem to be stronger to JLG clients than SHG clients, Bandhan seems to have achieved it so far only through steady rise in working capital loans, but as further expansion of existing business enterprises becomes increasingly difficult, Bandhan must find ways and means to encourage its credit officers as well as clients to go in for modern technology, better organizational skill and more value added production for premium markets. Last but not the least, cut-throat competition by NBFC-MFIs to poach each other's clients through aggressive and/or multiple lending, unless controlled through self-regulation rather than merely through RBI stipulation (which is difficult to enforce) may ruin the customers (through spending an increasing proportion of their income on loan repayments, as we have seen earlier) as well as the MFI lenders.

Appendix 4.1: List of activities for which loans are given classified by purpose

Serial #	Purposes	Serial #	Purposes
1	**Consumption**		
1.1	General consumption	1.4	Household durable expenditure
1.2	Marriage or buying ornaments	1.5	Medical treatment
1.3	Loan repayment		
2	**Agriculture and allied activities**		
2.1	Cultivation	2.5	Organic fertilizer production
2.2	Nursery and sapling business	2.6	Poultry
2.3	Horticulture	2.7	Dairy, Milk, Ghee, Paneer production
2.4	Betel leaf farming	2.8	Fishery
3	**Services**		
3.1	Band party	3.11	Mason
3.2	Beauty parlor and saloon shop	3.12	Mosaic machine
3.3	Constriction service	3.13	Painting (general)
3.4	Decorators and loud speaker	3.14	Priestly service
3.5	Driving	3.15	Polish work
3.6	Electrical service	3.16	Quack
3.7	Equipment maintenance	3.17	Repairing service
3.8	Hotel and school canteen	3.18	Sewing and tailoring
3.9	Ironing and laundry	3.19	Studio
3.10	Lottery	3.20	Transport service
		3.21	Wall painting
4	**Cottage industry**		
4.1	Incense stick making	4.12	Lantern business
4.2	Art work/painting	4.13	Lethe work
4.3	Bakery, confectionary and biscuit business	4.14	*Maduli* making
4.4	Bamboo work, basket making, mat making	4.15	Musical instruments making
4.5	Carpentry, furniture making	4.16	Paddy husking
4.6	Conch shell work	4.17	*Papad* making and business
4.7	Cottage industry/handicraft general	4.18	Paper packet (*thonga*) making
4.8	Fur work	4.19	Pottery, idol making, terracotta
4.9	Garland (*Belmala* and flower) making	4.20	Puffed rice making
4.10	Grill work	4.21	*Rakh*i making
4.11	Handloom, embroidery, fabric work	4.22	*Sola* work
		4.23	Zari work
5	**Small Manufacturing, Trade & Business**		
5.1	Almirah business	5.26	Jewellery business
5.2	Ample business	5.27	Jute business
5.3	Battery business	5.28	Kite business
5.4	Bedding business	5.29	Leather (Bag or shoe) business
5.5	Betel leaf business	5.30	Medicine shop
5.6	Betel nut business	5.31	Meat shop
5.7	Bidi binding	5.32	Mobile shop

5.8	Cassette business	5.33	Mosquito net business
5.9	Clock business	5.34	Newspaper business and book stall
5.10	Cloth, garments business	5.35	Peanut business
5.11	Coconut vending	5.36	Plastic business
5.12	Constriction material business	5.37	Potato business
5.13	Egg business	5.38	Spices business
5.14	Electrical and electronic goods business	5.39	Stationary business
5.15	Ice cream & Fast food (*Bhelpuri*, Roll etc)	5.40	Straw business
5.16	Fertilizer business	5.41	Sweet shop
5.17	Fish vending	5.42	Tea leaf business
5.18	Flower vending	5.43	Tea stall
5.19	Fruit vending	5.44	Tobacco business
5.20	Fuel business	5.45	Utensil's business
5.21	General business	5.46	Vegetable business
5.22	Grain business	5.47	Wholesaler
5.23	Grocery shop	5.48	Wood business
5.24	Hardware business	5.49	Wool business
5.25	Hawker		
6	**Investment**		
6.1	Education	6.4	Shop purchase or development
6.2	Equipment purchase (general)	6.5	Transport equipment purchase
6.3	Land purchase		

Chapter 5

Studying NABARD's Role through Case Studies in Selected Districts of Gujarat and Maharashtra

Section 1: Introduction

5.1 As mentioned in the preceding chapter, the primary data collected on SHGs from West Bengal included very scanty observation on NABARD promoted SHGs. So, the study makes it a point to supplement the study findings with a few case studies from the twin states of Gujarat and Maharashtra from a few selected districts. With this end in mind, three districts of Gujarat – viz., Navsari, an affluent district from South Gujarat, and Sabarkantha, a relatively less affluent district from North Gujarat were chosen. In the neighbouring State of Maharashtra, on the other hand, only one district of Kolhapur could be chosen subject to the time constraint. Although this quick snapshot of NABARD's role in the SHG/JLG Movement provides only a very partial picture, this chapter nevertheless brings out several important lessons about the strengths and weaknesses of this Movement which are worthy of inclusion in this study for larger debate on the subject and further refinement in policy making.

5.2 This chapter is organised as follows: The next section presents three interrelated cases of SHGs from the district of Sabarkantha in Gujarat. Section 3 does the same for a bunch of JLGs in the village of Ghej in the district of Navsari. Section 4 presents two cases – one based on a meeting of SHGs at Kolhapur DCCB office, while the other based on a similar meeting held at village Gadmudshingwar at the office of an NGO called Shyam. The final section summarizes and concludes this chapter.

Section 2: Utility of SHG savings - Lessons from several cases from North Gujarat

5.3 SHGs are being persistently promoted among the poor people throughout the world to inculcate the spirit of self-help among these people, especially the women-folk, so that they can handle some of their problems through internal lending out of their own savings, and can also build up trust through group savings and group solidarity with the formal banking system. This process, *Pundits* preach, help them achieve a spiral process of growth. Thus, the underlying ideas behind the SHG Movement and the objective of saving are of mutual help, the bank support and then progressively going up the ladder in terms of development.

5.4 The district of Sabarkantha in North Gujarat being a relatively backward area, where the SHG Movement made its early dent through the efforts of NABARD, we have chosen three cases of SHGs from this area. The first case pertains to a bunch of SHGs being promoted by an NGO called Viksat around a place called Bhiloda, which is now part of a new district called Aravalli (since August 15, 2013) in North Gujarat. The next two cases pertain to two SHGs – viz., Mahakali and Aakash, both located near Himmatnagar in Sabarkantha district and promoted by another NGO called ACHALA. All these three cases revolve around a common theme 'Utility of SHG Savings', wherein the group members seem to have tried to bring out the pros and cons of SHG savings. These cases may be looked upon as constituting parts of a common question: 'What are we saving for?', though we are providing different sub-titles to add different flavours to these four cases.

Case 5.1: Are the banks promoting the SHGs, or are the SHGs promoting the banks?

5.5 Viksat, an arm of an NGO called Nehru Foundation for Development (NFD) came into being in 1977 to undertake effective steps to conserve the environment and to promote sustainable development through promotion of sustainable institutions and positive interactions among them. With support from NABARD, Viksat is engaged in promotion, management and development of bank linkages of about 250 SHGs in the districts of Mehsana, Patan, Sabarkantha and Kutch . Viksat has an office at Bhiloda, where we reached to interact with about 8-10 SHG members who were waiting for us.

5.6 On arrival at Viksat office at Bhiloda, the study team was welcomed by Viksat official Hazel S., the senior most SHG leader present in the gathering, who introduced herself as Sumitraben Gamit. Sumitraben was earlier a part of the Joint Forest Management Programme, which Viksat was running in this area. She is the team leader of Jai Ambika SHG, which has currently Rs.80,000 as their savings and internal lending to the tune of Rs.52,000 per annum. There are 15 members in this group. As Sumitraben recalled, the SHG was first formed in 2001 with per head saving of Rs.2 per month. The saving rate has now risen to Rs.100, and they are believed to be doing pretty well. However, Sumitraben recalls that the group had broken 2-3 times due to lack of mutual trust within the group, but it steadied after they came in contact with Viksat, which trained them on the virtues of SHGs and guided them about rules and regulations to sustain themselves.

5.7 As Sumitraben recalls, earlier it was tough time for the women folk to raise any money to meet urgent needs. They had to keep their gold ornaments with the money lenders against extremely high interest rate of 2-5% per month. As a result, the women folk very often fell into debt traps and could not recover their ornaments. In this way, Sumitraben herself lost about 35 grams of gold. So, it became imperative for Sumitraben to provide a lead in the formation of her SHG and thus help herself as well as other women, who are often in shortage of emergency funds. For group members are all engaged in vegetable vending, and in sharp contrast to a money lender, her group lends money internally at the rate of 2% per month - i.e., 24% per annum. All interest earnings of the group are accumulated funds of the group, which are used for internal re-lending. Thanks to their consistent performance, the group got a loan of Rs.1 lac from a bank in 2009 at an annual interest rate of 12%, which was internally lent among the group and repaid to the bank within a period of two years.

5.8 Jai Ambika SHG favours internal saving as well as internal lending, rather than taking loans from banks. Internal loans are utilized for education of children, medical treatment and purchase of auto rickshaw, buffalo, machine etc. These loans are given as per the requirement of the members.

5.9 When asked what they do advise their children, if they don't get a job even after having enough education, the leader of Saraswati SHG replied that in that case they give money to their unemployed children, but ask them to return double the amount. In other words, they are all giving the lessons to their children that they must look for legitimate ways and means to earn and augment income flows. They therefore teach them how to milk the buffaloes, and she proudly announces that children don't mind doing such work alongside their mothers and sisters. She mentions that one of her sons has completed B.E. (Computer), and the other is pursuing B.Ed. Another member reports that her son has completed B.Sc. and become a teacher. The daughter of another SHG member is pursuing MSW. The Saraswati SHG was formed 6-7 years ago, and it too has about Rs.45,000 in the form of bank savings. Some basic information depicting progress of these two SHGs are displayed in Tables 5.1 and 5.2, respectively.

5.10 When the group members were asked whether they work under MNREGA, their answer is that though all of them have MNREGA cards, they don't get enough work on time – during seasons when they need such work most. MNREGA jobs are available, only when funds are available with the local authorities. Very few people get 80-90 days' work in a year in their view. Moreover, they complain that apparently due to the piece rate system followed there, they get paid for roughly 4 days job, if they actually work for 5 days. In other words, their realization is about Rs.100 per day, which ought to have been Rs.147 per day. So, very often they need to look for alternative sources of employment during bad seasons.

5.11 They however agree that thanks to the SHG Movement, their income levels have increased. They are in a position to buy one buffalo to augment milk supply to the market, which fetches them about Rs.1,200 extra income per month – i.e., an additional income of Rs.14,400 per annum. This is the only steady source of income. However, after detailed probing it got revealed that they are not supposed to get any 4% interest rate refund as in case of agriculture, if they get loans for allied agricultural activities like animal husbandry, fishery, etc. As these allied activities involve as much nature as in case of agriculture, they wonder why the country is pursuing for such a long time a discriminatory interest rate policy towards allied activities, if the goal of government policy is to help the poor.

Table 5.1: Information on Shree Ambika SHG (Village: Makroda)

Col.1	Col.2	Col.3		Col.4	Col.5	Col.6	Col.7	Col.8	Col.9	Col.10	Col.11	Col.12	Col.13
Year	# of members	# active members		# of meetings held during year	Average attendance %	Savings during the year (Rs.)	Total internal fund created during year	Col.7 as % of col.6	Internal lending from own savings during this year	Col.9 as % of col.7	Savings balance with Bank: (minimum, maximum)	Borrowing from Bank	Lending from bank borrowing
		Saving	Borrowing										
2004	15	15	15	12	90	6150	12503	103	39000	212	766,16479	0	0
2005	15	15	15	12	85	9000	20058	123	44500	122	677,13946	0	0
2006	15	15	15	12	100	9000	18563	106	84000	353	833,20827	0	0
2007	15	15	15	12	80	9000	17523	95	107000	511	2230,27755	100000	100000
2008	15	15	15	12	100	9000	18410	105	71000	286	4111,21588	0	0
2009	15	15	15	12	80	9000	16646	85	58600	252	1736,21736	0	0
2010	15	15	15	12	80	9000	27765	209	61000	120	1963,27329	0	0
2011	15	15	15	12	90	9000	23107	157	43000	86	34313,66406	0	0
2012	15	15	15	12	90	9000	19933	121	174559	776	3239,64702	0	0

5.12 What if an unforeseen contingency like accident happens in a family? DDM, NABARD, who was accompanying the study team, reveals that in case of an accident, an FIR needs to be lodged within 9 days, and then the death certificate together with post-mortem report are to be submitted as per official procedures in order to avail Rs.1 lakh of accident victim support for the immediate kin of the deceased from the state government. There is no need for a separate accident-insurance policy. This is in the case of farmers. In case of non-farmers, the amount of support is of the tune of Rs.50,000. The gathering, however, felt that there is not enough awareness created about this state government scheme. Moreover, they complain that as per their little experience so far, there is still a lot of paper work required for getting the benefits.

5.13 In course of discussion, the study team is given to understand that Dena Bank has been operating an insurance policy for its clients against a premium of only Rs.10 per annum - apparently to attract customers - which entitles the client Mediclaim cover of Rs.20,000 per annum but no one knows for sure about what was heard. Although Dena Bank has clients among the SHGs present there, apparently there is not awareness created about these policies. It is also heard that St. Xavier Church runs an NGO, which provides insurance of similar kind, but with an annual compulsory premium of Rs.100 per person. The study team felt that both Viksat and NABARD should study these possibilities as well as the experiences of SEWA in this connection, as the assembled groups seem to have enough interest in such products.

Table 5.2: Information on Shree Saraswati SHG (Village: Vejpur)

Col.1	Col.2	Col.3		Col.4	Col.5	Col.6	Col.7	Col.8	Col.9	Col.10	Col.11	Col.12	Col.13
Year	**# of members**	**# active members**		**# of meetings held during year**	**Average attendance %**	**Savings during the year (Rs.)**	**Total internal fund created during year**	**Col.7 as % of col.6**	**Internal lending from own savings during this year**	**Col.9 as % of col.7**	**Savings balance with Bank: (minimum, maximum)**	**Borrowing from Bank**	**Lending from bank borrowing**
		Saving	**Borrowing**										
2004	13	13	13	12	80	3900	4625	19	8930	93	1000,1500	0	0
2005	13	13	11	12	75	3900	5747	47	16000	178	800,1300	0	0
2006	13	13	10	12	80	4175	7126	71	18500	160	1300,2100	0	0
2007	13	13	13	12	70	7800	11541	48	23000	99	1200,2000	0	0
2008	13	13	10	6	80	3900	4636	19	17000	267	700,1600	0	0
2009	became defunct												
2010	13	13	10	12	80	7800	10535	35	20000	90	1500,2200	0	0
2011	13	13	10	12	80	7800	12511	60	29000	132	1200,1600	0	0
2012	13	13	10	12	80	7800	12123	55	79000	552	1200,1500	0	0

5.14 A debatable issue arose out of discussion when both the groups reported that a large part of their accumulated savings is maintained in savings bank account of their respective SHGs with the relevant banks (this figure is Rs.45,000 out of an accumulated savings of roughly Rs.80,000 in case of Jai Ambika SHG). The study team's question of why the groups were not utilizing additional loan facilities conferred to them by their respective banks, several interesting answers came from Sumitraben, the eldest among the SHG leaders. Her explanations are broadly as follows. First, as her group is involved in vegetable vending there is hardly any further scope for expansion, as they cannot do the job for 24 hours and can't go very far from the locality. Even if they go for purchase of electric motor, buffalo, etc., they cannot handle, given their other resource constraints, more than one each. Nor do their capability of handling risk of a larger business proposition. So, she has to be extra careful while taking a loan from a bank which is after all an outsider. If large loans are taken in a hurry from inside the group and cannot be repaid on time, it does not involve as much loss of face as it happens with an outside loan, in her opinion. So in Sumitraben's interpretations, there is a natural limit of linear expansion of their activities. Her second justification for not taking bank loans in a hurry and making maximum use of internal funds is as follows: For both types of loans whether from internal resources or from bank borrowings, the internal lending rate remains the same – i.e., 24% per annum. If they use internal resources for internal lending, the entire interest earnings remain with the group. But in case of bank borrowing, only the difference between the internal lending rate and the bank interest rate can accumulate to their funds. So, she points out, by making use of their own funds they are sacrificing only 4% interest from banks on savings account, whereas by borrowing funds from the banks, they are paying 8-12% interest per annum depending upon whether the loan is for pure agricultural or other purposes. Moreover, an outside loan invariably demands larger instalment payments over and above their monthly savings.

5.15 At this stage, the study team decided to provoke Sumitraben by posing yet another question of why she was keeping such a large amount of her group savings (Rs.45,000) with the bank against a meagre annual interest rate of 4%, while the inflation rate is more than 4% per annum and the banks usually earns much higher rate of interest on their savings through lending to more productive customers. At this provocation, Sumitraben expressed her anguish along with the other ladies present, but they never lost logical reasoning. She sought the help of the visiting team in finding suitable answers to her several pointed questions. First, they have no knowledge of any other investment proposition where they can invest and manage the investments well. Will this IIMA Study Team or the students of IIMA come forward, even on occasional trips, to train, educate and guide them on this matter? Second, if there is an emergency in their family, which requires immediate funds, they have no alternative other than approaching the oldest friend – viz., the rural money lender. Instead of that, and given no other alternative, they jointly decided to hold this much amount of money as contingency fund with a bank. So, given their constraints, they have no alternative other than becoming net lenders to banks rather than the banks becoming net lenders to them to sustain their growth and prosperity.

5.16 The study team feels that Sumitraben, except for her formal qualifications to make an access, has got the capability to handle one session in first year Micro-economics at a renowned Management School! We left Bhiloda with a heavy heart.

5.17 The next two cases pertain to a different NGO called ACHALA, which stands for Activities for Children and Ladies' and is located at Himmatnagar. It came into being on 25th May, 1988 under Bombay Public Trust Act. This NGO has the following objectives: (i) To work for woman development and women empowerment; (ii) To undertake activities for socio economic upliftment of women from below poverty-level (BPL); (iii) To provide job work without any prejudice of caste and creed to women, who are needy and willing to work; (iv) To make widows and divorced women economically independent and ensure them their rights in society; (v) To solve collateral problem of the society by making them economically independent and self-sufficient. (vi) To bring revolutionary changes in manners, methods and social customs by creating awareness and education against antisocial activities such as dowry; (vii) To create awareness amongst women about their legal rights and social status; (viii) To motivate them in gaining self-confidence to face challenges in life. (ix) To generate awareness amongst women in regard to their health as well as health of their children; and (x) To get associated with various welfare schemes of central and state governments and work for implementation of such schemes for benefit of BPL women. It has already gathered experience in socio-economic uplift campaigns including formation of women SHGs, legal aid and counselling and provision of health care. In order to get an understanding of the functioning of SHGs under ACHALA, we decided to visit in the company of NABARD DDM and a social worker of ACHALA two SHGs - both located in the outskirts of the town of Himmatnagar.

Case 5.2: Who will bother about a poor widow's plight?

5.18 We first visited Mahakali SHG of 10 women members, which is functioning steadily since 2001. This group has been saving Rs.20 per member per month since inception and all its bank accounts are held with DCCB, Sabarkantha. Since inception the group members are engaged in business of selling sarees and garments, even though some of them sell low-content gold ornaments too. The group has currently a stock of Rs.50,000 worth of sarees. The group leader recalls that they had started with a working capital of only Rs.10,000, which has now increased to Rs.5 lakh, thanks to a bank loan, which they have distributed among the members as per their need. Some basic information depicting progress of this SHG are displayed in Tables 5.3 below.

5.19 The group head recalls how they had started the group. When they came to know about ACHALA, they decided to take its help in forming this group. But for about a fortnight no one came forward to formally start the group, as the ladies were not sure about the purpose of saving the money. However, after repeated interactions with ACHALA, more and more women came into the fold and they got started. They got convinced that ACHALA could not vanish taking away their savings, as their savings were to be kept in a bank account against the name of their group. Since that time they started saving regularly, so that they could qualify for bank loan in the near future. They were convinced that this was the only option before them, if they were to stand on their own feet. They recall that they had never gone out of their house earlier. With maximum education of just 10^{th} or 12^{th} standard, they had very little idea of the world – not to speak of how to speak before a bank official, how to sign, and how to use a cheque. So ACHALA provided the necessary training and helped them build up confidence in interacting with outside people – even officials from Delhi.

Table 5.3: Some Basic information about progress of Mahakali Achala SHG

Col.1	Col.2	Col.3		Col.4	Col.5	Col.6	Col.7	Col.8	Col.9	Col.10	Col.11
Year	**# of members**	**# active members**		**# of meetings held during year**	**Average attendance %**	**Savings during the year (Rs.)**	**Cumulative total internal fund**[1]	**Internal lending from own savings during the year**	**Savings balance with bank**[2]	**Borrowings from bank**	**Lending with borrowed fund**[3]
		Saving	**Borrowing**								
2001	10	10	10	15	90	6000	NA	3000	3000	10000	10000
2002	10	10	10	12	95	6000	NA	4000	5000	0	0
2003	10	10	10	13	100	6000	NA	2000	8000	25000	25000
2004	10	10	10	14	90	6000	NA	5000	9000	0	0
2005	10	10	10	12	80	6000	NA	6000	9000	100000	100000
2006	10	10	10	13	90	6000	NA	3000	12000	0	0
2007	10	10	10	15	100	6000	NA	4000	14000	200000	200000
2008	10	10	10	12	90	6000	NA	3000	17000	0	0
2009	10	10	10	15	95	6000	NA	2000	21000	0	0
2010	10	10	10	13	95	6000	NA	10000	17000	300000	300000
2011	10	10	10	12	100	6000	NA	5000	18000	0	0
2012	10	10	10	12	100	6000	NA	8000	16000	500000	500000
2013 (till 7/6/2013)[4]	10	10	10	6	100	4000	NA	5000	15000	0	0

5.20 They started internal lending six months after formation of their SHG, when they had nearly accumulated a saving of Rs.3,000 (saving of Rs.50 per person per month). Loans are given to group members as per their needs like delivery of daughter-in-law, starting a small business, paying tuition fees of children, taking care of sickness of a family member, etc. They keep the loans after the borrowing member signs a loan on a stamp paper vis-à-vis the group. During the earlier days, saving Rs.50 per month per member was difficult, but as they were determined they used to stitch blouses,

[1]Unfortunately, these figures couldn't be provided by the promoting NGO, in spite of best efforts from our side.
[2]Seems these are either average balance or balance at the end of calendar year, which is not clarified by the promoting NGO though we were looking for minimum and maximum balance during the year, as supplied by the accounts table from SHGs bank passbook records.
[3]We have skipped another column on repayments to bank as these figures too couldn't be provided.
[4]These figures are as of 7/6/2013.

sell vegetables, soaps, etc., to maintain the rhythm of saving. Now that they are taking loans from bank, they are required to pay larger instalments to the bank. As a result, they cannot tell the group members to increase compulsory monthly saving. This is how they have managed the repayment rate of 100% for the last 10 years or so. Their rule is that on 5th of every month a member has to pay the instalment amount. Penalties are levied at progressive rates for delays in repayment.

5.21 The group members point out that after interest subvention, it comes down to 4% per annum for agriculture, but there are no such concessions for animal husbandry, fishery and other allied activities, even though these activities continue to be livelihood issues for them. Given the fact that there is hardly much scope for profit in agriculture for them, they are required to survive by necessarily getting engaged into various allied agricultural activities and even in non-farm activities. They therefore, very much resent absence of interest concessions in bank loans for the whole spectrum of their activities.

5.22 Definitely technological improvement has increased their efficiency. For example, earlier they could stitch one or two blouses per person per day when the stitching machine was leg-pedalled, but now-a-days with electric sewing machines, the output rate has increased to 5 per person per day.

5.23 Unfortunately, such a well-functioning SHG seems to be in a spot in taking care of unforeseen contingencies. Earlier they were part of Aviva Life Insurance, but they had to discontinue as the premiums were too high for them. At this stage, they don't have any life insurance, nor any health insurance other than that provided by the state government for BPL families. As a result, one of the group members, whose husband met with an accident and expired, is in serious trouble. The entire burden of maintaining the family of three children, their educational expenses and repaying all loans has fallen on her shoulders. Of her three children, the youngest one, a boy is in 3rd standard, whereas two daughters are in 5th and 10th standards. So, like others in the group, she stitches and sells the goods door-to-door, but as it is not enough to meet her needs, she has taken up some extra job in Civil Hospital in the evening, but she finds it awfully difficult to do both jobs simultaneously after taking care of the household chores. She wishes there were a cheap life insurance policy to protect her from the trauma she is in. So, at the end of her meeting with the group, the ladies present raised a legitimate question: 'Who will bother about a poor widow's plight?'

Case 5.3: Do you advise fresh SHGs of educated but unemployed children of ours?

5.24 To understand the functioning of an SHG of exclusively Muslim women, we visited Aakash which was created by 10 women in 2008. On our arrival along with NABARD DDM and the lady organizer of ACHALA, the head of the group, Raziabibi welcomed us along with her group members. This group too was initially linked to the DCCB of Sabarkantha district, but later on they moved to ICICI Bank, as the latter offered a larger quantum of loan. They took this move as they have confidence to pay back a loan of Rs.1 lakh within a year, besides saving Rs.500 per month per person. Most of the wives in this group run small businesses of fruits and vegetable stalls. Raziabibi started a new business of organising pandals (*mandap*) for organising various ceremonies. Most of the SHG members have sewing machines at home, which they use for earning additional income through stitching. In course of discussion with them it got revealed that although in the past, the husbands of two lady members had interfered with their credit activities, resulting in temporary default by those two members, it never occurred again – thanks to their joint efforts and support of ACHALA. Some basic information on progress of this group are provided in Table 5.4.

5.25 Although education levels are generally low in this community and hardly crosses 8-10th standard, this group made it a point to send their children for higher education, even though school/college going children are taught to help their mothers not only in household and group activities, but also for working part time as maid servants in other houses. In this way, Mobinabano Firdauz Khan Pathan, the eldest daughter of Raziabibi completed her M.A. Class B.Ed. But most unfortunately, she could not get any decent job in a school, as they alleged the family did not have enough money to bribe the authorities. The group complained that it had created a bad precedence, thus sending a discouraging message to other parents for sending their children for higher education.

5.26 Probably seeing the plight of Mobinabano's, NABARD has been implementing (i) Rural Entrepreneurship Development Programme (REDP) to promote entrepreneurship and generate self-employment avenues in rural areas. Under this programme, ACHALA organised a training programme of 25 women members to train these women in *mehendi* and related works to start beauty parlours. So, before leaving the group, we pondered: should Mobinabanos of this community get ready for starting a fresh SHG to run the group activity of a beauty parlour!

Section 3: Lessons from the case of a bunch of JLGs in South Gujarat

5.27 With the objective of understanding the role of NABARD in promotion of SHGs and JLGs, we picked up the district of Navsari, a relatively affluent area in South Gujarat and visited the office of the DDM, Navsari for his guidance in identifying a handful of NABARD-promoted SHGs and JLGs. Although this official could immediately put us in touch with Gujarat Gramin Bank's Ghej branch in Taluka Chikhli, he found it difficult to identify SHGs, while pointing out to us that due to relative affluence and relatively easy availability of jobs in his area, there was not much scope for formation of SHGs in Navsari district. This case, though a lone one, brings out some of the strengths and weaknesses of NABARD-promoted JLGs in the district.

Case 5.4: Why discrimination against allied agricultural activities, when we are forced to undertake them in conjunction with meagre opportunities in agriculture?

5.28 To enable landless and marginal farmers as well as tenant on oral contract to take advantage of micro-credit, NABARD initiated the concept of joint liability group (JLG) to group together 4-8 such individuals with common concern to provide them individual as well as group loan against joint liability of the group. Very often the group members have small holdings of even less than one acre, but if 4-10 people of similar background, similar activities and cropping pattern come together and give consent for undertaking joint liability, then the promoting bank after necessary verification can provide them individual and/or group loans. If they are landless but have some common type of economic activity (e.g., tenancy farming on oral contract or dairying etc.) the promoting bank after necessary verification of their credentials from local areas, can also grant them individual and/or group loans. JLGs are necessarily linked with bank through opening of a savings account for each member, but unlike in the case of SHGs, prior saving is not a necessary condition for bank loans. However, they are definitely advised to save voluntarily and thus build up the habit of saving.

5.29 On arrival at Ghej, we met a bunch of JLG members, who greeted the study team as well as the officials from the bank side. We are told that there are three groups present there, which could so far save Rs.12,000, Rs.1,000 and Rs.6,000 respectively, even though they were only a little more than one year old[5]. The members present pointed out that they had opened their savings account before forming JLGs, but could not save but after formation and getting loans from the bank, they have been able to save a little bit. Almost all of them are oral tenants, who have taken agricultural land on lease. The maximum education, a group member had in this gathering was 12th standard pass. Since such level of educational attainment is hardly enough to get a regular job, the groups found the concept of JLG a handy means to increase their earnings. Even though education does not mean much to them in terms of job procurement, they are all sending their children – both boys and girls for education – at least to complete the schooling stage.

[5] However, in subsequent official communication and several reminders, the relevant branch manager could provide us only these pieces of information for only one Jai Sri Ram JLG: the names of the four members together with their savings account number, their village, one time loan amount of Rs.25,000 each granted to them on 16.05.2012, all of which were recovered, and that they used to have a meeting only once in a month.

Table 5.4: Some Basic information about progress of Aakash Achala SHG

Col.1	Col.2	Col.3		Col.4	Col.5	Col.6	Col.7	Col.8	Col.9	Col.10	Col.11
Year	# of members	# active members		# of meetings held during year	Average attendance %	Savings during the year (Rs.)	Cumulative total internal fund[6]	Internal lending from own savings during the year	Savings balance with bank[7]	Borrowings from bank	Lending with borrowed fund[8]
		Saving	Borrowing								
2008	10	10	10	12	90	6000	NA	8000	4000	10000	10000
2009	10	10	10	15	95	6000	NA	10000	6000	0	0
2010	10	10	10	13	95	6000	NA	12000	6000	0	0
2011	10	10	10	12	100	6000	NA	0	16000	0	0
2012	10	10	10	12	100	6000	NA	0	32000	60000	60000
2013 (till 7/6/2013)[9]	10	10	10	6	100	4000	NA	20000	20132	100000	100000

5.30 One member of Jai Sri Ram JLG mentioned to the study team that on his lease of 1.5 bigha of land on 50-50 sharing basis, he makes a net earnings of about Rs.50,000 per annum through production of paddy during *kharip* season and some vegetables during other season. Most of them being BPL families get food grains at cheap prices from ration shopsso they sell the entire produce of grains to the market. The land owners provide water for irrigationsince he is also taking care of the mango orchard of his landlord, he is not required to share his produce beyond the *kharip* season. However, there is not enough water during summer to keep him fully engaged.

5.31 In course of probing, it turned out that this gentleman could not make his two ends meet merely from tenant cultivation. So, he purchased dairy animal which is providing milk for the last few months, which he is selling to Vasudhara Dairy Cooperative at around Rs.22 per litre. Thus he makes a family income of nearly Rs.12,000 per month. Now that he has a dairy animal, he has switched to production of paddy from that of sugarcane, because it enables him to have regular cash flows through sale of seasonal crops and vegetables. This cropping pattern change also enables him to grow fodder crops on a part of his leased-in land. This gentleman was extremely thankful for JLG

[6]Unfortunately, these figures couldn't be provided by the promoting NGO, in spite of best efforts from our side.
[7]Seems these are either average balance or balance at the end of calendar year, which is not clarified by the promoting NGO though we were looking for minimum and maximum balance during the year, as supplied by the accounts table from SHGs bank passbook records.
[8]We have skipped another column on repayments to bank as these figures too couldn't be provided.
[9]These figures are as of 7/6/2013.

loan to supplement his agricultural income by that from dairy, which seems to have steadied his overall income.

5.32 When we encountered another tenant farmer having 3-4 animals, we became keen to know why he did not have a bio-gas plant. In fact, we pointed out that even members of a single group could have a common bio-gas plant, if they had one animal each and living in close proximity to each other. It is at this juncture, the assembled farmers expressed their difficulties with allied and non-farm sector loans. They pointed out that for agriculture loans, they are entitled to avail interest subsidy, thereby making the net interest cost as 4% per annum. True, there is provision for composite loans with a part agricultural loan and a part allied/non-farm loan. Since allied/non-farm sector loans are frequently investment loans of longer repayment period of usually 5 years, they are charged a much higher interest rate of 11-12%, and there is no interest subsidy, which turns out to be very costly for them. Although even dairy is not as profitable as it used to be earlier, they cannot survive without some dairy animals which alone can stabilize their income levels. They pointed out the limitations of some other non-farm activity like fishery, farm forestry, etc. which they are required to take up to supplement their meagre agricultural income. They argued that these allied activities involve nature as much as agriculture does, but still the bank interest rates are quite different. What seems to be shocking them even more is that when opportunities for agriculture are limited and moreover its profitability has come down so much, they are required to undertake allied agricultural activities and even non-farm activities only to make a living. So these people were wondering when government was committed towards promotion of sustainable livelihood, why government was still pursuing a differential interest policy across these livelihood activities for them. The group was also very unhappy about the government not recognizing certain limitations of dairy, which is constraining their sustenance as time progresses. They cited the following constraints: first, a family could hardly afford to maintain several cows and buffaloes due to physical space limitations; and second, the costs of feeding animals were going up by leaps and bounds, whereas the price of milk did not go up by the same proportion, as the government was fixing the price of milk in the interest of relatively affluent sections of urban and semi-urban population, while ignoring the interest of milk producers supplying milk even depriving their own children.

5.33 Being constrained in various ways as they have described to us, every one of them tried to get job card for NREGA work, but almost everyone failed. Even those who got job cards could not get 100 days of work, as guaranteed by government. Given that NREGA wages are higher than the market wages, which are not available in any case throughout the year, they clearly preferred NREGA work, but that option too does not work for them.

Section 4: Lessons from cases of SHGs and JLGs in the district of Kolhapur in Maharashtra

5.34 This section is devoted to lessons extracted from field visits to the famous DCCB at Kolhapur in the state of Maharashtra, which has spearheaded the cooperative movement in this district for a long time and which is currently engaged in promoting SHGs of women through a special Women Development Wing of the bank. It also covers field visit to the headquarter of an NGO called Shyam located in the outskirts of the district town of Kolhapur called Gudmudshingwar village, which is engaged in promotion of SHGs as well as JLGs of women.

Case 5.5: Lessons from interaction with several SHGs promoted by DCCB, Kolhapur

5.35 Kolhapur DCCB started financing women SHGs and JLGs since 2000, and came up with the help of NABARD a special cell of five women officials to promote women development. The cell is also engaged in capacity development as well as gender equality movement with the help of the Zilla Parishad, Mahila Arthik Vikas Mahamandal and several NGOs, besides NABARD. Till June 2013, this bank from 29,745 women SHGs, of which as many as 21,587 groups are already linked with banks for credit. 4,29,887 women members are claimed to be associated with this group with a total loan disbursement of Rs.27.27 crores. The cumulative growth in terms of percentage bank linkage and cumulative credit in rupees for SHGs over time is given in Table 5.5. Prominent activities supported by Kolhapur DCCB include financing of 3,460 SHGs for purchase of dairy animal to the tune of Rs.24.75 crores in the form of loans, resulting in each family getting approximately Rs.10,500 of net income per month. These dairy groups are engaged in production of milk based products like *basundi, shrikhand,* curd, butter milk, etc., besides milk. Sale of textile products is another important activity, in which 3,000 women SHGs are involved – thanks to the fact that the Kolhapur city is surrounded by three Industrial Development Corporations. With help of NABARD these SHGs provide training in tailoring and fashion designing, so far producing bank loans of about Rs.90 lakhs to this activity. About 800 SHGs in a place called Hupri in Hatkanagale taluka of the district are engaged in production of silver ornaments and articles, which are sold in exhibitions in big cities. So far the bank has provided loan support to the tune of Rs.40 lakhs to this activity. 600 women SHGs are engaged in preparation of Kolhapuri *chappals* and leather articles against bank loans of Rs.25 lakhs. These groups too sell most of their products through exhibitions in big cities around the country. About 2,000 women SHGs are engaged in production of spices, pickles, *chutnies* and special food items against a loan support of about Rs.283 lakhs. The bank is thinking of forming a Federation of these food processing groups. Under NABARD's Rural Mart Skill, self-help groups under three well known organizations called Annapurna, Kamdhenu and Ridhi Sidhi have established a Mall in village Harle in Hatkanagele taluka of the district. This Mall has an annual turnover of Rs.92 lakhs and created 115 jobs for women. These SHGs have also repaid their loans. Shri Bhaveshwari Mahila Bachat Gat at Belbelkhurd is a unique group constituted by Kolhapur DCCB to provide multiple services to generate incomes for its members – running subsidised fair price shop, seed and fertilizer disbursement under Maharashtra government scheme, sharing information on rainwater harvesting, water irrigation and application of seed and fertilizer and organizing social activities like village cleanliness, daughter saving movement, etc.

Table 5.5: Loan delivered to SHGs under KDCCB

Years	# of SHGs	% SHGs with bank linkage	Credit (Rs. in lacs)	Credit per SHG (Rs.)
1999-00	14	14.29	0.13	929
2000-01	50	26.00	1.14	2280
2001-02	1260	7.14	8.29	658
2002-03	1440	12.64	26.00	1806
2003-04	7999	5.98	59.75	747
2004-05	9167	22.49	209.41	2284
2005-06	11241	55.96	669.83	5959
2006-07	15439	70.44	1109.31	7185
2007-08	19280	83.11	1608.01	8340
2008-09	22123	80.93	1874.54	8473
2009-10	24578	77.12	2079.37	8460
2010-11	25990	77.23	2294.54	8829
2011-12	27975	73.41	2396.84	8568
2012-13	29532	72.27	2680.12	9075
up to June 2013	29745	72.57	2727.46	9169

5.36 In course of discussion with women SHGs, several important points were brought out, which are summarized as follows:

- Janiv Jagruthi SHG has come up with an old age home for people who don't have anyone else in family to take care of them. They are, however, in shortage of space to expand their business. This SHG organises health check-up camps, sewing classes, besides training on preparation of gift packages to be sold in different festivals like *Ganesh Chaturdasi, Diwali, Raksha Bandhan* and such important events. This group has now reached a total saving of Rs.3 lakh, while their total internal lending turns out to be of the tune of Rs.1.77 lakhs.
- There is a new SHG of 7 weeks of age, which is engaged in making broomsticks for sale in the local market against a bank loan of Rs.10,000. Since transport cost for buying raw material from Karnataka has increased, the group demands larger loan of Rs.50,000 to expand business so that they can enjoy economies of scale. It came out in course of discussion that

if several SHGs/JLGs undertaking similar activities can come together, they can avail large size loans, but they must have an appropriate project report.

- Radhai Mahila SHG, which is engaged in production and sale of food items, they are required to take food licences. But as their businesses are seasonal, they need to invariably go for different licences for different activities in different parts of the year. They demand larger loans, besides organizing joint purchase of raw material at lesser average cost, besides permanent marketing of their produce through a Mall. This group also requires stronger training inputs to achieve full-fledged compliance of Food Safety Standards.
- The NGOs attending this meeting pointed out that as three MIDC areas were around the city of Kolhapur, there is ample scope for allied activities, which can cater to the needs of the industry therein. They felt that there was huge scope for introducing Nursing College, Kinder Garden, Old Age Home, Community Services, etc. which can be taken up by women SHGs.

Case 5.6: Lessons from interaction with women SHGs of Shyam

5.37 At an NGO called Shyam in village Gadmudshingwar, which was our second destination for study of SHGs/JLGs in the district of Kolhapur, we met members of about 20 groups. Although this NGO has been working with NABARD for almost a decade, most of the groups were aged 5-7 years. Broad performance parameters of the groups assembled for our meeting, as obtained from this NGO, are displayed in Table 5.6. Although most of the numbers are given are self-explanatory, one must add that many other important performance parameters and even data in disaggregated form (e.g., of group savings held at bank and used as working capital for internal lending, break-up of loans from banks and through internal lending and similar break-up of repayments and outstanding figures across years) are not simply available, in spite of our best efforts, obviously raising questions about the quality of data maintained and of monitoring based on such data.

5.38 Through interaction with Dhanlakshmi SHG, a group of 20 women members, we learned that their activities involve running of bakery, cloth store, mess etc., besides grain grinding, for which there is enough demand in and around the MIDC area in which it was located. This group is only 5 year old, wherein each member is saving Rs.100/- per month since inception. So far they have accumulated about Rs.50-60 thousand in the form of savings. They took a group loan of Rs.1.5 lakh from the Indian Bank, which they have dispersed to members as per their needs. Now they are planning to take a fresh loan of Rs.3 lakhs, so that they can distribute up to Rs.25,000 to a needing member (inclusive of internal lending). Besides, they make full utilization of their internal savings, while keeping only Rs.500 in the bank to keep their savings account active. Every 2-3 years, during *Dusshera and Diwali*, the group gives dividend to the members out of its interest income, after meeting the cost of running their show. It is learnt that each member having a savings of Rs.4,000 gets a dividend of Rs.1,500-2,000 per year. Another interesting feature of this group is that they charge a penalty of Rs.10 for not attending monthly meetings of the group (held once in a month).

Table 5.6: Basic information about SHGs under Sham

Col.1	Col.2	Col.3	Col.4	Col.5	Col.6	Col.7	Col.8	Col.9	Col.10	Col.11
Sr.no.	Name of the SHG	# of members involved	Age of the SHG in years	Saving of the members	Cumulative bank loan disbursed	Cumulative internal loan disbursed so far	Average bank loan per year	Average internal loan per year	Cumulative repayment of bank loan with interest	Outstanding bank loan, if any.
1	Sahara	15	4.42	79,500	3,60,000	1,57,600	81,509	35,683	63,387	3,00,000
2	Shree Vaishnavi	20	3.42	82000	25,000	1,46,750	7,317	42,951	27300	--
3	Pushkarni	20	2.42	58000	80,000	85,500	33,103	35,379	55358	29,000
4	Dhanlaxmi	20	2.42	58000	1,50,000	92,950	62,069	38,462	157500	--
5	Shree Vardhan[10]	20	6.50	172000	340000	6,25,000	52,308	96,154	161733	2,00,000
6	Shree Durgamata	20	3.75	90000	1,22,000	1,25,700	32,533	33,520	109984	22,000
7	Bharatmata	20	3.50	84000	2,05,000	1,09,400	58,571	31,257	95619	1,20,000
8	Gautami	13	5.42	56550	3,15,000	1,53,000	58,154	28,246	133000	2,00,000
9	Mangeshwar	12	0.92	15800	53,000	11,100	57,818	12,109	62200	--
10	Rajlaxmi	18	2.58	55800	1,75,000	58,600	67,742	22,684	166980	21,000
11	Shree Mahalaxmi	20	0.92	22000	78,000	13,700	85,091	14,945	23687	57,000
12	Dnyanadeep	20	0.92	22000	72,000	12,000	78,545	13,091	13878	60,600
13	Nrishingh	20	1.83	66800	1,00,000	1,38,900	54,545	75,764	39567	64,800
14	Saraswati	14	3.83	66700	85,000	1,54,500	22,174	40,304	76164	15,000
15	Prabhukrupa	17	1.58	28900	1,00,000	62,000	63,158	39,158	107550	--
16	Adarsha	13	3.83	50700	2,12,000	1,000	55,304	261	65185	1,52,000
17	Bharari	17	2.17	44200	68,000	83,000	31,385	38,308	60400	11,000
18	Bismilla	16	2.08	40000	1,60,000	78,000	76,800	37,440	33687	1,30,000
19	Shree Vaishnavi	20	3.42	82000	25,000	1,26,750	7,317	37,098	27380	--

5.39 Swayam Siddha SHG also has 20 members. It is 18 months old, has accumulated Rs.29,000 in terms of savings, which they lend internally @ 2% interest per month. It has taken a loan of Rs.1.5 lakh from HDFC Bank. Most of its members are engaged in Jute bag business - after cleaning the bags they resell them to nearby MIDCs, while some other members are engaged in vegetable vending, cloth stitching, etc. It is understood that the lady in this group stitches around 3-4 dozen pieces a day, thus earning about Rs.150-200 per day.

[10] Note: Monthly saving per member is Rs.100, except in case of Shree Vardhan and Gautami, their monthly saving are Rs.200 and Rs.50, respectively.

5.40 Shri Mahalakshmi SHG is 11 month old and has 20 members. It has accumulated a savings of Rs.22,000 at ICICI Bank, while they have taken a bank loan of Rs.75,000 only two months back. This group is engaged in stitching activities for which they believe that they have enough demand. Prabhukrupa SHG has 17 members, of which nearly 50% are married. Some of them are vending vegetables while some are engaged in sewing, and a small sub-group is also running a mess. It has an accumulated savings of Rs.30,000, against which they had been given a bank loan of Rs.1 lakh.

5.41 Sahara SHG has been functioning since last five years, it has 15 members. It has accumulated Rs.50-60,000 while taking a bank loan of Rs.3 lakh. These women are involved in potato and onion vending and wholesale of ornaments.

5.42 In course of discussion, it got revealed that Sham has provided training in preparation of *Agarbatti*, preparation for cooking, cloth bags and record keeping. However, they allege that their interaction with the bank officials is not very pleasant. So most of them are in favour of having an exclusively women's bank solely managed by the women folk.

Section 5: Conclusions

5.43 The case studies reported in this chapter bring out several important lessons for NABARD, in particular. First of all, MIS has to be sufficiently strengthened, and the NGOs involved must be communicated this message in clear terms, based on the data deficiency reported inside this chapter. Second, NABARD has to give a serious thought of putting allied agricultural activities on the same footing as agriculture, in terms of interest rate concession. Third innovative investment projects must be checked out based on resource availability and human resource capability in specific regions; else the SHG/JLG movement will turn out to be a trick to make extremely poor people net lenders to the banking sector against loss making rates of interest. Finally, various insurance schemes must be instituted in favour of SHGs/JLGs at low costs, if these poor communities had to be protected against multiple contingencies including health hazards and loss of lives, earnings and assets.

Chapter 6

Lessons from Short Field Trips to the States of Andhra Pradesh and Kerala

Section 1: Background

6.1 As the original intention to cover two other states of AP and Kerala known for their vibrant micro-finance movement through primary data collection couldn't be realized due to time and other resource constraints, the study team decided to have at least one short field exposure to the ground level experiences in these two states by having interaction with some program officials as well as some beneficiaries of the program. Naturally, the lessons extracted from these short trips have two major limitations – first, they provide a very partial picture, which could be seen during 2-3 days' hurricane tour. And second, the choice of the field areas visited, as this matter had to be left to the officials, may have created an upward bias in our mind about the achievements. Nevertheless, the study team took a very critical view of things to minimize the bias, while looking into available literature for these states. Needless to add, the study has attempted to procure and analyze all available secondary data, though they simply failed to get the kind of detailed SHG/JLG-wise or their Federation-level data, they were searching for rigorous cross-sectional and inter-temporal analysis. Nevertheless, apparently some important lessons are still extracted from this limited exercise performed. Sections 2 and 3 details our assessment of the running programs in AP and Kerala, respectively. The final section concludes this chapter.

Section 2: An Assessment of the Sustainability of the Society for Elimination of Rural Poverty Program (SERP) in Andhra Pradesh[1]

6.2 Institutional and technological innovations are the two key underlying features of the phenomena and the process of development- i.e. the ability to produce, consume and live better as witnessed over time and across space. Micro-credit in this regard has emerged as one of the popular institutional innovations in the developing countries over the last three decades that attempts to facilitate formal banking access to unbanked rural population through organization of small thrift and credit groups of women called Self-Help Group (SHG). In India, since the last two decades, SHG has emerged as one of the major organizational vehicle to launch poverty alleviation programs. Andhra Pradesh (AP) among all other states has taken the lead since the very beginning in the coverage of SHGs. As of 31st March 2012, around 19.6% of total SHGs in India were based in AP whereas it also accounted for 18.6% of total provision of

[1] This section is prepared exclusively by Shrikant Taparia and Samar K. Datta.

SHG loans across all over India[2]. The present study as such attempts to assess the sustainability of the SHG programs in operation in AP based on the brief review of secondary data and the case studies collated from the field interviews in few selected program areas.

6.3 The foundation of the SHG programme in AP was laid in 1975 with the initiation of the NGO led microfinance model called Cooperative Development Foundation (CDF). The model involved formation of women thrift cooperative- membership which was open to all adults of the community without any other qualification. The group comprising of around 100 members on average depended entirely on internal funds without any linkages with other organizations. The coverage of this program was however limited to two districts with significant errors of exclusion. Moreover, the size of the savings and loan per member was found to be considerably low along with low rate of utilization of loan for productive purposes owing to less avenues of productive investment; which increased the default risk and unsustainability of the program itself (Galab & Rao 2003).

6.4 The second version of SHG program was led by the government covering the entire state under a scheme called Development of Women and Children in Rural Areas (DWCRA) which was launched in the year 1982-83 and had its primary focus on socio-economic empowerment of women. It was a targeted program as only poor were eligible for membership. SHGs under it were federated into *Mahila Banks* with an emphasis on training and skill development along with an access to microfinance services (Galab & Rao 2003).

6.5 The year 1992-93 was a watershed year. Led by the SHG-bank linkage initiative of the National Bank for Agriculture and Rural Development (NABARD), the third global version of SHG program appeared in 1995-96 called South Asia Poverty Alleviation Program (SAPAP). It was supported by United Nations Development Programme (UNDP) and was launched in the SAARC countries. In AP, it was piloted with the state support in three districts and comprised of three components – first, social mobilization; second, capital formation and capacity building of the poor; and third, federation of SHGs into Village Organizations (VOs) and VOs into *Mahila Mandal Samakhayas (MMSs)*. A review of these three versions of SHG programs indicated that although there was an overall notable progress but it was uneven and

[2] http://www.indiastat.com/table/socialandwelfareschemes/27/selfhelpgroups/18063/626298/data.aspx

uncoordinated. Besides, there was also a problem of targeting of poor and the mobilization and capacity building of SHGs (Galab & Rao 2003).

6.6 As such, under this backdrop, the Society for Elimination of Rural Poverty (SERP) was set up by Government of Andhra Pradesh (GOAP) in the year 2000 building onto the strengths and limitations of the earlier programs. The overarching ambitious goal of the program is to build sustainable institutions of the poor for promoting their sustainable livelihoods through increasing access to financial services and social safety entitlements, besides promoting social and human development. The programme is meant to implement rural poverty projects named as Indira Kranthi Patham (IKP) under two phases (see Table 6.1 below) (RTI 2005).

Table 6.1: Overview of SERP

Name	Andhra Pradesh District Poverty Initiatives Project (APDPIP)	Andhra Pradesh Rural Poverty Reduction Project (APRPRP)
Period	2000-05 (extended till 2006)	2003-08 (extended till 2011)
Districts	6	16
Financial Outlay and Distribution	Rs 8051 million • IDA- 54% • GOAP- 22% • Users- 5% • Commercial Banks/ MFIs-19%	Rs 14860 million • IBRD/IDA- 54% • GOAP- 22% • Users- 5% • Commercial Banks/MFIs-19%

Findings from secondary-source materials

6.7 One of the insightful field study on the SHG program during the pre-SERP phase can be found in the work of Smriti Rao (Rao 2005) during her 9 month (July 2001-March 2002) long fieldwork conducted in two villages of Mahbubnagar district of A.P. There are three notable findings of the study:

- Systematic influence of class and caste identities of an individual on her chances of being a member of SHG such that a member from a high earning potential household and an upper caste had relatively higher chances of being a SHG member than an individual from low earning potential household and a lower caste. The strong implication of it is that the collateral-less household was less likely to be a SHG member in practice although the assumption was held as contrary in theory.

- Low frequency of weekly meetings of SHGs, poor accountability and high cost of monitoring group leader signifying high transaction cost experienced by general SHG members.
- Features like lower than expected benefits of participation, small size of savings corpus and loan size, utilization of loan predominantly for consumption purpose and the small longevity of the group are common. The short-term nature of loan and faster repayment schedule are also noted as major hindrances to use of loan for investment purposes. Moreover, there is only a marginal difference between the internal group lending rate and the external lending rate from informal sources.

6.8 The second evaluation of SERP program is found in the end-term appraisal of APDPIP covering about 2461 sample households (Dev 2007). The Baseline Survey (BLS) for the study was conducted in the year 2001, Follow-up survey 1(FUS-I) was conducted in 2003-04 and Follow-up survey II (FUS-2) in 2005-06. The key results are highlighted as follows:

- First, decrease in the % of households reporting food insecurity for participants and non-participants between BLS & FUS-2 was found to be 27% and 20%, respectively.
- Second, increase in the annual total income per household for participants and non-participants between FUS-1 & FUS-2 were found to be 39% and 12%, respectively.
- Third, increase in total savings was noticed as Rs. 4353 in the program area and Rs. 2638 in the newly formed groups over FUS-I & FUS-II, respectively.

6.9 One of the key features of the SERP is that it is not just a micro-finance program but is inter-linked with the range of livelihood and social safety measures. The two prominent programs that fit under this space are: (a) Micro-Insurance Initiative (MIA) and (b) Community Managed Sustainable Agriculture (CMSA).

6.10 AP apparently has the highest share (27%) of the total insurance schemes in India. MIA was launched under SERP with an aim to increase awareness, inculcate financial discipline and cover health and life risks of the members. There are four schemes under MIA- Aam Admi Bima Yojana (AABY), Janashree Bima Yojana (JBY), Other Group Insurance (OGI) and Credit Insurance (CI). National Insurance Academy (NIA 2010) conducted an assessment study of two of such schemes- AABY and JBY among 1586 households in 5 districts and found out the following key results:

- Reduction in Financial Vulnerability: Around one-fourth of the beneficiaries used interim benefit of Rs 5000 as an alternative source of credit while around four-fifth of them utilized the claim amount for debt payment and saving for children in similar proportion.
- Financial Sustainability: Around half of the respondents felt that the coverage was sufficient. Similarly, most of the respondents were willing to pay for the service much more than the actual cost on their own without requiring any subsidy from the government.
- Operational Sustainability: SHGs were the key agent in collecting enrollment money as well in assisting in claim settlement. The respondents complained about the apathy and inefficiency of the government-led agent, i.e., Bima Mitra on this front.
- Systemic Sustainability: Further, most of the respondents relied upon the federations to get informed about the MIA. Overall satisfaction with the scheme seemed quite high.

6.11 CMSA is one of the successful flagship programs of SERP that was initiated in the year 2004 with an investment of Rs 1120 million. It was set up in response to the agrarian crisis in AP in 1990s that contributed to one of the highest suicide rate among the farmers in India owing to stagnation of yields and unviable farming. Accordingly, the aim of CMSA was to support poor farmers through community participation to adopt sustainable agricultural practices for reducing their cost of cultivation and increasing net incomes. The basic strategy relied upon by the CMSA included crop, pest and soil fertility management undertaken through various popular interventions, namely – Non-Pesticide Management (NPM), Rain-Fed Sustainable Agriculture (RFSA) and System of Rice Intensification (SRI).

6.12 The impact of the CMSA can be gauged by the fact that during the period 2004-05 and 2012-13, the total coverage of farmers increased from 250 to I million, of which 58% were SHG members while the growth in area witnessed was from 400 acres to 3 million acres. According to the study by Angrau covering 300 villages of 18 districts to assess the impact of CMSA, it was found that based on the crop type, savings on chemical fertilizers and pesticides ranged from Rs 1200 to Rs 16000 per acre; increase in yield ranged from 1-2 Qts, while the net additional income ranged from Rs 3000 to 7000 per acre (Angrau 2008).

Findings from field work

6.13 The village Madur lies in the Shankarampet mandal of Medak district. The first SHG here was founded in the year 1995 under the UNDP supported South Asia Poverty Alleviation Programme (SAPAP). Currently, there are 27 SHGs in the village having an average size of 13 members each. SHGs individually are an informal body as they are unregistered, although their federation called Village Organization (VO) is a formally registered organization. Each SHG has a gender oath based upon the shared principles of protecting women against domestic violence and harassment; ensuring education of every girl child and prohibiting the practice of early marriage (below 18 years).

6.14 One of the SHGs in the village called Kranti was formed in the year 2005 apparently after observing the performance of other groups. It is located in the Sandal locality of the village that houses minority groups called BC having identical socio-economic status (which is also apparently considered to be the primary basis for their formation). The formation of the group was facilitated by a locally appointed individual called community activist. Initially, the savings of each member was fixed as Rs 30 per month which however gradually increased to Rs 60 and now Rs 100. The group is entitled for the first dose of bank loan under SHG-bank linkage program after 6 months provided they are functioning in a fairly desired manner. The group received the first loan in the year 2006 as Rs. 15,000 under the 1:3 corpus scheme, i.e., amount of loan was 3 times of saving amount. Meanwhile, the current rules have changed with the initial loan amount increasing to Rs 50,000 irrespective of the corpus size.

6.15 Over the period of 8 years in operation, the group has received the loan 3 times (after successfully repaying two times)- first being Rs. 15,000, second being Rs. 1,00,000 and third being Rs. 2,40,000. The first loan was to be repaid in 12 months while the second and third ones in 24 to 36 months. Apparently, the bank linkage loan is an interest-free loan such that the borrower has to only pay the principal component while the interest component is covered by the government.

6.16 The group received the loan within one week of the application which is less than the maximum time of 15 days allowed for the same depending from bank to bank. A field staff from the bank chooses one particular day in a week to select the SHG in a village whom the loan is to be given after collecting the relevant data and preparing micro-investment plan. Thereafter, two accounts are opened for operation- one saving and another loan account. Recently, the practice of mobile book-keeping has replaced the earlier manual recording of transactions such that there is a one mobile book-keeper for every village. According to one of the SHG members of Kranti group, no problem of any hassle was reported to get the loan from the bank that considerably weakens the theory that inconvenience costs of obtaining a loan to an individual SHG would probably increase with the rise in the number of such groups.

6.17 The activity set for which the loan was issued involved agriculture, carpentry and barber shop. Except agriculture related and diary activities, all other activities undergo a feasibility study undertaken at the village level by taking into consideration the factors such as population and the number of existing shops. In general, the following guidelines have been mutually agreed upon in the village regarding the possible usage of the loan:

- Maximum 50% for Income Generating Activities (buffalo, hotel, carpentry, poultry, beedi-making, grocery shops)
- Maximum 10% for Consumption Activities (health, electricity, education, house construction)
- Maximum 40% for repayment of old debt

6.18 Agriculture and dairy activity are the two popular income generating activities for which the loan is undertaken. Some of the individuals undertaking loan for growing vegetables for instance made individual procurement of agri-inputs but collective procurement of food-grains from wholesale market for consumption purpose. The vegetables so produced were however sold individually in the local market although there was an instance of collective marketing as well.

6.19 In the case of milk, there is a shade identical to that of the AMUL model. The milk is procured at the village level from both SHG and non-SHG members which are then supplied to VOs which supply to Milk Marketing Societies (MMS) which house around 294 bulk milk chilling units. Finally, it is transported to AP dairy unit. The importance of three-tier organizational structure as such cannot be under emphasized or worse ignored. Further, SHG members point out the insufficiency of only one source of loan, i.e. village federations are necessary to complement bank linkage program.

6.20 The village also had a six poorest of the poor (POP) farmers who were landless. Each of them had taken Rs. 10,000 as loan amount for land lease from the SHG for growing paddy under the Rain-Fed Sustainable Agriculture (RFSA) practice that resulted in the water reduction up to 40% besides the reduction in cost of fertilizer and pesticides. One of the POP landless farmer, for instance had taken a loan of Rs 10,000 for land lease of 1 acre for 1 year under the provision of SHG loan for agriculture activities. Besides the land cost, the farmer also had to bear Rs 7000 as input cost for cultivation on his own. The revenue realized from selling the yield of 28 quintals was Rs 30,000 thereby leaving Rs 13,000 as profit for one season - comparatively less than that for the vegetables, which were believed to be more profitable crops.

6.21 Individuals in the village have also taken a loan under the Community Managed Sustainability Agriculture (CMSA) program, wherein a registration fee of Rs. 50 is charged from each participant, the total amount thereafter being deposited in the common fund of a village which can be utilized for undertaking loan for agricultural activities. Around one-tenth of the farmers in the village had contributed to this fund. Moreover, there is also a Community Investment Fund (CIF) set up under a World Bank grant to MMS amounting to Rs.50,000 which was offered to the 5 people (from SC/ST group) who were in fact the only ones who had applied for it. The interest rate for the loan was 12% which was to be repaid within 20 months installment. There were also two cases of small loans (Rs 3000 and Rs 6000) within the SHG internal loans carrying an interest rate of 24% per annum.

6.22 One of the SHG women shared her experience of the role of SHG in her livelihood. Being unable to get the chance to receive school education, she learned to write after attending the night school. Prior to joining SHG, she worked as a daily wage laborer earning Rs. 30 per day for seven hour work along with her husband, who earned slightly better at Rs. 50 per day. However, such work was available only for 4-5 months, after which she engaged herself in household work while her husband went out to search for work. Moneylender was the only source of borrowing for the household charging 24% per annum as the interest for the maximum loan amount of Rs.2000. The moneylender offered loan without collateral but under a condition that the household had to provide labor service in return, thus suggesting the presence of inter-linked contract of labor and credit.

6.23 However, after joining SHG, she obtained Rs 5000 loan for buying half-an-acre rain-fed land which she used for growing cotton. She incurred Rs 2000 as cost of input and it yielded her Rs 20,000 as revenue. Gradually, she freed herself from private debt and also became the recipient of the Indira Awas Yojana (IAY).

6.24 The SHG-bank linkage program is evolving in India from merely being a micro-finance model of financial inclusion to a multi-faceted poverty alleviation model. The experience of the state of Andhra Pradesh which is a front-runner in this regard clearly highlights this transformation. In the midst of both vertical and horizontal growth of the SHG based livelihood and social security programs evidently seen in the AP, one of the crucial questions that arises is that of sustainability of such programs.

6.25 Sustainability is an inter-temporal and multi-dimensional concept that requires on the one hand, an assessment of the past as well as prediction of the future, which is partly based on the former. At the same time, the assessment indicator encompasses different components of cost and benefit variables. Considering the case of SERP, the limited evidence (both primary and secondary) indicates that there is no short and straight answer to the question given the hybrid nature of the program itself:

- While the macro assessment of the program indicates that on an average there seems to have been an increase in saving, consumption and income of the beneficiaries with varying magnitude, however it only presents half the picture as it fails to include the other half and equally important component of cost and its distribution. Any true measure of sustainability must include net benefit cost ratio and its distribution as one of its core indicators.
- Second, apparently the successful case studies of MIA and CMSA indicate that the selection of right program and their right design are crucial prerequisites to make the program sustainable. Both the programs address an important need common to a large number of population such that people are willing to pay for the service much more than the cost which is another significant indicator of sustainability. It is not holistically captured by many assessment studies of similar programs partly because of the ignorance, short-sightedness and embedded vested interest. This problem is particularly chronic to the programs which are heavily dependent on government support.
- Third, the field studies indicate that the theoretical assumption of anonymous random grouping of SHG members do not hold true in case of India given strong pervasive inter-play of caste and class identities on the social choices of the individual. To what extent do such homogeneous grouping effects sustainability can be framed as an important research question in itself; however it is quite plausible to develop a chain of thought that heterogeneous groups might be able to share and diffuse risk better besides generating better entrepreneurial ideas, thereby making the program more sustainable over time. This concern also assumes greater significance in the context of crucial role of group dynamics to access and exercise collateral-less group loans. However, it is important to reflect that the issue of discrimination raised earlier in the pre-SERP assessment study doesn't seem to hold true in the findings of the recent field work although their mode of assessment was different and hence incomparable. Similarly, the members' concern over transaction cost also doesn't seem to hold true in the case. Moreover, the introduction of mobile-book keeping also appears to be factor facilitating the reduction of overall transaction cost.

- Fourth, there seems to be some flexibility in the internal loans and non-SHG-bank linkage loans with respect to the purpose of loan whereas the SHG-bank linkage loan is given preferably only for investment purpose. This dichotomy if gets enlarged can make the program unsustainable over time.
- Fifth, there is a clear differential between the type of livelihood promoted- self-employed and cooperative-based ventures. Much of the effort of the government seems to have shifted towards the promotion of the latter despite the fact that the latter is relatively much more difficult than the former but also relatively much more sustainable in the longer run. The positive role of federation in this regard is imminent and it needs to be better exploited with respect to other suitable activities as well.
- Finally, in order to increase sustainability of the SERP, greater focus needs to be placed towards expanding investment opportunities for the SHG members beyond the conventional terrain through internal synergic collaboration with other public service fields in the provision and management of health and education services at the local level. For instance, the utilization of services of SHGs in mid-day meal program highlights such mutually beneficial collaboration.

Section 3: An Assessment of Kudumbashree[3], the State Poverty Eradication Mission of the State of Kerala

6.26 Kudumbashree is a joint program of the Government of Kerala and NABARD implemented through Community Development Societies (CDSs) of poor women. This program was launched in May 1998, but the effective implementation started from early 2000. The program is formally registered as the 'State Poverty Eradication Mission' (SPEM). The program works in a three-tier structure with Neighborhood Groups (NHG) at the bottom, Area Development Societies (ADS) in the middle and Community Development Societies (CDS) at the top. The program has three objectives - Women Empowerment, Social Empowerment, and Economic Empowerment with help of several important programs like *Samagra*, *Asraya*, Responsible Tourism, Buds Special School, Onam Market, Slum Development in urban projects. It has also initiated several new programs like holistic health, tribal special projects and interest subsidy scheme.

[3] This section is prepared exclusively by Sunny Bhushan and Samar K. Datta with the help of Anirudha More

6.27 Actually Kudumbashree is the culmination of a process of community mobilization program taken up by the state beginning with community led poverty identification in Alappuzha Municipality and capital in early 90s, which was then followed by a district level similar effort in Malappuram in 1994. In 1998 it was extended to the whole state to create the widest possible 'base of community organizations of women that would work in tandem with Local Self Government (LSGs) for poverty eradication and women's empowerment' (Brochure of Kudumbashree, published by the Local Self Government, Government of Kerala). By 2004 the network of community organizations was completed, encompassing all LSGs. A new set of bylaws were created with emphasis on two key issues: First, enabling 'community organization network to function as autonomous institutions of poor and marginalized'; and, Second, facilitating 'structures and mechanisms that would ensure participation of community network of local government processes', which in turn would 'enable LSGs to strengthen their development and poverty alleviation mandate' (*ibid).*

6.28 The salient features of Kudumbashree are the following:

- The program allows open membership to women of age 18 and above from economically weaker families, who are residing in the area covered by a group;
- Membership is limited to only one from a family, though other women members can take part in discussions and activities; all members of NHGs constitute the General Body, while special NHGs are formed for ST communities and people with special needs;
- NHG funds come from membership fees, interest and penal interest earned from lending operations, donations and receipts from activities etc.;
- NHGs collect thrift on a regular basis and maintain its accounting, while thrift accounts are kept with local banks;
- Kudumbashree follows NABARD grading norms and bank linkages provided only for graded groups;
- Activity groups for micro enterprises and joint liability groups can be formed by NHG members alone or along with members of other NHGs;
- Each NHG is required to maintain minutes book, membership register, thrift register, loan register, monthly report of thrift and credit, membership fees and penalty register, assets register, revolving fund and grants-aids register, affiliation file, micro enterprise register, bank passbook, annual receipts and payment statement, and audited accounts; and
- NHG accounts are audited by Kudumbashree Accounting and Auditing Service Society (KAASS)

Table 6.2 provides an overview of Kudumbashree's performance till end March 2013.

Table 6.2: Kudumbashree at a glance (As of March 2013)

No. of NHGs	242883
No. of NHG Members	3761835
Total Thrift (in crores)	1655.62
Total Internal Loan (in crores)	6961.77
No. of NHG Having Live Linkage	87723
Live Linkage Amount (in crores)	1507.65
No. of Micro Enterprises	30310
No. of ME Members	161626
No. of JLG	52309
No. of JLG Members	275434
Total Area Cultivated (in acres)	127855.78
No. of Asraya Projects	1029
No. of Asraya Families	74787
No. of Balasabha	34226
No. of Balasabha Members	353395

6.29 The program called Samagra attempts to address the entire production- supply value chain in a holistic manner, by scaling up productive activity both qualitatively and quantitatively. It scales up enterprise activities, besides increasing number of units in economically feasible activities, subject of course to carrying capacity, thus attempting to bring together economies of scale and greater focus for facilitation and handholding support. This program also attempts to achieve convergence of different activities. For example, while preparing projects on agricultural crops, animal husbandry, fish farming etc., an integrated approach is followed involving different sectors in training, crop development, production of planting materials, improvement in quality, marketing etc. For convergence of different projects/programs, Samagra brings together different projects and programs implemented through different departments and LSGs by uniting them under a common agenda and goal. Under the present setup different Departments are carrying out poverty reduction, marketing, crop development etc. thus leading to duplication of efforts, wastage of time and money. Samagra envisages convergence of activities of different Departments. Where the knowledge and skills within government are limited (e.g.

marketing), Samagra projects arrange mutually beneficial tie ups, so that efficiency gaps are made up. Samagra highlights stakeholder cooperation especially in areas of production, marketing, quality control etc. It also ensures product diversification and quality enhancement in the production process. This is done through using modern technologies available in research institutions for product diversification, quality enhancement and marketing. Samagra thus looks at newer marketing strategies for packaging, branding, networking etc.

6.30 Kudumbashree is specially designed project called Asraya involves identification of the destitute using a transparent risk index framed by the Mission, besides their rehabilitation and monitoring of the project. So far 72116 destitute families have been identified and the project is implemented in 890 Gram Panchayats and 32 Urban Local Bodies across the state.

6.31 Over the last three years Kudumbashree has started Responsible Tourism at 4 destinations. Alongside promotion of tourism, Kudumbashree is also engaged in supply of fresh vegetables under collective farming and non-perishable items through the Samrudhi shops (about 50000 units of Kudumbashree are engaged in procurement and supply mechanism), where even ethnic delicacies are promoted. Cultural groups like *Sinkarimelam and Thiruvathirakali* are also positioned alongside tourism as part of the venture. It has been exploring roles of "Parisarasevika", solid waste management, laundry management etc. Pricing committees and quality monitoring committees are formed under Kudumbashree to address the pricing issues and to ensure that the right quality of the product/service is delivered. Representatives of Panchayat, RT Cell, Kudumbashree Mission, service industry and Samrudhi are part of these committees.

6.32 Buds Special School is meant for the mentally challenged children, as conceptualized by Kudumbashree. These schools are set up on the basis of community surveys and health assessment by local bodies. This idea was first implemented in Venganur village panchayat, Trivandrum district by people of the village. The experiments made and lessons learned were meant to pave the way to set up a special school for rehabilitation of the differently abled children in the Panchayats. Now there are 31 Buds schools in the state, which providing medical attention, physical and mental therapy, mobility equipment, hearing aids, individual, vocational and educational training and skills to these children.

6.33 Under the concepts of Onam Market 1207 fairs including state trade fairs were conducted across the state, which involve participation of 38,482 entrepreneurs. Games and events along with fairs for Balasabha children are also organized under this program. Table 6.3 provides some information about programs organized under the Onam Market.

Table 6.3 Programs organized under Onam Market (Ramzan-Onam 2012)

Sr.No.	District	No. of fairs	Sales (Rs. in lacs)	No. of entrepreneurs
1	Thiruvananthapuram	89	250.24	4750
2	Kollam	76	211.74	2892
3	Pathanamthitta	70	145	1022
4	Alappuzha	83	312	1951
5	Kottayam	86	115.35	1331
6	Idukki	57	93.96	1425
7	Ernakulam	110	416.72	2539
8	Thrissur	126	193	4125
9	Palakkadu	110	169	2330
10	Malappuram	124	448.33	5389
11	Kozhikkode	79	114	4779
12	Wayanadu	24	30.52	950
13	Kannur	114	108.89	3631
14	Kasargod	58	40.17	1368
15	Total	1206	2,648.92	38482

6.34 The Integrated Housing and Slum Development Program (IHSDP) of Kudumbashree targets the poor living in slums and clusters in cities and mofussil towns with a view to improving the housing stock, basic infrastructure and coverage ---- service delivery to poor. In the housing projects, out of total cost, 80% is financed by the Central Government and 20% by the State Government, while the beneficiary bears 12% in case of general population and 10% in case of SC/ST population. Out of 20% State share, the balance fund after deducting beneficiary share is borne equally by the ULB and the State (the maximum state share is 10% of the total project cost). Till now there are 53 IHSDP projects running in 45 cities / towns of Kerala.

6.35 Three new initiatives namely, Holistic health, Tribal Special projects and interest subsidy schemes, deserve special mention at this juncture. Holistic health is a sports based cultural intervention program. Balasangamam is a part of this initiative under which space for social learning and development of adolescents is provided. Dissemination of child rights and concerns for the larger spheres of the society are embedded in the program.

6.36 Tribal Special Projects are currently being implementation as a pilot in four selected districts - Idukki, Palakkad, Waynad and Kasargod. It reaches out to the untouched, colonies and habitations in 45 panchayats. As per the projects, Kudumbashree facilitates creation of ST NHGs and their participation in NREGS in targeted areas.

6.37 Under Interest Subsidy Scheme, NHGs get loans from commercial and cooperative banks, which are participants to this scheme, at 9% or below annual interest rates under the bank linkage program.

Section 4: Concluding Remarks

6.38 A short assessment of SHG/JLG programs in the two states of Kerala and Andhra Pradesh raises both hopes and concerns. Hopes arise because of the meticulous ways both the states have gone ahead in mustering resources, innovative ideas and unique plans to bring about a change in the profile of the village poor and especially the women folk. However, there is a significant difference between the approaches of AP and Kerala. While Kerala has gone in for community participation in the structure of the program as well as in its implementation by placing this popular program under Department of Self-governments, AP has not put PRI institutions at the center stage of control, though it has sought the support of PRIs. AP has put the movement at the control of the Department of Rural Development. In other words, given the dominance of government Departments and importance of government support and resources, it is an open question whether the movement has maintained or lost its autonomy. No doubt, many new things and ideas are emerging and also getting implemented, but several concerns continue to arise. First, MIS continues to be poor as no data could be obtained at SHG/JLG or at their association level over time and space, which could be rigorously analyzed to judge comparative performance and guide policy directions. Definitely, SHGs/JLGs we have visited do have the requisite data, but we are not sure why they are not being gathered and systematically analyzed for monitoring and development purposes. In spite of promises and repeated reminders, we could not lay our fingers on anything beyond performance claims in terms of fulfilling certain targets. It appears that in both the states the bureaucracy is not keen on developing a rigorous MIS system, so that the better performing units can be easily differentiated from the poorly functioning ones for a necessary corrective action and responsibilities for poor performance can be fixed. The second concern is about the huge expenditure being incurred by the states in promoting this movement. Unless government can gradually withdraw, it will invariably be extremely difficult to sustain large expenses with results highly dependent on and probably not commensurate with such expenses. Nevertheless, some of the brilliant ideas like organic agriculture which are being implemented in these two states are worth pursuing for purpose of learning and policy exercise. Whereas AP has concentrated more on productive investments, Kerala with its long tradition has pursued a mixed blend of productive investment and welfare activities. With stronger emphasis on welfare measures, as in case of Kerala, sustainability becomes more difficult to achieve, if not becoming impossible, if productive investments don’t fetch sustainable returns due to lapses in governmental design and implementation.

Chapter 7

Potential Areas and Activities for SHGs/JLGs, and Some Illuminating Examples

Section 1: Introduction

7.1 The preceding chapters of this study have shown that irrespective of whether we call it SHG or JLG and also irrespective of who promotes it, the concept of SHG/JLG is an instrument of collective action by groups of people who are generally not part of the mainframe economy for structural and historical reasons. This instrument of collective action, if used properly under an appropriate leadership, can help such groups not only overcome their lack of marketable collateral to access credit, but also initiate a spiral process of growth for them through enterprise development. With this conviction, as it began to be ingrained in the minds of the study team, it decided to look around for examples to highlight a few things to build up a stronger case and an expanded domain for application of this instrument. The present chapter is intended to demonstrate how the instrument of SHG/JLG can be more successfully applied in situations where the groups have some physical/social capital at the beginning to make use of the same to take off and achieve quicker progress towards sustainable development.

7.2 This chapter is organised as follows. The next section identifies through examples from the study team's experiences to potential areas, where the concept of SHG/JLG can be applied in a more disciplined and systematic fashion to capture huge benefits for hitherto neglected sections of the community within the project areas of Damodar Valley Corporation (DVC) spread over the twin states of West Bengal and Jharkhand, and in the western-side forest areas of West Bengal, commonly referred to as *Paschimanchal*. Section 3 attempts to extract lessons from one group of cooperatives called *Annapurna Parivar*, operating in the slum areas of the cities of Pune and Mumbai, and four hospitals (viz., EMS Memorial Hospital in Malappuram district in Kerala, *Shushrusha* Citizens Cooperative Hospital at Mumbai, *Jai Kishan* Hospital at Gandevi in Gujarat, and Rotary International Eye Hospital at Navsari in Gujarat), which are engaged in providing cheap medical services to members as well as local area population. This section attempts to highlight how community health insurance can be provided using the experiences of *Annapurna Parivar* and by roping in community hospitals, which have a soft corner for serving poorer communities which are usually attracted to the SHG/JLG Movement. Section 4 highlights a few illuminating examples, which are not necessarily parts of the SHG/JLG Movement, but which can be used as models and even as instruments to further the cause of this movement, and especially to expand the domain of investment opportunities for SHG/JLG. This section would cover five cases of one *Bhagini Mandal* within the famous Warana Sugar Cooperative Complex near Kolhapur in Maharashtra, one *Amalsad Cooperative Mandali* in the district of Navsari in Gujarat, thrift cooperatives of men and women, promoted by the Cooperative Development Foundation (CDF) in and around the districts of Warangal in erstwhile Andhra Pradesh (now in Telengana state), one *Krishi Vignan Kendra* (KVK) located within Navsari Agricultural University in Gujarat which is promoting farmer groups to undertake advanced agricultural and allied agricultural activities in and around the district of Navsari in Gujarat, and one Farmers' Club located at a place called Vanjar in the district of Sabarkantha in Gujarat. The next section has attempted to highlight how the instrument of SHGs/JLGs can help re-engineer the fate of once-famous Versova Fishermen's Cooperative Society in Mumbai. The final section concludes this chapter, based on the insights from the various case studies covered in this chapter.

Section 2: Potential areas to extract huge benefits from application of SHG/JLG concepts

7.3 Generally the instrument of SHGs/JLGs is applied to areas where poor people have very little natural resource base to get started and there is also very little of community resource or social capital they can fall back upon. As a result, the development process of an SHG/JLG member has to depend almost exclusively on outside support through promotion of limited potential of very few pre-existing and sub-standard activities. Naturally, the potential of SHG/JLG Movement would be much stronger if the community's natural resource base is stronger and suitable leadership can establish appropriate property rights through designing of relevant institutions which can activate both people and resources for sustainable growth. Given this premise or understanding, we decided to highlight two highly potential areas in West Bengal, which came in front of our eyes only by chance, when the author was invited to see the sprouting of SHGs and examine their potential in the Damodar Valley Corporation (DVC) command area with vast water bodies for fish cultivation, and in the forest areas of *Paschimanchal* of West Bengal, where Bidhan Chandra *Krishi Viswavidyalaya* (BCKV) has found huge potential for turmeric cultivation to sustain the livelihood of local schedule tribe population.

Case 7.1: Can Technology alone improve the lot of Traditional Inhabitants in and around the DVC Area?

7.4 The Damodar Valley Corporation (DVC) was constituted in 1948 by an Act of Parliament as the first multi-purpose river valley project of Independent India on the lines of the Tennesse Valley Authority of the US. Governments of India, West Bengal and Jharkhand are partners in this organization. Its mandates as per the DVC Act are: Promotion and operation of schemes for irrigation, water supply and drainage,

a) Promotion and operation of schemes for generation, transmission and distribution of both hydroelectric and thermal power,
b) Promotion and operation of schemes for flood control in the Damodar river and its tributaries and channels, if any, excavated by the Corporation in connection with the schemes and for improvement of flow conditions in the Hooghly river,
c) Promotion and control of navigation in the Damodar river and its tributaries and channels, if any,
d) Promotion of afforestation and control of soil erosion in the Damodar valley, and
e) Promotion of public health and agriculture, industrial, economic and general well-being in DVC's area of operation.

7.5 As a part of its mission, DVC has taken initiatives for development of one Aquatic Resource Centre to take up rigorous fisheries development in its core reservoirs – Maithon, Panchet, Tilaiya and Konar, and other water bodies created under different projects. The total water spread of these reservoirs at full pool level is about 34,447 ha., of which the productive area is about 20,116 ha at this stage. Although reservoir fisheries is a natural outcome, it is being revived with fresh vigour and in a much broader way involving the local people and various stakeholders. The local stakeholders include Primary Fishermen Cooperative Societies (PFCS) and Self-help Groups (SHGs), which are being involved in consultation with the concerned Block/District level officers of the Governments of West Bengal and Jharkhand. Currently, there are altogether 30 registered fishermen cooperative societies with total member strength of 1285. Of these 30, 28 are constituted by Government of Jharkhand and the rest 2 by the Government of West Bengal. All current activities are being undertaken with the help of these cooperative societies and SHGs.

7.6 In order to generate better income opportunities to the local people, a Social Integration Programme is being implemented, which has the following components:

1. Developmental works at Maithon Fish Farm, and initiation of scientific pisciculture since June 2008;
2. Setting up of one Indian Major Carp (IMC) Hatchery at Maithon and initiation of spawn production in these hatchery since August, 2008;
3. Construction of Fish Landing Centers at different reservoirs;

4. Stocking of fingerlings in DVC Reservoirs since 2007-08 using assistance with National Fisheries Development Board (NFDB) and full co-operation of the Department of Fisheries, Government of West Bengal and Government of Jharkhand as well as the Central Inland Fisheries Research Institute (CIFRI), Barrackpore, West Bengal. Till 2011-12, about 334.91 lakh fingerlings have been stocked in these four reservoirs;
5. Arrangements of workshops and organization of training programmes on scientific pisciculture and management of reservoir fisheries, thereby training 1,420 candidates so far;
6. Organization of training programme on ornamental fisheries for women;
7. Organization of awareness camps;
8. Distribution of fishery inputs (nets and aluminium *hundies*);
9. Introduction of a pilot project of cage culture for table fish production in Maithon reservoir under the Joint venture of Damodar Valley Corporation (DVC) and Central Inland Fisheries Research Institute (CIFRI) beginning December, 2011 as an experimental basis using the funds from National Fisheries Development Board (NFDB);
10. Promotion of pisciculture in a large number of fresh water bodies (initially 20 ponds covering 35 ha. areas) in the valley with a view to achieving sustained income generation of the local people;
11. Enhancing fish seed (fry and fingerlings) production capacity through creation of new Nursery ponds/rearing ponds under different projects;
12. Construction of a Model Fish Farm at Panchet; and
13. Providing fishing rights to local villagers and agencies in Maithon and Panchet reservoirs through creation of appropriate participatory bodies.

During 2007-08 to 2011-12, DVC has received grants from NFDB to the tune of Rs.340.78 lakhs, and DVC's own contribution till October 2012 stands at Rs.251.86 lakhs.

7.7 The proposed Aquatic Resource Centre has also a future plan for setting up one residential training complex, one Research and Development Wing for reservoir fisheries, one Aquaria House, and one Fisheries Museum – all at Maithon.

7.8 As professional manpower is needed for efficient management, a permanent set up of the Department of Aquatic Resources in DVC is contemplated. Currently, the works of fisheries are being carried out by the Chief Engineer (Civil) with necessary professional advice from one Officer on Special Duty, Aquatic Resources who is District Fishery Officer, presently in DVC on deputation from Govt. of West Bengal. He is being assisted by only 5 Special Assistants at this stage. In order to strengthen manpower, several new posts are expected to be created – e.g., of one Assistant Fishery Officer, 5 Fishery Assistants, another 5 Special Assistants/Field Assistants, and two Messengers/*Khalasi*.

7.9 From field visits, examination of documents and interaction with the members of SHGs and cooperatives, it appears that considerably more emphasis is placed on construction of facilities and discharge of technical knowledge than on imparting of necessary management skill and building capacity to run the show. No doubt, cooperatives have been there for a long time, but without any notable progress most cooperatives seem defunct or nearly defunct, as no audited annual progress report could be obtained. Relatively more enthusiasm seems to have been seen around SHGs, though these are only in formative stages. Although both men and women members of these SHGs are keen to realise the fishing potential of these reservoirs to their advantage, they are probably not getting enough attention from DVC, given acute shortage of manpower, which alone can sustain the technical knowledge being imparted to them by experts. Certain fundamental features of SHG Movement like group savings, internal lending, identification of productive activities, bank linkages, and availability and repayment of bank loans on time seem to be still a far cry for many of them. In several of the SHGs within West Bengal area seem to be suffering from another serious problem – dominance of employed Resource Persons (RPs) at Panchayat level, who are alleged to be demanding separate incentive payments for doing the necessary jobs for the SHGs and even collecting subscription from the SHGs to construct an union office of these RPs at block level. If valuable resources of state line departments are properly allocated and spent in these low population density areas, DVC can spend its CSR resources exclusively on promotion and empowerment of SHGs and cooperatives. The functional relationship between SHGs and cooperatives is yet to be defined. Only in one SHG of the wives of DVC employees at Mejia, which was promoted by an NGO called *Pradan* seem to be functioning pretty well with a high degree of awareness created among its members. In general, the typical problem of mismatch between technical and management inputs, which probably should go hand in hand in the spirit of a healthy marriage, seems to be persisting, in spite of huge potential of this area. The essential message of this case is that unlike in most of the SHGs, which start without any resource base, these SHGs promoted by DVC made a difference by providing a resource base and natural activity to begin with. Whether and to what extent they could sustain the process of development is a different question, especially when the requisite training and management inputs are utterly in short supply.

7.10 The important message of this case is that unlike most of the SHGs which start without any tangible resource base, these DVC-promoted SHGs made a difference by providing a natural resource based activity they are accustomed with. Whether and to what extent they could sustain the resource as well as themselves will depend upon the processes being followed, especially when the requisite training and management inputs seem to be in short supply in spite of the best intentions of the people at the helm of affairs.

Case 7.2: Can Turmeric Cultivation bring Prosperity to the Backward and Dry Areas of Western W. Bengal?

7.11 Following an invitation from one of the senior scientists of Bidhan Chandra *Krishi Visvavidyalaya* (BCKV), the author had visited one KVK near Jhargran in the district of West Midnapur in West Bengal, where a workshop was to be held to propagate turmeric cultivation among the scheduled tribes of this area under a project entitled 'dissemination of techniques for growing and processing of turmeric in non-traditional areas of *Paschimanchal* for livelihood security', which was funded by *Paschimanchal Unnayan Parshad,* Government of West Bengal and implemented by BCKV. The operational areas of this project are carefully selected pockets in the three districts of Bankura, Purulia and Midnapore (West), which together are referred to as *Paschimanchal* or *Jungle Mahal*. This case is based on the author's learning from this workshop, supplemented by some reading materials provided by the scientists.

7.12 These scientists have chosen turmeric as their point of intervention as this crop can mitigate stress condition of most of the soils in this area, besides providing livelihood security to production of this high-valued crop. Through exhaustive study of soil samples of this area, they have found enormous scope for growing turmeric under rain-fed or moisture-stress conditions as an alternative to traditional *kharif* rice cultivation. Turmeric is one of the most important and ancient spices of India, which is useful in dying, drug and cosmetic industries, besides being used in religious and ceremonial occasions. Medicinal properties of turmeric, as cited in the literature, is due to its capacity to treat digestive disorders, liver diseases, anti-inflammatory atherosclerosis, osteoarthritis, etc., infections and even cancers. Its cosmetic use arises from the fact that it purifies blood and skin conditions. As spice, it is found in every Indian kitchen not merely as a colouring agent but also to add flavour to curries, pickles, *chutnies*, and rice dishes. The team of scientists found the following feature of turmeric especially attractive:

- It is believed as the golden spice of life;
- It is a highly remunerative crop with high benefit cost ratio, especially compared to rice;
- It is suitable for red lateritic zone;
- It has good employment generation capacity;
- It can be used as a diversified crop along with other crops;
- It is accepted socially and economically irrespective of religion and caste;
- It can be easily stored, processed and marketed after value addition; and
- Its market potential is high in both domestic and export segments.

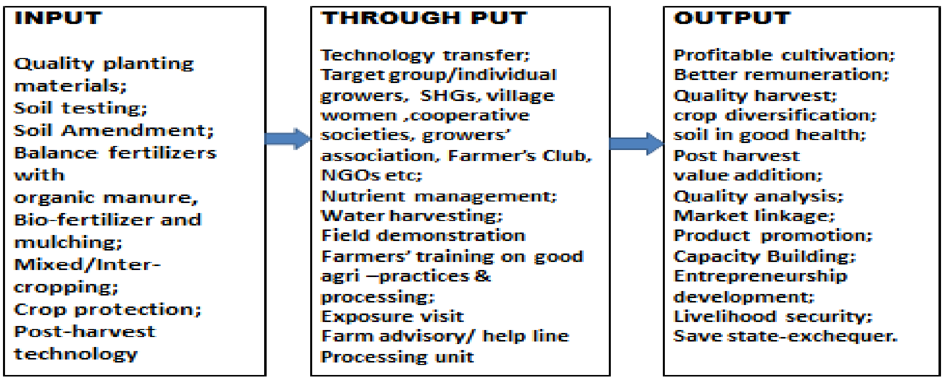
7.13 Estimates provided by the scientists reveal that while cost of cultivation of turmeric is around Rs.10,000 per *bigha*, production is around 200-250 kgs. per *bigha,* which can fetch a revenue of around Rs.40,000 per *bigha*. Farmers can get two crops in a year.

7.14 The project started functioning since October 2012. Initially, this project was limited to only western side of the district of Bankura having rain-fed, lateritic zone mostly inhabited by tribal and economically backward population. Later on, the project was extended to other parts of Bankura district, besides extending it to the districts of Purulia and West Midnapore. Survey of soil samples in this area revealed two concerns: poor soil characteristics in terms of nitrogen and carbon contents, and though potassium is fairly good in supply, level of phosphorous is on borderline/inadequate/ deficient. So keeping in view the soil status of this area, the project attempted to make farmers aware about green manuring and bio-fertilizer application. Simultaneously, they started azolla and sylvania cultures, besides preparing compost and vermi-compost pits, which were demonstrated to farmers in-situ to improve soil productivity. Farmers are advised cultivation of leguminous crops like *khesri*, lentil, *arhar, methi*, etc. Accordingly, training and skill development was given top priority through regular meetings, group discussion, panel discussion, and seminars. A mobile squad was created to tour intensively to spread the message of turmeric based livelihood security. Contacts were established with industry which showed huge potential demand for the output. Initially, BCKV is providing high quality turmeric seeds to farmers free to promote this cultivation. The project implementation process is described in Figure 7.1[1].

[1] Source: This picture is provided to the author by BCKV scientists.

Although SHGs here are in the initial stages at the time of this study, it appears they are being provided active guidance by BCKV scientists not only in choosing a crop suitable to the groups' interests and local area, but also in production, processing and marketing of the crop. This active involvement of the promoting organization in realizing the full value of the farmers' produce stands out as a distinct feature of this case, which is often missing in many contexts.

Figure 7.1 Project Implementation Process



Section 3: Potential for low-cost insurance including community health services to SHGs/JLGs

7.15 SHG/JLG members being people of small means and often of backward communities from backward areas are usually more prone to risks as they have little *ex ante* and *ex post* capacity to hedge against small risks including periodic capacity failures and serious diseases. It is in this context the issue of low-cost health insurance, accident insurance and life insurance arises. While accident insurance are now-a-days being provided at cheap cost (e.g., at an annual premium of Rs.100 against an insurance coverage of Rs.2 lakhs by SBI for its account holders), life insurance and especially health insurance are relatively more difficult to provide. Although *Rastriya Swastha Bima Yojana* (RSBY) has attempted to provide free health insurance up to an annual amount of Rs.30,000 to BPL families, the scheme is subject to widespread criticism, including cornering of benefits by corporate hospitals at a huge cost to the national exchequer. In this context, three types of illuminating examples elaborated in this section deserve special mention. The first example (case 7.3) of community mutual health insurance instituted by one *Annapurna Parivar* for its SHG-members, the slum-dwellers in the cities of Mumbai and Pune deserve maximum attention. Cases 7.3 and 7.4 of EMS Memorial Hospital from Kerala and of *Shushrusha* Hospital near Dadar in Mumbai, respectively, attempt to bring out the ingredients necessary to achieve a cooperative solution to the health insurance problems of less well to do people, though not of people of the bottom layer. These cases have nevertheless important lessons for the SHG/JLG movement and its activists and policy-makers.

Cases 7.5 and 7.6 briefly cover two examples of hospitals set up by charitable trusts – one at Gandevi taluka of Navsari district created at the behest of Gandevi Taluka Cooperative Union, and the other an Eye Hospital at the city of Navsari itself set up by a group of dedicated social workers with matching donations from Rotary International – highlight the role of dedicated social leadership in solving health problems of local poor without depending exclusively on government support. These cases should be of special interest to those, who are in favour of furthering the cause of SHGs/JLGs without being unnecessarily dependent on a government subsidized and government managed program.

Case 7.3: The poor too can establish and run their own mutual health insurance! Lessons from Annapurna Parivar[2]

7.16 With rising unemployment rates and fewer new jobs, it is difficult for the urban poor to make both ends meet. In most cases, they have to resort to small and sundry jobs. In the case of landless agricultural workers, the wage rate is so low that his entire family must work to make both ends meet. The same is true for urban slum dwellers. Both males and females have to join various odd jobs to earn enough for the family.

7.17 Although there is no substitute for hard work for the poor, often hard earned money gets wasted due to social evils like drug abuse and alcoholism. More often than not, men are the prodigal culprits and women are the docile homemakers. Although both members may be earning in the family, in most cases, the males assume control over the household finances either by force or deceit. Domination of male members over the family is also a socially accepted practice.

7.18 Therefore, not only poor economic conditions or social evils are to blame not only for the poor staying poor but also for had the lack of financial independence of women. They do not have access to a bank account to deposit their savings nor any collateral to get loans. A financial constraint thus restricts their social mobility. Mrs. Prema Purao realised this while working with women workers as a Trade Unionist. She was earlier a freedom fighter in the Goa liberation struggle and also been an activist in the *Samyukta* Maharashtra Movement, Girni *Kamgar* Union and *Bharatiya Mahila* Federation (Kaur & Kaur, 2012). In 1975, with the backing of Dada Purao, who was Secretary of the All India Bank Employees Union and Mrs. Purao's husband, the *Annapurna Mahila Mandal* was formally registered as a Charitable Trust and Society (Kaur & Kaur, 2012). Later in 1986, *Annapurna* registered itself as a Multi-state Credit Cooperatives Society. In 2004, Mrs. Purao retired and handed over the management of *Annapurna Pariwar* to her daughter Medha Purao Samant, who still

[2] The author wishes to acknowledge help from his former FPM student, Kanish Debnath, who later wrote his dissertation on *Annapurna*'s health insurance, in developing this case.

manages the organisation till today. In the local language, *Pariwar* means family and *Annapurna* strives to be a big family of its members.

7.19 The *Pariwar*'s mission is to make their "members sustainable and happy in their professional and personal lives by giving small repetitive loans to poor enterprising men and women along with business guidance and skill trainings to improve their business" (*Annapurna Pariwar*, 2013). The *Pariwar* also works towards linking the members and their adolescent children with jobs and generating their savings and insuring them against unforeseen emergencies like death and sickness. *Pariwar*'s members' families are also looked after through family counselling and day care centres.

7.20 The *Annapurna Pariwar* is a Network of five NGOs working in Mumbai and Pune since 1993 (Annapurna Pariwar, 2013). It started as a chapter of *Annapurna Mahila Mandal,* Mumbai, started by Mrs. Prema Purao. *Annapurna Pariwar*'s NGOs are working with poor self-employed women and men in urban slums and are providing different services[3]. As briefly elaborated below: –

Annapurna Mahila Cooperative Credit Society (A Multi-State Cooperative Credit Society)*:*

7.21 It offers micro loans and savings program for poor self-employed women and men. This project is at the core of all '*Annapurna Pariwar*' activities, since it addresses the basic economic needs of slum dwellers. The borrowers are vegetable vendors, fish/dry-fish sellers, fruit sellers, flower / garland sellers, rag pickers, *papad* rollers, construction & domestic workers, farm labourers, construction workers, small fabricators, petty merchants, rickshaw drivers etc. They are not able to borrow from the banks and big financial institutions because they are poor and cannot offer any guarantee or collateral security. The loans are given for business creation/expansion, education, housing, repayment of old debts and asset creation. The *Pariwar* gives small repetitive loans through its Joint Liability Groups (JLG). The loans range from Rs 7000/- to Rs. 1,00,000/- to women/men. While repaying the loan, borrowers have to save a minimum of 8% of the loan with the Cooperative Society. This project is refinanced by banks like IOB, SIDBI and NABARD. As of 31st December 2012, Rs. 236 crores has been disbursed. This was possible because of a very high recovery rate. They now have 38,000 members forming 7,600 groups.

Annapurna Pariwar Vikas Samvardhan (A Section 25 Company)*:*

7.22 This project provides Health Mutual Fund, Life Mutual Fund and Family Security Fund for the slum dwellers. It guides members about their health and family problems. It also gives financial

[3] This section is adopted from (*Annapurna Pariwar*, 2013)

assistance at the time of sickness, death, and disability. All the members are insured under Life Mutual Fund Scheme of *Annapurna Pariwar Vikas Samvardhan*. In case of death of the member, the loan is written off and a financial assistance of Rs.15,000 is provided to the family of the borrower. A Family Security Fund is also created for helping the borrower's family cope with the death of its earning family member. In case of death of a family member, an emergency relief of Rs.1000 is provided to the family of the borrower. The health claims under the Health Mutual Fund are settled to a maximum of Rs.15,000/- per individual per year.

Vatsalyapurna Self-Employment Service Cooperative Society Pune (A Cooperative Service Society for Child Development)*:*

7.23 "Education begins at home" is the principle behind creation of *Vatsalyapurna*. It is a chain of low cost Day Care Centers for children of poor working women. The security of toddlers from the age group 1 year to 6 years from slums whose mothers go out to earn is the driving force behind running these centers. Various activities involving recitation of poems, educational games and story telling are held. Apart from that, other habits like sharing, discipline, lunch habits, etc. are taught. This program helps the poor mothers to work for longer hours and earn more. It also helps the eldest daughter since she does not have to invariably look after younger siblings in the absence of the mother. She can continue with her education. At present there are 415 children (per month) taking benefit of their Low Cost Day Care Centres and their parents are charged an average of Rs.375 – Rs.400 per month.

Annapurna Mahila Mandal, Pune (A Public Charitable Trust and Society)*:*

7.24 This is the mother organisation for *Annapurna Pariwar* in Pune. It houses all the project offices in its premises. Some of the programs running successfully from within the *Mahila Mandal* are –

Vidyapurna is a program for giving educational scholarships to the deserving children of single mothers who are their members. *Annapurna Mahila Mandal*, Pune, gives educational sponsorship for the deserving children of single mothers who are our borrowers. This project is called *"Vidyapurna"*. Foster parents are identified who sponsor one/two children each. These children belong to single mothers from our members who are unable to educate their children because of their poverty. 265 such children were sponsored with Rs. 5,75,000/- during January-December, 2012.

- The **Dada Purao Research & Training Institute** takes up research projects and publishes books on the subject of microfinance and micro insurance. It also imparts training to bank officers in the field.
- One of the programs running from here is a Working Women's Hostel at Vashi, which is aided by the Woman & Child Welfare Dept., Govt. of India. Here 125 Working Women are getting a safe stay and homely food. The staff in this hostel comprise of destitute women who also get a job and shelter from this activity.

7.25 Throughout the years of its existence, *Annapurna* has taken several initiatives and in process has unearthed many lessons[4]. These are elaborated under the key points below –

- **Partnership over charity** – Dr. Samant is of the conviction that none of these services are provided as a charity. Charity culminates a sense of inferiority and a lack of ownership, and often leads to moral hazards. The participants of all the projects are called partners, and they participate in the decision making through group and cluster meetings at regular intervals. Major managerial decisions are taken in consultation with concerned groups.
- **Dealing with groups to counter moral hazards** – *Annapurna*'s experience show that Joint Liability Groups (JLGs) are more suitable for the urban slums. In JLGs 5 poor women / men get together in groups and stand as guarantee for the loan to each member in the JLGs. 3 JLGs get together in centres. The centres facilitate efficient loan delivery and recovery. Also while forming groups, members from different professions are clustered with the twin objectives of gaining community cohesion and lowering covariant risks.
- **Franchisee program in rural areas** – In rural areas, *Annapurna* has a Franchisee Program wherein their franchisee partners extend micro-credit facilities to rural SHGs. The main areas covered are Ichalkaranji and Beed – through *Shramshakti Nagari Pat Sanstha* and *Samata Pratisthan*, respectively. In Beed, *Samata* is covering landless migrants who cut sugarcane. In Ichalkaranji, *Shramshakti* is covering jobless loom workers. In Pune, their partners are *Parvati Swayam Rojgar* and *Sahyadri Bachat Gat* (*Annapurna Pariwar*, 2013). Having franchisees lowers operating and monitoring costs and such options can be explored even in other not-for-profit organisations.
- **Coalition of different institutional forms** – *Annapurna Pariwar* has registered its NGOs as different societies. The *Annapurna Mahila* Cooperative Credit Society is a Multi-state Cooperative Credit Society. This gives them the flexibility to operate in different states and also places them outside the ambit and control of any state legislation. The *Vatsalyapurna*

[4] This section is based on personal communication with Dr. Medha Purao Samant and other references

Self-Employment Service Cooperative Society Pune is a voluntary cooperative service society for child development. The *Annapurna Pariwar Vikas Samvardhan* is a 'Section 25' company that is accorded full legal status as a non-profit company and has to act according to the Indian Companies Act 1956. Finally, the mother organisations in Pune and Mumbai – *Annapurna Mahila Mandal*, are public charitable trusts. By placing their eggs in different baskets, *Annapurna* manages to get the best of multiple worlds. This is a unique strategic advantage they possess.

- **Cultivate local market competitiveness before looking for domestic or export market competitiveness** – *Annapurna'*s experiences point out the fallacy in asking the producers, traders and artisans to be domestic or export market competitive without the resource, skill and intent at being so. Domestic and export competiveness is only wishful thinking if people cannot be competitive even at local level. On the other hand, poor slum dwellers are primarily trying to make both ends meet and lack the entrepreneurial ability to have a sizeable working capital and target distant markets. Therefore, *Annapurna* tries to form JLGs out of people who are in different professions so that they can easily exchange products and services and the money will remain within the group.
- **Reduce healthcare costs by lowering transaction costs** – The *Annapurna Pariwar Vikas Samvardhan* runs a Health Mutual Fund that safeguards the healthcare of many insured individuals (Leist, 2004). They take an annual premium of Rs.100 (now raised to Rs.120) for insuring claims up to of Rs. 15,000 for that year (*Annapurna Pariwar*, 2013). While this may look similar to many other community based programs, the distinctive feature of them is that their claims have never exceeded premium collections. They have achieved this even with low rejection rates and rejecting only false claims. Their success formula has been in employing young doctors who love doing social work. These doctors analyse each and every claim and if needed, provide medicines themselves. Furthermore, *Annapurna* has tied up with many nearby clinics and hospitals for treating their members at lower charges than their actual rates. It also keeps a tab on costs of treatment at various places and direct member patients to the hospital where they can get the needed treatment at the lowest cost. *Annapurna* could take the benefit of competition among many healthcare providers in upscale Pune and Mumbai. In fact, it is squeezing the risk distribution of health issues by absolutely removing uncertainties by providing correct treatment on time.
- **Leveraging Information and Communications Technologies (ICT)** – Since *Annapurna* runs several programs, each of the programs involving thousands of members, the need for computerisation of records was soon realised. After using a highly limited system since

2004, they awarded a contract to a local software vendor called Quantum Software Solutions to develop a custom built solution keeping in view the existing limitations and future plans (Kulkarni, 2011, p. 139). Annapurna's own technical advisory team was involved in the evaluation and implementation process, to validate and meet screen functional requirements before they found their way into the features being incorporated in the product. Annapurna went live with the solution in 2009 and its current efficiency and transparency is backed by its strong MIS set-up.

- **Nurture research potential** – *Annapurna Pariwar* has a strong belief that it is possible to influence policies at the local, national and international level in favour of the poor. They have realised that in order to do this, they must present their experiences and experiment results in front of the academic community. Policy changes can be brought about by strong results in their favour. With this zeal, they started the Dada Purao Research & Training Institute in the name of Medha Tai's father. The institute has already published several books in English and Marathi. Some of these books are '*Samvaad* – An effective tool for women empowerment' by Dr. Medha Purao Samant, 'Basics of Microfinance – presentation of two models' by Lopa Dasgupta, and 'Beyond loans – empowerment through Microfinance' by Keerti Marathe. The publication of the book by Lopa Dasgupta has been funded by National Bank for Agriculture & Rural Development (NABARD). All of these books are written in simple language and are affordable to all.

Case 7.4: EMS Memorial Cooperative Hospital and Research Center – a Unique Creation of Pragmatic, Local Communist Leaders!

7.26 EMS Memorial Co-operative Hospital and Research Centre Ltd. is located in a beautiful and patient friendly environment at Perinthalmanna in Malappuram district, Kerala. It is spread over more than 6.5 acres of land with 1.5 lakh square feet built-up area with the state of the art infrastructure, designed and constructed using advanced medical technologies. The hospital is a tribute to the memory of legendary E M Sankaran Namboodiripad (1909-1998), the first Chief Minister of Communist-ruled Kerala. It came into being in 1998, when about 10-12 local communist leaders, who were the followers of Namboodiripad, assembled and discussed the idea of a big hospital for the service of the mankind and gathered support from social workers, philanthropists, co-operators and many other ordinary people in Malappuram District and nearby places. Incidentally, Namboodiripad also held from this district, where he had a very strong foothold. The idea was to make use of the goodwill of all including Namboodiripad to come up with a matching memorial to the departed leader in his place of birth – viz., world class, affordable health care facilities accessible to all sections of the society with a human touch. They thought governments can come and go, but a world class hospital affordable to all in the society will become a permanent asset, which will be remembered for ever. So it was the pragmatic thinking of the local communist leaders to seek cooperation of non-communist as well in this area and to place this hospital in the cooperative sector. The hospital is committed to providing need-based patient care affordable to all through continuously innovative improvements in the health delivery system and its processes. The vision was to heal each and every one within his reach.

7.27 However, setting up such a dream-piece hospital required huge expenditure on account of land, infrastructure, technology, equipment and manpower, whereas the felt need was to provide affordable quality health care, which is accessible to the masses. With great hope, the promoters planned a big expansion of the initial structure and approached co-operative banks for a loan of Rs.7 cores in early 2000, after procuring sufficient amount of land. They planned a tertiary level 500 bedded hospital with allied services. Unfortunately, both the state cooperative bank and the district cooperative bank felt, given their traditional mind set, that running a co-operative hospital would not be profitable, and hence rejected the request. The commercial banks too felt that this project would not work smoothly because of its co-operative entity and the entire investment would soon become an NPA of the financier. At this stage, the Board of Management of the hospital took a bold step to explain the situation to the people and started motivating the mass organizations to co-operate in their endeavour. They organized meetings in the district and even in Arab gulf area, where at least one member from each family in the district was employed. The hospital management offered attractive incentives and cashless treatment facility to the shareholders of the hospital to the extent of the share amount invested. The hospital soon mobilized large amount of money as share capital, without incurring any outflow of resources in the form of interest or commission. Since then, the hospital has never looked back and faced the need for loan from any bank, though most of these banks later came to the hospital for deposits and investments, and offered finance at concessional rate.

7.28 The hospital gets patients not only from the state of Kerala but also from neighbouring states like Tamil Nadu, Karnataka, Lakshadweep, etc. Now patients belonging to Arab gulf countries are also coming to this hospital for treatment. The hospital has 540 beds, 100 doctors, 1500 other paramedical and non-medical staff, one 10-storied IP block, 5-storied administration block, 26 medical departments and running paramedical and nursing colleges, etc. To keep pace with growing awareness and demand for better facilities, more space, world class medical equipment, upgraded technology and quality delivery, the management decided to take expeditious actions to construct another 10-storied building. In this direction, the hospital has already purchased a land plot of 1.5 acres adjacent to the existing compound.

7.29 The cooperative hospital is entitled by its bye-laws to raise funds through shares, entrance fee, subsistence fee, deposits, loans, donations, grants and subsidies, and any other means as may be approved by the Registrar of Cooperative Societies (RCS). The authorized share capital of the society is Rs.160 crores, which comprises of a total of 50 lakh A-class shares of Rs.250 each from individuals in the area of operation of the Society (i.e., the district), 10,000 B-class shares of Rs.1,000 each from state/central government, 20,000 C-class shares of Rs.1,000 each from Cooperative Societies, 20,000 D-class shares of Rs.5,000 each from small scale industries, local bodies, charitable societies, trusts, registered service organizations, trade unions, registered cultural organizations, etc., 1,000 E-class shares of Rs.10,000 each from large scale industrial houses, and 60,000 F-class shares of Rs.5,000 each from individuals and organizations outside the area of operation, who are interested in the activities of the society. The society is entitled to borrow not more than 25 times the paid-up share capital and accumulated reserve fund. Except for B-class and F-class, all other members are entitled to one vote, irrespective of the number of shares held. The elected members from A, C, D, and E-class members are allowed to constitute a board of 15 members for a 5 year term. The composition of the Board, besides Chairman and Vice-chairman, is: 7 representatives from A-class members, 2 from C, D, and E class members, 3 from A, C, D and E-class women members and one representative from A, C, D and E-class SC/ST members. The Board is entitled to constitute different sub-committees for running the organization, though the decisions of the sub-committees must be ratified in the next meeting of the Board of Directors. This cooperative hospital has thus followed a stakeholder cooperation approach winning over support from all corners. One CEO designated as General Manager is responsible for overall supervision, while there is one Medical Superintendent who is in charge of clinical affairs. A member is entitled to receive benefits depending upon the share capital contribution, the larger the contribution, the larger the benefits. So patronage, cohesiveness is interpreted in this way. While the charges are moderate, they get automatically adjusted against the credit earned by each member. The existing charges for common medical procedures in EMS Hospital are displayed in Table 7.1

Table 7.1: Existing charges for common medical procedures in EMS Hospital

Treatments	***Charges(Rs)***
1. Ultra sound	550
2. Ct	1250
3. MRI	4000
4. Echo	750
5. TMT	600
6. Angiogram	5000
7. Coronary Angioplasty	22000
8. PDA Closure	15000
9. ASD Closure	22500
10. Endoscopy	800
11. Colonoscopy	1600
12. CABG plus medicine ASD	69000
13. VSD Closure	52000
14. Normal delivery	1000
15. Rooms: Deluxe	1680
16. Rooms: A/C	1080
17. Rooms: Single	520
18. General Ward	250
19. ICU	1700
20. OP Consultations: Speciality	50
21. OP Consultations: Super-Speciality	80
22. Dialysis	150

Note: The selected list of charges are with effect from 1-12-2012.

7.30 The hospital pays competitive rates to doctors and staff working in the hospital in terms of salary and service benefits as fixed by the state government. Although doctors are not paid at market rates, the management is successful in keeping the doctors hooked to this organization using their strong goodwill. However, to attract international level doctors, they have not hesitated to go for special rates. Most of the doctors are full time, but some are on part time basis. Doctors are not given any bonus or incentive; they get only the contractual payment as per renewable and negotiable contracts. The doctors are of course allowed to do individual practices, without in any manner hurting the interest of the hospital and its members. The strength of EMS Hospital is that, unlike most non-corporate hospitals, it is making small profits, as it can be seen from income and expenditure figures during 2007-08 to 2011-12 (Table 7.2). Some statistics regarding the flow of patients is displayed in Table 7.3.

Table 7.2: Income and Expenditure figures of EMS Hospital during 2007-08 to 2011-12 (Rs.crores)

Year	Income	Expenditure	Surplus
2007 - 08	36.37	34.25	2.12
2008 - 09	44.97	42.56	2.41
2009 - 10	57.51	54.91	2.60
2010 - 11	67.44	64.81	2.63
2011 - 12	72.49	70.33	2.16

7.31 The purpose of introducing this case to this study on SHGs/JLGs is that given the existence of a cooperative hospital of this kind or even the potential for existence of such hospital at least in some pockets of the country, not only the hospitals, but also the nearby SHGs/JLGs can build bridges between the two sides for mutual benefits. Such bridges will probably help the SHGs/JLGs more as they need cheap and reliable medical care from participatory medical organizations to sustain themselves, but such steps will also help community based hospitals to enjoy scale economies.

Table 7.3: Some statistics regarding the flow of patients to EMS Hospital

Year	No. of shareholders	No. of Outpatient	No. of Inpatient	Surgery	Angioplasty
2007	18,498	1,81,392	26,144	8,172	483
2009	23,236	2,21,209	26,957	9,112	755
2011	25,737	2,64,073	29,001	11,040	1,159
2012	25,962	2,65,203	27,387	11,146	1,058

Case 7.5: Lessons from Evolution and Functioning of Shushrusha Citizens' Cooperative Hospital in Mumbai

7.32 The health of most Indian urban citizens is on a downward spiral. With rising work pressures, pollution, traffic congestion, lack of exercise and good sleep, etc., the problems of the urban population has increased manifold. Health of an individual may mean different things to different individuals, but on a broader perspective, health must be viewed as a state of complete physical, mental and social wellness. One of the determinants of good health therefore is access to various types of preventive and curative health services.

7.33 Everywhere in the world, the demand for medical care and thus the health related expenditures as a part of the GDP have continually risen (Folland, Goodman, & Stano, 2009). The total expenditure on health care in India, taking into account both public, private and household out-of-pocket (OOP) expenditure, was about 4.1 per cent of GDP in 2008–09; and the public expenditure on health was only 27 percent of this total expenditure (Planning Commission, 2012).

7.34 The above data leads to the following two observations. First, the cost of maintaining one's health is constantly increasing because of improper lifestyles and also due to higher cost of new technology being used for diagnosis. Secondly, the provision of public healthcare is certainly not enough to mitigate the health demands. Thus with the rising costs of healthcare the household is pressurised to apportion bigger amounts to access good quality health care.

7.35 Apart from the costs, there are also multiple risks in healthcare. First, there is a chance of not receiving the correct diagnosis in time or not knowing what to diagnose for. Often people also choose to take multiple opinions and tests to ascertain whether the diagnosis was correct. Secondly, as in most cases the doctors do the job of both diagnosis and treatment, they can act as first-degree discriminating monopolists. Customers are never aware of the actual costs of treatment. Finally, most hospitals cannot afford to keep costly equipment or perform surgeries requiring specialised apparatus, for example, for cardiac surgeries. Hence there is also a search cost involved for receiving health care.

7.36 The *Shushrusha* Citizens' Co-operative Hospital was founded in 1966 by Dr. Vasant Shripad Ranadive and is located in Shivaji Park, Mumbai. The hospital was the first cooperative in the healthcare sector to be registered under the Maharashtra Cooperative Societies Act, 1960. It got registered in 1964. The late Prime Minister, Mrs. Indira Gandhi inaugurated the hospital in 1969. From a humble beginning, the hospital has grown into a full-fledged Medical Institute.

7.37 Even today, the unique aspect of this hospital is that this is the only hospital in Mumbai, and probably one of the very few in India, which falls under the cooperative sector. It is run in true spirit of the Indian constitution – for the people, of the people and by the people. This experiment was necessitated by the fact that private medical facilities charge exorbitantly for services rendered and the public hospitals lack hygiene and are badly managed. In such a situation, this hospital envisages providing "The Third Force" – institutions where the health of the patient is more important than the money he has in his pocket.

7.38 To avail the services of this hospital, citizens have to first become members of the cooperative society that runs this hospital. Membership is open to citizens of Greater Mumbai and

Thane Districts. A person who is legally competent to contract can become a member by paying a non-refundable amount of Rs 1000 towards the Shareholders' fund (one time) plus an entrance fee of Rs 5. No dividend or bonus is payable on the money paid. This membership is transferable to another person, voluntarily, after a member holds the membership for two years or, automatically and irrespective of minimum holding period, to an heir/nominee of the member upon his/her death. The class structure of the beneficiaries is observed to be predominantly middle class. Even an institution, firm, or body may become a member (as an institutional member) of this hospital by paying Rs 2 lakhs.

7.39 The governance of the cooperative society is done by a Board of Directors, who are 25 in number, and, who are elected by the members of the society once in every 5 years. The composition of the Board of Directors is as follows: 4 Doctors who are also members of the Cooperative Society, non-medical members of the Cooperative Society 4, 2 seats for women representatives, 1 seat for SC/ST nominee, 1 nominee of Cooperatives Department of the state government, 1 nominee of Maharashtra State Cooperative Bank Ltd., 1 nominee of the Director of Health Service, Government of Maharashtra, and 2 seats for Municipal Corporation of Greater Mumbai nominees. Other positions are contestable. The Hospital provides the following facilities to its patients –

S. No	Particulars
1	**Operation Theatre Complex**
2	**Intensive Care Unit**
3	**Neonatal Intensive Care Unit**
4	**Artificial Kidney Dialysis**
5	**Emergency Medical Service Department**
6	**Out Patient Department**
7	**Blood Bank**
8	**Optometry Department**
9	**Audiometry & Speech Therapy**
10	**Physiotherapy Department**
11	**Diet Department**
12	**Pathology**
13	**Radiology Department**
14	**Neurology**
15	**Pediatric Ward**
16	**General Ward**
17	**Deluxe Ward**
18	**Online computerization**
19	**Patient friendly services**
20	**High Dependency Unit**
21	**Cardiac Care Centre**

7.40 The aims of the hospital are –

- Facilitating good quality of health at an affordable price
- Health care by self-participation of the people
- To provide educational facilities to enlighten the citizen about the care of his health
- Cater to the local, middle class of the population who cannot afford such treatments
- Give a chance to new doctors to selflessly serve the society and also learn from their seniors

7.41 The benefits to the members and their dependents are the following –

- Priority in admission
- Discounts to members
- Discounts to their registered family members
- The right to vote representatives to the board of directors
- The right to participate in the regulation of the hospital

7.42 The formation of *Shushrusha* hospital was not by fortuity or through an act of altruism. The local people along with their leader Shri Y. B. Chavan felt the need for a facility to take care of their health. Today, the relevance of cooperative hospitals of this type has increased manifold as almost all urban centers are filled with rapid flow of population from rural to urban fringes, leading to large growth of urban middle class and slums. Urban cooperative hospitals of the type as elaborated in this section can easily be encouraged to provide cheap health insurance coverage to the SHGs/JLGs in the urban fringes to steady their growth and development.

Case 7.6: Lessons from Evolution and Functioning of Jai Kishan Hospital at Gandevi[5]

7.43 Gandevi *Taluka Khedut Sahakari Sangh* Ltd. (The Federated Co-operative). Gandevi was established in 1948 by the freedom fighters of Gandevi county. The Federated Co-operative Gandevi has established Gandevi *Taluka Samaj Kalyan Trust* (The Social Welfare Trust) in 1994. The Federated Co-operative, Gandevi is the first co-operative body to establish a Trust for social service activities. In the Golden Jubilee Year (1999) of the Federated Co-operative, its Management Committee decided to establish this *Jai-Kishan* Hospital, as a permanent community service project

[5] This case is based on materials collected Ms. Bhumi Naik and Sanjaybhai Naik under guidance from the author.

of the Social Welfare Trust, to provide basic medical services at minimum rate to the rural and tribal mass of the people. The Federated Co-operative donated a land and constructed the building having area of 18,000 sq.ft. which it gave on an annual rent of only INR 25,000 to the Social Welfare Trust for *Jai-Kishan* Hospital.

7.44 *Jai-Kishan* Hospital is the dream of its founder president Late Mr. Amratlal Naik. He was working as a General Manager of The Federated Co-operative. Having deeply interested in the community service activities, Late Amratbhai was instrumental in establishment of *Jai-Kishan* Hospital. Despite a patient of a fatal disease of cancer, he developed Jai-Kishan Hospital in just seven years. Dr. Hasu Naik is a Trustee of *Jai-Kishan* Hospital and taking deep interest in the development of *Jai-Kishan* Hospital, he is the motivation source for hospital. He has prepared 15 Matching Grant Projects, amounting to $ 430,469. Besides, he is instrumental in collecting money from his NRI friends and making all necessary correspondence with The Rotary Foundation, U.S.A. required to approve these projects. *Jai-Kishan* Hospital received equipment of INR 6 million as a beneficiary of several projects.

7.45 At present, medical services are provided in following various departments by expert doctors. And *Jai Kishan* tries to give the best facilities to its patients at minimum cost.

Department	How Evolved
General Surgery Department	This department is there since the inception of hospital. Then the operation theatre is made with help of rotary club of Gandevi.
Gynaec & Maternity Department	This department is working since inception of hospital. Aid to establish Gynaec & maternity ward has been received from The Rotary Foundation & Rotary Club Gandevi with the help of a Matching Grant.
Paediatric Department	Late Shri. Dhirubhai Morarji Naik (Krishnatalao, Zimbabwe) has donated INR 1,500,000 for this department. So this department has been named after his wife Late Shrimati Kikiben Dhirubhai Naik Children Ward. Neo-natal Intensive Care Unit has been established, with the support of a Matching Grant Project of Rotary Club, Gandevi.
Pathology Lab	Jai-Kishan Hospital has established computerised Pathology Lab, which is aided by the Matching Grant of the Rotary Foundation and Rotary Club Gandevi.
Dental care	
Sonograph y & X-ray Services	Sonograph y Machine was donated by Rotary Club Gandevi under Matching Grant Project whereas X-ray machine was donated by Krishak Bharti Co-operative Ltd., Ahmedabad.
General Medicine Department	By identifying the need of the people Jai Kishan developed this department.
Orthopaedic Department	This department is developed with the help of an orthopaedic surgeon of the area.
Psychiatric Care	

Ear, Nose & Throat (ENT) Department	ENT department has been started from December 2001.

7.46 The *Jai Kishan* Hospital also provides many other important services like,

1. Outdoor Patients' Department

This department is the outcome of the charitable dispensary started by The Social Welfare Trust. Medicine of one day is given by charging only INR 5. This service is proving as blessings for the poor, needy community. Dr. Digvijay and Dr. Sejal Mehta are rendering their services in this department.

2. Poor Patients' Relief Fund

Despite giving all the services at minimum rates, the poorest of the poor people mainly comprising of Adivasis, Halpatis, Landless laborers etc are not able to pay the lowest rates also. As someone has rightly said "Service of Humanity is the real service of God ". Trustees of Jai-Kishan Hospital have developed "Poor Patients Relief Fund" (which is a Corpus Fund) to serve such needy and weaker section of society. The hospital intends to deposit INR 100 million and hence has solicited support from corporate donors, individual donors, NGOs, etc.

3. Avoidable Blindness Initiative

80 camps have been already organized till to date, in which 12761 patients are registered. Over 1800 Cataract surgeries with IOL, and several other surgeries have been done free of cost. This project has been benefitted under Matching Grant Project of The Rotary Foundation, Rotary Club, Gandevi and 3-H project of Rotary Club, Navsari.

4. Cancer Information & Counseling Center

This center works on the principle of "prevention is better than cure". It was established by the founder president of Jai Kishan Hospital Late Mr. Amratlal Naik who fought against Cancer disease for eight years. Various awareness and counselling programs which are useful in early diagnosis and prevention of certain infections are being organised with the help of experts. Cancer check-up camps and Cancer Awareness Seminars are also organised at regular interval. Proper guidance and information has been provided to the cancer patients regarding their treatment.

5. Mortuary

Mortuary has been developed in which two dead bodies could be kept at a time.

6. Provision of Nutritive Meal

Nutritive food has been provided to the patients along with his caretaker free of cost in general ward and at nominal rate in the special ward. Breakfast and Tea are also being provided in the morning. It is proving very useful for poor and underprivileged people.

7.47 Based on our description of the functioning of *Jai Kishan* Hospital, we can identify the strengths, weaknesses, opportunities and threats of the organization as follows:

- Strengths:
  - ✓ Wide network because of all the primary agricultural societies being connected to it.
  - ✓ Good financial support from federated union and other donors.
- Weaknesses:
  - ✓ Non-availability of good doctors because they are paid only fixed salary and hardly any incentives. They can however be tapped on part-time basis depending on requirements.
- Opportunities:
  - ✓ Advanced technologies can be implemented by proper utilization of funds.
  - ✓ Wide area can be covered by implementing more schemes.
- Threats:
  - ✓ Competitors like other similar trust hospitals are growing day by day in the surrounding area.

7.48 There are two government schemes being implemented by Jai Kishan - one is *Chiranjivi Yojana* under which mothers of BPL families are provided free delivery services during their pregnancy, which the female members of various SHG groups can avail at this hospital. The other scheme implemented is RSBY under which the hospital provides free health treatments up to Rs. 30,000 to the RSBY card holders. So, the female members of various SHGs can show the RSBY card and get benefits from the hospital.

7.49 Gandevi *taluka* is an area which has a very vibrant cooperative movement – maybe due to strong influence of Gandhi who undertook the famous 'Dandi March' through this area, wherein he had attracted great many young and promising mind to work for the social cause. As a result, a large number of Multi-purpose Credit Cooperatives and other cooperatives have embraced almost all landed farmers to solve most of their problems. Being members of the Union, they can also avail the services of this Union-level hospital. But landless people are not generally regular (at most B class) members of these cooperatives. So, they are constrained in use of the services of this hospital. Formation of SHGs/JLGs of these landless households, and especially their womenfolk can solve this problem. That will also generate scale effects for these cooperatives and their hospital. Unfortunately, this possibility appears not to have caught the imagination of cooperative leaders even in a cooperatively vibrant area like Gandevi – at least as much as it should have.

Case 7.7: Lessons from Evolution and Functioning of Rotary Eye Hospital at Navsari[6]

7.50 The Rotary Eye Hospital came up in the year 1977. The story of this hospital is a bit interesting. The Rotary club of Navsari was having their installation ceremony, in which the president of the club. Dr. Ratilal Desai, an ophthalmologist had invited Jivraj Mehta, the first Chief Minister of the state of Gujarat. During the ceremony, Jivraj Mehta commented that the club was providing services to the people for just a show off. He remarked that if the club really wanted to do something it should provide long term rather than short term services. In response to that comment, Dr. Ratilal Desai promised to make it a full-fledged eye hospital. He himself contributed Rs 40,000 and all the other members contributed Rs.1000 each so that enough fund was created to make the Rotary Eye Hospital a reality in February of 1977[7].

7.51 At that time the hospital was having 25 bed capacity and today it has 250 bed facility. This was the first ever largest project of Asia at that time and after the success of this project the Rotary Club decided to go for permanent projects beginning from 2005. The various departmental services provided by this hospital are: General Eye Care & Advanced Diagnostic Eye Care. The Rotary eye hospital provides completely free treatment to the very poor people who cannot afford the treatment cost. They identify this kind of patients during the free eye camps and then for further treatment they arrange the facility at Rotary eye hospital. Some patients can't even afford the transportation cost so they arrange the transportation facility before treatment and after treatment for this kind of patients and also arrange the food facility for these patients free of cost.

7.52 After its total modernization, this hospital is now-a-days providing many services to the society free or at very nominal rate to the BPL families, while attracting affluent patients by

[6] [6] This case is written exclusively by Ms. Bhumi Naik and Sanjay B Naik under guidance from Prof. Samar K. Datta

[7] Today, it is one of the top ten eye hospitals in the country (Source: http://www.wlivenews.com/top-10-best-eye-hospitals-in-india.html)

providing state of the art facilities at slightly below the market price – thus utilizing the surplus over costs incurred in servicing affluent patients towards subsidizing poorer patients. This hospital is thus using the model of a philanthropist discriminating monopolist! So, SHGs/JLGs can utilize this hospital for their eye treatments as there are very few public/community eye care hospitals in the surrounding area.

Section 4: Illuminating Examples to Strengthen and Expand the Domain of SHG/JLG Activities

7.53 In the preceding chapters, we have seen that although there is a general clamour for non-availability of enough funds to SHGs and JLGs by banks and MFIs, on deeper probing however what we find is that these organizations are suffering from lack of appropriate investment opportunities which can sustain themselves in the future. SHGs and JLGs being poor women's organizations, mostly living on government support of one type or the other, and also undertaking at best production of non-standard products for sale into local markets, cannot often absorb more credit unless and until they integrate themselves with the knowledge society so as to be able to produce newer and value added items with better technology and design in more efficient organisational format for sale into premium markets. Naturally, they require promotion of their human capital, which demands much more than simple supply of funds at high interest rates. Even though government provides interest subsidy for agricultural loans, further opportunities in agriculture, given existing distribution of land and structural deficiencies in the working of input and output markets, are at best only meagre. In case of non-agricultural activities, which they are often required to fall back upon, the interest costs are awfully high, apart from the other constraints. The most important issue confronting the SHGs and JLGs is: who will provide appropriate ideas and help them implement the same through necessary handholding at the initial stage and through ultimate empowerment? Given this fundamental issue, the study attempts to provide a few illuminating examples, which can offer certain possibilities to augment and sustain SHG/JLG activities. We intend to present in this section four small cases – first, about the relevance of Farmer's Club and necessary networking with appropriate organizations; second, of Bhagini Mandal, an illuminating women's organization within the famous Warana Sugar Cooperative Complex; third, of Women's and Men's Thrift Societies promoted by Cooperative Development Foundation (CDF) in and around Warangal district in Erstwhile Andhra Pradesh (now, Telengana), and finally, of one Amalsad Cooperative Society, which can be promoted as a Federation of SHGs/JLGs by providing the necessary linkage between this organization, on the one hand, and existing/potential SHGs and JLGs in the nearby areas, on the other.

Case 7.8: Possibility of Networking with Farmers' Club – Lessons from a Farmers' Club Meeting at Village Vanjar in District Sabarkantha of Gujarat

7.54 When in our quest for appropriate institutions to develop networking with SHGs/JLGs, the study team decided to attend a Farmers' Club meeting in the above stated place during their field visit in the relevant district, the General Manager of NABARD Regional Office, Ahmedabad forwarded to the study team copy of a letter from Development Policy Department (Farm sector) of their head office to the various regional offices (Ref. No.DPD.FS/1079-1108/DPD-FS(FTTF-FC Master Farmer)/2010-11 of June 14, 2010), which reads as follows:

7.55 "…*Our Chairman has a vision that NABARD, through its Farmers' Clubs, should play a prominent role for improving the income level of farm families by strengthening symbiotic interaction and convergence of initiatives for access to improved technologies, timely credit and strong market linkages. In this direction, it has been decided to launch a Pilot Project aimed at Technology Transfer, Credit Counselling and Market Advocacy through Farmers' Clubs. The objective is to facilitate the awareness building among farmers on lead crops/activities with emphasis on technology, credit and marketing so as to create an enabling environment to capitalise on the emerging Agri-Business opportunities in Indian Agriculture. To reach out to large number of farmers, the strategy would be to develop Master Farmers in partnership with resource institutions to disseminate the knowhow to other members of the club and fellow farmers in the village on an on-going basis…"*

7.56 Vanjar Farmers' Club meeting is organised every month by DDM NABARD at Himmatnagar which happens to be the headquarter of the district of Sabarkantha. The IIMA study team accompanied by several invited experts from various fields reached the Dudh Sarita Mandali meeting hall at Vanjar for the July meeting. It was a gathering of around 50 people from the nearby villages, which we were told was representing the core Farmers' Club of this area. Most of the experts invited by NABARD were retired officials of concerned Departments, Agricultural University and Banks. Each of them delivered talks to the farmers followed by a long session of question answering.

7.57 On the subject of horticulture, the concerned expert highlighted the need for water conservation in the context of global warming, which could not only economise on costs but also augment productivity. The expert also drew attention to a number of government schemes and ideas through which the available water conservation measures could be utilized. The expert also highlighted the need to shift to lesser water intensive horticulture crops like *amla, ber,* guava, etc., which had much higher earning potential as compared to vegetables and food grains. He highlighted that good food crops must be cultivated through grafting only, and those grafts ought to be purchased only from government nurseries which offer better quality material. The same expert also explained the importance of soil health card. Such cards bring out the deficiency of the culture medium, and accordingly suggest remedial action to improve nutrition of plants. He also explained how to ensure proper usage of pesticides.

7.58 Another expert on animal husbandry touched upon various issues in this segment of activities in his talk. He listed various problems farmers face in the rearing of cows and buffaloes, and provided solutions for each. As cost of production of milk was going up by leaps and bounds, he suggested various ways to achieve improvement in management to cut down costs and improve profitability of business. He advised that a new born calf should be given immediate milk after birth, so that its immune system builds up fast and the calf turns into a healthy animal. He explained the AI concept as it increases the reproduction rate, besides producing better quality breed. He provided guidance about how care ought to be taken to maintain health of animals. The expert guest speaker explained how varieties in fodder can give good nutrition to the calf and help maintain their hormonal balance. This expert from KVK talked about various training programmes on agriculture and allied agricultural activities organized by KVK as well as on various government schemes and programmes. He highlighted the need for greater association between Farmers' Club and KVKs.

7.59 A senior manager from a public sector bank explained to the gathering the various efforts being made by banks to achieve financial inclusion. He especially emphasized SHG/JLG-bank credit linkage and livelihood promotion programmes of the government which are being supported by the banks. He highlighted the possibility of extracting their bargaining power as members of Farmers' Club while purchasing/selling their inputs/outputs. He also emphasized the need for undertaking various social reforms like removal of bad habits and practices through Farmers' Club Movement.

7.60 During breakfast and lunch along with the team of experts, the study team decided to engage themselves on brainstorming over a few issues. The following points cropped up in course of this brainstorming exercise:

- Dena Bank, in order to popularise its KCC, started an optional insurance scheme, in which the card holders are required to pay only Rs.10 per annum, while the rest of the premium cost is borne by the bank, for getting Mediclaim facility up to Rs.20,000 per person per annum. They have made a tie-up arrangement with United India Insurance Company. The study team felt that there was not much awareness about these insurance facilities, including those available with other banks.

- In course of deliberations, it was realized that the most important type of insurance for rural communities and especially those related to SHGs/JLGs was health insurance of humans as well as their animals, though this area seems to be most undeveloped, even though some government schemes like RSBY has attempted to address the health insurance problem of poorer people with varying order of success across states. The concept of animal health insurance does not seem to have evolved.
- The experts based on their experiences felt that unless specific productive activities are rigorously pursued, a large chunk of SHG/JLG loans tend to be spent on consumption, thereby hardly producing any significant and visible impact.
- It was felt that in this part of the country, where rain fall is less, animal husbandry is the only source of income to sustain poor families. But it makes these poor families highly dependent on supply of dry fodder, whose prices are soaring much more as compared to milk prices. As a result, dairying is rapidly becoming a non-profitable proposition. The group felt that it was high time for the country to have a fodder revolution, besides creating a national grid like that on milk, so that fodder can be transported easily across the country from surplus to deficit areas. In this context, Professor Datta highlighted an example of Harda district in Madhya Pradesh, where he found that villagers were converting cut grasses into bricks with the help of a machine to send such bricks through Indian Railways all the way up to Ladakh to meet the demands of Indian military – thanks to the effort of one Col. Bhadoria who hails from this area (Professor Datta's case on this example is incorporated as Appendix 7.1 for ready reference). They appreciated in this context the efforts of the Gujarat Government to produce fodder crops in Saurashtra region.
- Since village *Gaucher* (grazing) land are rapidly disappearing due to illegal encroachment, and their efficiency going down due to 'failure of the commons', the group highlighted the role of the Government of Gujarat which had initiated the programmes of land levelling of several villages taken together, for which a loan of Rs.15 lakhs is provided if a suitable proposal with appropriate responsibilities is submitted by the villagers. This programme is aimed at resolving at least to some extent the problems of food and fodder security, which is threatening the country. Inter-cropping of fodder is also found to have become a necessity at this juncture, the group felt.

Case 7.9: How to build a Bridge between KVKs and the SHGs/JLGs – Lessons from an Interaction with a Group of Farmers being promoted by the KVK under Navsari Agricultural University

7.61 Learning that Krishi Vignan Kendras (KVKs) of the ICAR system are imparting useful knowledge to farmers to improve agricultural performance, the study team decided to pay a visit to the KVK located inside Navsari Agricultural University, when field visit was being undertaken in the same district. The objective was to look for opportunities of building bridges between SHGs/JLGs, on the one hand, and other suitable organizations, which can impart practical knowledge to the farmer, on the other hand. The KVK we visited has been displaying a lot of extension literature in local language, which we understood were being distributed to farmers, besides explaining to them during occasional face to face discussions. As we could find no documentation or records of how many farmers were visiting KVK with what frequency and the kind of benefits obtained, we decided to pose our questions directly before the assembled farmers. A summary of what we learnt from the assembled group of farmers is presented below:

- Thanks to the interventions and convincing power of KVK scientists, the farmers are able to replace older variety of paddy by new varieties resulting in substantial increase in paddy production.
- Navsari being a district of several horticultural crops, introduction of new techniques like green house, drip irrigation, mulching, etc. is believed to have increased yields of these crops.
- Awareness is being created about importance of soil analysis, leading to the need for applying micro-nutrients and organic carbons amongst the farmers.
- In the tribal belts of this district, sweet corn is being taken up for cultivation by the farmers. MOUs have been signed with Vadilal and Company to provide buy-back guarantees to the farmers.
- The district having 600 fish ponds, most of them in silted conditions though, KVK made use of RKVY's scheme to provide fish feed, etc. to the farmers to promote aquaculture in 14 villages among 148 farmers. In order to check, the study team visited the village of Pathari to meet and interact with a group being led by a progressive farmer called Manubhai. His group of SC/ST origin have quickly adopted intensive fish culture, after being trained at ICAR Institute at Bhubaneshwar and Barrackpur. The fish farmers are now-a-days getting ready for customers on the spot, who gives them Rs.100 per kg.

- Application of mineral mixture in animal feed, made available free of cost to KVK farmers seem to have increased milk production by 20%, besides improving fat percentage in milk. Mortality has gone down and the farmers no longer bring animals from Punjab.
- One lady farmer – named Sukhiben has started producing diversified crops including sapota, mango, banana, white and black *jamun*, etc. on her land.
- One farmer, having only 12 *gunthas* area of land, has earned an income of Rs.30,000 in just one month through *brinjal* production, using a new technique. He has applied calf urine with *moongdal* flour and a few other ingredients to prepare a mixed manure to apply on his farm. Farmers are being taught to apply bio-fertilizers, organic fertilizers in farm planning which has led to increased yield.
- Production of green gram during winter has enabled farmers to go for a second crop during winter times.

7.62 The farmer groups gathered did not go for the SHG/JLG route as they are financially strong enough to take care of advanced production using modern techniques. True, currently they do not have any need for loans, but it is also a policy failure to create enough demand for loans by them. Moreover, the ideas and technology transmission being provided by KVKs should also go to SHGs/JLGs, which are facing acute shortage of investment opportunities.

Case 7.10: Lessons from Evolution and Functioning of Thrift Cooperatives under Cooperative Development Foundation (CDF) in Warangal District of Erstwhile Andhra Pradesh

7.63 Cooperative Development Foundation (CDF) is an association of individuals registered in 1975 as a society under the Society's Registration Act. It aims to promote "an environment in which cooperatives flourish as decentralised, democratic, self-help and mutual-help organizations effectively harnessing and fostering local resources – in consonance with the Principles of Cooperation". CDF's functioning over the years are divided into three distinct phases. During the first phase of 1975-85, it concentrated its effort on replication of the famous model of Mulukanoor Cooperative in other parts of the state. During the second phase of 1985-95, it led a sustained campaign to advocate liberal cooperative laws in consonance with the universally accepted principles of cooperation, which resulted in enactment of a parallel and liberal cooperative law entitled Andhra Pradesh Mutually Aided Cooperative Society's Act of 1995 (MACS Act). During the last phase, it got engaged in performing mainly four tasks – first, assisting men and women around Warangal in forming and developing new generation cooperatives under the new MACS Act; Second, disseminating the contents and implications of this Act so as to motivate a large number of ordinary people to organize themselves under cooperatives in the interest of their own economic and social development; third, providing advocacy for enactment of similar liberal cooperative laws in other states, so that cooperatives can play their legitimate role in a free market economy; and fourth, disseminating the contents and implications of this parallel law, wherever such a law is enacted. Ever since CDF came in contact with the World Council of Credit Union, it started organizing men and women thrift groups to promote savings and internal lending within such groups. In the early stages, these thrift groups were functioning under CDF under the Societies' Act, although CDF also started the process of organizing their unions and federations, like the AMUL Model, in order to strengthen the functioning of thrift groups. After enactment of the MACS Act in 1995, all these thrift groups and their higher-tier associations were registered under this Act. Till December 2011, a total of 471 thrift cooperatives comprising of 284 women thrift cooperatives and 187 men thrift cooperatives (TCs) were formed, covering 113793 men and 69865 men. These TCs are looked after by 23 associations of women TCs and 15 associations of men TCs, which are extending certain common services to their members at lower tiers at economic rate. Unlike the SHGs and JLGs, TCs are charging gradually lower and lower interest rates (so far coming down to 12% per annum) to their members. The members on the other hand, get 11% bonus besides training on maintenance of accounts, bye-laws, conducting of audit, computerization of their accounts, etc. TCs are also running *Abhayanidhi* Scheme and Group Fund Scheme to protect family members of deceased members, their guarantors and cooperatives from loss in case of adverse contingencies.

7.64 While group lending is going on, the TCs are linked to two main business activities – dairying and supplying milk to Mulukanoor Women's Dairy as well as Wardhannapet Women's Dairy, and Paddy Seed Cooperatives to provide areas for continuous investment opportunities. Providing an extremely disciplined approach and sustainable investment opportunities are two important characteristics of the TCs under CDF, which distinguish them from the SHGs and JLGs we are seeing elsewhere. Although the study didn't find enough time to make use of the available data in details about inter-temporal functioning of these TCs, their higher-tiers as well as the dairy and seed cooperatives, this is a third distinctive characteristic of CDF-promoted groups.

Case 7.11: Lessons from Evolution and Functioning of Amalsad Khedut Sahakari Mandali in Navsari District of Gujarat

7.65 Though both Cooperatives and Self Help Groups (SHGs) evolved from the principle of self-help, SHGs have not received the same patronage as Cooperatives. Globally, the year 2012 was declared and celebrated by the United Nations as the International Year of Cooperatives. In India too, more power and importance has been bestowed to Cooperatives through Article 43B of the

Constitution (archive.india.gov.in, 2012), whilst SHGs have remained obscured even though they have survived for more than twenty years through the help of the government and non-government bodies. In a way, the spirit of self-help has moved in a more formal manner for cooperatives and mostly informal manner for SHGs.

7.66 In their quest for growth and for competing on an equal footing with the Corporate, Cooperatives have increased their member base, diversified their activities, spread to different states and also became self-dependent. On the other hand, SHGs have been grounded into basic activities that can reduce the poverty of its members. The SHG-bank linkage program of NABARD and the *Swarnjayanti Gram Swarozgar Yojana* (SGSY) have been instrumental in financing the basic livelihoods of SHGs. In fact, the models of both Cooperatives and SHGs enjoy a different set of advantages but apart from very few exceptions[8], there has not been any effort to interlink the two and enjoy economies of scale. Therefore, this case is highlighted essentially to draw out the lessons that Cooperatives and SHGs can learn from each other and also from the world.

7.67 The "McKinsey on Cooperatives" report (McKinsey & Company, 2012) note that across the sample they have drawn out of cooperatives, they have grown at almost the same rates as publicly traded companies. While the overall growth rates are similar on the aggregate level, the composition of the growth is different between these two types of organisations. Although cooperatives do better on market share gains, they perform weaker on portfolio momentum and merger and acquisitions. On an operational level, cooperatives seem to be facing a number of generic problems on Indian soil, which have contributed to their relative inefficiency and decline over the years so much so that one wonders whether cooperatives have already reached the end of their roads.

7.68 The relative inefficiency of cooperatives follows from three fundamental problems – horizon problem, transfer problem and control problem. The first problem arises because cooperative shares don't appreciate even though the net worth of an organization rises. Cooperatives lack visionaries who can extrapolate the cooperative functions for the next one or two decades. The uncertainty about the powers of the cooperatives given by the legislator is a big cause of this problem. This issue is coupled with the second generic problem that cooperative shares are not tradable and transferable. As a result, cooperative members tend to take a very short-term view of

[8] For example *Sahavikasa* Cooperative Development Foundation's Thrift Cooperatives, which are voluntary association of individuals who come together to meet their savings, credit and insurance needs (*Sahavikasa*, 2009)

things, which discourages longer-term investment in assets, including intangibles like brand name. The lack of a clear hierarchical structure and poor member participation within cooperatives vis-à-vis the corporates, leads to the third problem of control. The term of office for the board members of a cooperative being restricted to only five years, which is in sharp contrast to corporate boards, has also resulted in cooperatives meandering without a sense of direction.

7.69 Although SHG and NGO movement has picked up to some extent - at least in certain parts of the country, the traditional cooperatives in most cases have remained largely outside the sphere of SHG-NGO activities. As a result, no permanent bridge seems to have been built between cooperatives, on the one hand, and women's groups, environmentalists, social activists, trade unionists etc., on the other, to reinforce each other's causes. It is therefore no surprise that the cooperatives are generically weak in lobbying activities.

7.70 Many cooperatives have grown in a sheltered atmosphere and hardly have any clue to the meaning of competitiveness. Apart from import and export-competitiveness, they must be locally competitive such that not only members will prefer to continue their activities with their cooperatives rather than being lured by rival organizations, but also non-members will feel an urge to become members of cooperatives to reap greater benefits. Creation of such incentive-disincentive structure through suitable designing and fine-tuning of organizations seems not to have been pursued enough in the context of cooperatives. It is this observation that brings us in exploring partnerships and collaborations with already existing or new Self Help Groups (SHGs) in the context of briefly covering the case of a flourishing cooperative, as captured in the following paragraphs.

7.71 The *Amalsad Vibhag Vividh Karyakari Sahakari Khedut Mandali* Ltd. (henceforth Amalsad Mandali)[9] is a multi-purpose agricultural credit cooperative society under the Gandevi Taluka Union that was founded for giving loans to farmers in the region. After years of profitable operations, it is completely self-reliant and does not take any help from NABARD or other financiers. Apart from financing loans, it undertakes various activities for its members like procurement of inputs like fertilizers and marketing of produce to Delhi market. It has also started consumer stores in each of the 17 villages under its ambit. Now people who cannot become producer members (category A) of Amalsad Mandali can become its consumer members (category B) and draw groceries from the store up to a credit of Rs. 2000 anytime in the year. People who are not members can also get the

[9] Based on personal discussions with Hemant Bhai, Ex-Managing Director of Amalsad Mandali.

benefit of its consumer stores. Then why don't they rope in any Self-Help Groups in the region, for whom most of thrift is used for consumption purposes?

7.72 Hemant Bhai, the recently retired (after 33 years of continuous service) Managing Director of Amalsad Mandali is a reasonable man. He noticed that in some of the villages, informal lenders were still doing brisk business. They were lending to the local people at interest rates ranging 26 to 36% and sometimes exceeding 36% per annum. Hemant Bhai could not understand the necessity for such loans, given the fact that almost every family earned Rs.100 or more per member per day and their daily spending need is not more than Rs.20 per member for food and small items. He sat with a few lenders and learnt that even though there is a surplus amount with a family, not much is retained for costlier purchases, for example, furniture like beds and cupboards, and electronic items like television sets. Families cannot manage to save for these purchases by saving a portion of their income every day. Thus many families take up these informal loans by having an agreement for paying a small amount every day. The cumulative interest they pay per year, amounts to a huge percentage of their principal.

7.73 Hemant Bhai's Amalsad Mandali already has deposits of cash reserves that it can invest in building stores for such items. It has already started a furniture store and has been successfully running a cloth store. Currently, even if they stress on bringing these people to their consumer stores that sell grocery and FMCG, they will profit. It will be a better proposition for the new consumers as well. They can get better quality products at prices they pay for substandard quality products. Also addition of new members into the Mandali is imperative for growth and higher savings due to economies of scale.

7.74 In the 17 consumer stores that Amalsad Mandali has in each of the 17 villages, the sales per head vary from Rs. 5,800 to Rs. 995. The average is calculated to be around Rs. 2,000 per customer. If we estimate that for a person the monthly expense on groceries and commodities is Rs. 500, i.e. less than Rs. 20 per day, then the yearly expenditure will be Rs. 6000.

7.75 This is a fair estimate, given the prices of the commodities available. Therefore, if some Amalsad Mandali's stores are not getting enough sales per head per year, then either the existing consumers in those places are going elsewhere to make their purchases or they are forgeoing some of the purchases to meet their loan requirements. Then there are probable consumers who do not purchase from the stores. Whatever be the case, Amalsad Mandali's stores can help them to reduce expenditure and increase consumption. According to Hemant Bhai, if all the poorer performing branches reach the average figure of Rs. 2,000 per head, then Amalsad Mandali can get additional sales of Rs. 1.9 crore.

7.76 The customers are not fully aware of the quality differences of the products they purchase and often settle for lower prices provided by other stores. However, if they can be made aware of the quality differences between products at an Amalsad Mandali store and a *kirana* store, they will be quick to appreciate it. In one such instance, a lady had come to shop at an Amalsad Mandali store and purchased many items but did not purchase cottonseed oil from them. Instead she bought it from another shop across the road. The store sales person observed this behaviour and after the lady left, he also bought a litre of oil and kept it in the store. The next time the lady arrived at the store, he showed to her the oil she was buying from the *kirana* store has already started depositing sediments in a week but the oil at Amalsad Mandali store has no such problems. The lady immediately agreed that the oil she was using was of inferior quality and vowed never to buy the same oil again. Thus, she got converted into a loyal customer of Amalsad Mandali's stores. Such instances may be rare but will definitely add to their popularity and increase the customer base through words-of-mouth marketing.

7.77 Thus Amalsad Mandali will gain if more customers make purchases at their stores and they can further distribute this gain among the customers. Customers are also benefitted in a way that they face almost zero risk of getting inferior or spurious products. In fact, they can get more value for their money. However, not only individual members but also groups can benefit from an association with a flourishing cooperative.

7.78 First of all, most SHGs that have achieved linkage with the banks for loans also have mandatory thrift saved with the bank. For this thrift, they earn a nominal interest rate of 4% while for the loans made to its members, it earns even higher interest. While a higher interest is required for generating some earnings for the group to run its operations, the rate often puts them at par with informal moneylenders. It is therefore true that SHGs should use a part of their thrift that is not loaned out internally, for more productive uses. One of them could be investing in cooperatives. Most cooperatives pay good interest rate on investments (at least higher than 4%) and Amalsad Mandali is no exception.

7.79 Secondly, SHGs can also avail loans from Amalsad Mandali. Banks usually provide loans (often 2-3 times the amount of thrift deposited) at an interest rate of 8-10%. In addition, banks forward loans only with compulsory insurance or collateral. In most cases, the collateral is any fixed asset, but in absence of any collateral, the thrift of the group acts as an insurance. It enforces monitoring and reduces moral hazards. However if Amalsad Mandali can become a federation of all the SHGs in the region, then loans could be evaluated and provided based on needs without the need for sizeable thrift deposits.

7.80 Thirdly, in the case of mutually reinforcing institutions, where most of the risks are taken care of by interdependent organisations, the need for insurance is minimised automatically. One of such instance is already mentioned earlier – Amalsad Mandali by virtue of its purchasing power and economies of scale can reduce the risk most rural consumers face. The presence of counterfeit, duplicate and imitation products is very high in rural shops. These products usually sell on the ignorance of the customers. Another big risk – healthcare – is also taken care of by the *Jai Kishan* Hospital under the Gandevi Taluka Union of Amalsad Mandali. The hospital helps the members of the Taluka Union, i.e., PACS like Amalsad Mandali to receive treatment at low costs.

7.81 Thus, SHGs and Cooperatives have a lot to gain and learn from each other and must aim to work together. Real development will be possible only when the very poor people can be provided with a sustainable source of livelihood.

Case 7.12: Lessons from Tatyasaheb Kore's Model of Bhagini Mandal

7.82 After successful establishment of his dream project, a sugar factory, in 1955 and its successful functioning to begin steady income growth, Tatyasaheb, the celebrated cooperative leader of Warana, started fielding of several economic enterprises to achieve all-round development of the Warana people. Tatyasaheb was especially keen to provide a platform to the latent talents of the women folk and to enable utilization of their free time for development and extra earnings. So, he initiated '*Shree Warana Bhagini Mandal*' with the beginning of a branch of '*Lijjat Papad* Center' in Warananagar in 1974. Lest other women hesitated to work outside home, his wife came forward to roll the papads every day. *Lijjat Papad* Center now-a-days employs about 550 women, each earning about 200 rupees per day. Profits of this Center is distributed in the form of bonus and prizes to the women workers depending upon quality of performance.

7.83 To achieve social, economic and cultural advancement of women and children, Bhagini Mandal started a flour mill and a chilli grinder, besides producing pickles, chutneys, and tasty snacks of different types, which are sold through the different branches of Warana Bazar. It organises different festivals and religious ceremonies like *Nag Panchmi, Vat Poornima, Navratri*, etc. It has also built an in-house capacity to serve lunch and breakfast to about 500 people at a time. It also supplies snack packets in general body meetings of various institutions inside the Warana Complex. *Bhagini Mandal* also provides outside caterings, and runs a snacks corner near the bus stand. It has a ready garment section, which started with sewing of the cloths of children. It supplies uniforms to schools and industries within the Complex. Through purchase of cloth and other raw materials from Warana Bazar, each of the women members of this section earn about Rs.1500-2000 per month from this activity.

7.84 *Bhagini Mandal* organizes a number of cultural activities like providing tuition to women interested in singing devotional songs and providing facility of playing badminton at concessional rate. It trains its members on fashion designing, bag making, catering services, *Yoga* and hymn recitations, besides organizing group discussions, lectures, concerts, occasional exhibitions and trips for them. It has an in-house library and one Senior Citizens' Club. It runs a nursery school, one '*Samskar* Development Course' for children and one '*Chaitanya* School for Mentally Challenged Children'. It also runs one '*Swayampurna* School' for drop out girls to impart various skills in them so as to make them useful in life.

7.85 To promote rural livelihood for women living in remote villages of the Warana area, *Bhagini Mandal* has been organizing SHGs to undertake projects like collective farming, goat rearing, supply of quality seeds, etc. Women Saving Groups (called '*Bachat Gats*') are encouraged to produce various things like candles, handicrafts, eatables etc. These items are sold through Warana Bazar and exhibition called '*Aanand Mela*'.

7.86 The Mandal has special focus on widows, abandoned and needy women. The women folk has developed their own *Mahila* Credit Society called 'Warana *Mahila Patsanstha*'. It came into being in 1990. It owns a building, a share capital of Rs.18 lakhs, deposits of Rs.36 crores and a loan portfolio of about Rs.20 crores, wherein the women do independent banking.

7.87 So, as we can see from the story of *Bhagini Mandal*, an illustrious leader had conceptualized an operational model of women development and empowerment in a much more comprehensive manner, even before the concept of SHG/JLG was born. Like AMUL, it started market linkage before expanding activities and formally organizing SHGs.

Section 5: SHG/JLG instrument as a possible solution to ailing collective enterprises

Case 7.13: Can SHGs/JLGs of Fisher-folk help Re-engineer the Fate of Once-famous Versova Fishermen's Cooperative Society?

7.88 The Versova *Machimar Vividh Karyakari Sahakari* Society Limited (VMVKSSL) is a famous marine fishermen's cooperative society, which came into being in 1948 at the dawn of the country's Independence. It became famous because a freedom fighter named Hiraji Motiram Chikle provided the necessary leadership during the early stages to start a diversified state of economic activities under this society to suit the needs of the fisher-folk, on the one hand, and to convert active fishermen into owners of modern fishing vessels, thanks to one scheme of the National Cooperative Development Corporation (NCDC), on the other. However, over time, partly due to rapid decline in fish catch per trip and also partly due to the vagaries of the market, the society gradually started losing its glory, while losing in terms of profit margin and even suffering losses in many of its activities. At this juncture, organising the fisher-folk, in general and especially the women-folk in this community, which are actively engaged in marketing of fish catch as well as preparation of attractive food and fish dishes as a matter of tradition, in marketing of value added and ready-to-eat food and fish dishes through SHGs/JLGs may act as at least a partial solution to prevent the drift of this once-famous Society.

7.89 The Koli fishermen community in the village of Versova has a history of participation in the country's freedom struggle against the British, which led to imprisonment of a larger number of youngsters by the British. During the famine of 1942, when the village came to the brink of a disaster, the villagers came under the influence of a Cooperative Guru named Vaikunthlal Mehta, who was also a freedom fighter. Being inspired by him the fishermen collected a corpus of Rs.1100 by issuing shares of Rs.10 among themselves to initiate the beginning of an institution for development called Versova *Koli Samaj Seva Sangh* on January 6, 1948. Later on it became Versova *Machimar Vividh Karyakari Sahakari* Society Limited (VMVKSSL).

7.90 Besides progressively taking advantage of NCDC's scheme of purchase of Over-Board Motorised (OBM) vessels through instalment payments by profit-making fishermen, the Society gradually diversified itself to undertake several activities in the interest of the fisher-folk. In 1959-60, it started a diesel section for regular supply of fuel to engine boats. In 1960 came an ice-factory together with provision for cold storage as well as fish ice storage. In 1971, it started a fresh fish centre at Chattrapati Shivaji Market (earlier called Crawford Market) for direct sale of fish caught by its members. In 1977, it started a spare parts section to sell spare parts of engines and other fishing accessories to the fisher-folk. In 1981-82, it started a transport section owning cars and diesel tankers to facilitate transport of fish and other materials. It also started grain shops for sale of groceries to the fisher-folk and other villagers.

7.91 Although the Society made huge profits in the early years, it started declining beyond a point. Although gross sales continued to increase exponentially mainly because of swelling in the number of customers as well as in costs, net profit margin for all activities taken together started declining, as it can be seen in Figure 7.2. The net profit margins across activities are displayed in Table 7.4 for several years for which data are available.

Table 7.4: Financial performance of VMVKSSL from 1993-94 to 2012-13

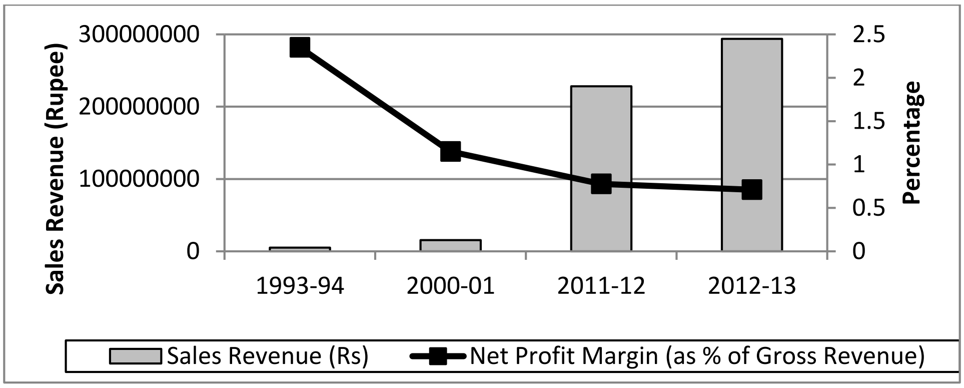
Division	Net Profit Margin (%age)			
	1993-94	2000-01	2011-12	2012-13 (forecasted)
Main division	6.08	4.09	0.65	2.50
Ice factory	7.60	3.42	1.25	3.08
Diesel department	1.29	0.40	0.68	0.45
Fresh fish sale centre	3.03	33.62	13.39	13.33
Spare part division	4.21	2.93	-32.05	-27.44
Motor division	-25.57	0.86	-2.22	-5.00
Grain shop 25D107*	N.A.	-11.17	N.A.	N.A.
Grain shop 25D27	0.37	-11.48	-12.41	-9.68

* not available (Seems to have been closed down)

Source: Datta et al. (2012), p.76, and VMVKSSL, Annual Report, 2011-12

7.92 The Society has no doubt played a glorious innings not only in bringing about economic development of the poor fishermen community, but also in introducing several welfare measures like Boat and Sailor Accident Insurance Policy and creation of one Koli Samaj Educational Institute based on education surcharge levied on sale of diesel. If the Versova Port Project as proposed by Government of India and Government of Maharashtra comes into being, the area would invariably benefit.

Figure 7.2: Growth of VMVKSSL from 1993-94 to 2012-13



Source: Datta et al. (2012), p.76, and VMVKSSL, Annual Report, 2011-12.

7.93 However, the decline in the economics of the Versova Society became inevitable for three compelling reasons. First, nothing could prevent decline in catch per vessel when too many boats are chasing too few fish. The NCDC scheme for owning boats, which was initially very popular, began to create further worries as limited revenue from limited catch now began to be distributed between the owner of boats (mostly members of the Society) and the working fishermen (mostly non-members recruited on contract basis). Second, there is hardly any value added activity on the limited catch of fish. While price of fish soared due to its scarcity, so did the cost of operation of fishing vessels to catch lesser amount of fish per trip. The members of the Society hardly made any conscious efforts to go up the value chain based on the biomass, which they are catching from the ocean. Third, even though the Society diversified these activities, there is hardly any imparting of managerial knowledge to sustain profitability of these activities. In fact, neither the Society nor the Deemed University of ICAR in the fisheries sector called Central Institute of Fisheries Education (CIFE) located in close proximity could achieve the desired marriage between technology and education. ICAR and other technical institutes are no doubt contributing to knowledge of better techniques to catch more fish per unit effort, but this is of little help when quantum of fish in ocean is rapidly shrinking and more and more boats with better techniques are going out to catch them. Interestingly, knowledge of managerial techniques to extract more value out of limited catch of fish is missing.

7.94 It is at this juncture Versova Koli Seafood Festival organised every year for three days in the month of January since 2006 provides a ray of hope, provided this traditional festival can be organised on a more regular basis through SHGs/JLGs of men and women-folk of the Society/area. The women-folk of this community are experts in special preparation of fish along with other food items, which attract a large number of people from Mumbai to join this festival and enjoy these delicious dishes for all the three days of the festival from 6.00 pm to 12.00 midnight. The fishermen folk organises about 40-50 stalls with sufficient sitting arrangements, where they offer these delicious dishes with beverages at minimal rates. For example, one four-five fish lobster dish, which costs anything between Rs.2500 – Rs.3500 in a five-star restaurant is served for Rs.350 – Rs.400 in this festival. The organisers of this festival ensure that foods are sold at affordable prices and with reasonable profit. The women-folk of this community, dressed in typical Koli costumes and jewellery serve food during this festival. Many of them have started speaking pretty good English. In other words, even though the young children are averse to do the job of a traditional fisherman, they are not averse to doing this fairly decent job on a part time basis, if they can do such things in a dignified manner. Like Singapore and Kuala Lumpur[10], Versova can profile this festival and keep a more regular place in the list of their economic activities. It is high time for Versova to profile this festival.

Section 6: Conclusions

7.95 The poor communities around the world has hardly any idea or capability to start innovative business, nor any marketable collateral to access formal credit to finance their petty, non-standard activities at reasonable terms and conditions. The SHG Movement started with a promise to empower these people. Given zero or even negative initial endowments, scope for quick success is extremely limited, unless the physical and/or human resource endowments are good and the systems and processes evolved during the journey towards development are robust and comprehensive enough to overcome the structural limitations and bottlenecks which often stand in the way of progress. Sometimes it is possible to demonstrate temporary success due to some luck factor or due to strong doses of government support, which though has a tendency to be spread thinly across vast areas and a very large size of beneficiaries. So, such sporadic success stories don't have the property of sustainability. Naturally, the chance and scope for sustainable success would be larger, the stronger the initial endowments – be it a physical resource like a vast pool of water bodies or cultivable land (as in the case of DVC or large forests of Paschimanchal), or human resource like availability of visionary leadership (as in the case of *Bhagini Mandal* at Warananagar), and/or the collective action processes are such that organizations are crafted in a manner so as to minimize opportunism and maximize value creation (as highlighted in other illustrations in this chapter). Naturally, policy makers and activists keen to utilize the SHG instrument to achieve empowerment and sustainable growth of the poorer communities may be better advised to

[10] Source: "'Mumbai's lost world.... Vesava Koli Seafood Festival" available from link - http://www.finelychopped.net/2011/01/mumbais-lost-world-vesava-koli-seafood.html

concentrate more on areas and pockets, which better fulfil these conditions, rather than thinly spreading their resources and energy over a large untargeted population.

Appendix 7.1

Grasses too have significant economic value![11]

There have been bumper crops of grass in the forests of the Harda Division ever since the concept of Joint Forest Management began to be applied and Forest Protection Committees (FPCs) were formed in the early part of 90s to protect the forests with the help of the villagers from indiscriminate grazing and fire. Prior to the formation of FPCs, the villagers used to graze their animals as well as others' on these forest areas. People even from far off places used to bring herds of animals to graze on these lands especially during the post-monsoon quarter of the year. Some smart villagers used to cut grasses and accumulate stocks to feed the animals during periods of overall scarcity of grasses. In the absence any alternative employment opportunities, some of the villagers used to graze the bovine stock of the nearby town-dwellers in herds of 40-50 animals for about three months following the rainy season against a paltry remuneration of two pai (each pai is approximately one kg.) of wheat per animal per month. There was hardly any awareness about a better use of grasses, nor any disciplined or systematic approach towards utilization of grasses. As a result, shortages of grass used to surface almost invariably within 3-4 months after the cessation of rains. Because of indiscriminate grazing, nor could the villages see sprouting of bamboo rhizomes after the flowering of mature bamboo stocks, even though the root stocks were still there.

The Indian Military Forces operating in the border regions in the country's north needed huge supplies of hay (so called when grass is used as feed for animals) to feed their horses and mules and also for using the dry grasses as bedding materials to protect their animals from severe cold. A part of the procured stock of hay is also used as feed for the bovine stock in their military dairy plants including the one at Lucknow.

Colonel Bhadoria, who hails from Madhya Pradesh, had an intimate knowledge of the grass potential of MP forests. So, around 1993, he started collecting from MP, initially with the help of a contractor. But the contractor failed to procure enough on time. Moreover, because of inappropriate handling of the transport of hay by the contractor, a large part of it got burnt in a fire on the way. So, the Colonel decided to set up military camps in the grass-growing regions of MP and take up the task of procurement of hay into their own hands. As he was aware of the formation of FPCs by the Forest Department, he approached the MP Forest Department for necessary help. He concentrated his operations in the intense forest regions of Gwalior, Jabalpur, Harda, etc. – places

[11] This case-let is written by the author and reproduced from Asopa, V.N., Datta, S.K., Singh, Gurdev, and Shingi, P.M. (1999): A Training for Trainers Primer on Appropriate Planning and Management of Natural Assets Development Initiatives (NADI), prepared for Frontline Managers of Madhya Pradesh Forest Department.

with better transportation network. In the Harda Division, he installed, after due consultation with the Forest Department officials, two camps, where population as well as livestock density were relatively less and as such the exploitation of grasses by the local villagers were relatively less.

In order to see the operations and find out the details, we visited the Hay Collection Center at a village located at about 30 km. distance from the Forest Range Office. The primary data collected through interviews from an employee of the camp, and from the local villagers brings out the following dimensions of this activity.

Against a procurement target of 1000 metric tons of hay from the two ranges, they have so far succeeded in procuring a maximum of 600 metric tons during the last two years (i.e., during 1996-97 and 1997-98). In the initial year of 1995-96, they could procure only 80 metric tons from this area – partly because the FPCs were yet to stabilize and the villagers as well as the Forest Department were yet to appreciate the utility of this potential market.

The Divisional Forest Officer (DFO) came to know that there were similar camps in the Khandwa region, but due to insignificant quantity of procurement, they left that place. So, they were seriously thinking whether or not to carry on their operations in this area. So the scale of procurement during 1996-97 was quite important for their decision-making. Hard-pressed to sustain the FPCs, the DFO didn't take any chance. Instead of waiting for the camp personnel to come to them for assistance in hay procurement, he himself approached them at the beginning of the 1996-97 hay harvesting season. So, immediately he started campaigning among the FPCs to step up the supply of grass to the camps and evolved the following payment system through several rounds of back and forth discussion and consultation. He also tried to impress upon the villagers and their FPCs that unless this opportunity was seized, production of such a huge bulk of grass in the protected forests would become a big liability to themselves.

An FPC member is free to cut as much grass as he can. He would get Rs.70 per quintal if hay is delivered at the camp. For this, however, the farmer-member has to wait for some time (about a month) till the weighing and compressing formalities are performed on cut-grasses so as to make grass-cubes out of them. If the farmer is in a hurry for getting the payment, he can supply in pulas – that is, in standard bundles at the rate of Rs.20 per hundred bundles (roughly 300 bundles make one quintal). If the farmer is not in a position to carry the cut grass, he can leave it in heaps and the camp will arrange transport. In that case, the farmer would be paid at the rate of rs.65 per quintal. The camp would also pay to the concerned FPC of the member-suppler Rs.10 per quintal of hay supplied to it, which goes directly into the FPC's collective fund.

How is an individual FPC-member better off from the current arrangement? The example of Mr. Ram Bilas provides an illustration. He used to take herds of about 50 bovine animals into the forests for grazing prior to the formation of FPCs. By grazing an animal, he used to get about 2 kg. of wheat per month for a maximum period of three months – that is, till the grasses were available. So, from grazing of 50 animals for three months, he used to earn about 300 kg. of wheat – that is, about Rs.1,200 in three months (by evaluating one kg. of wheat at the prevailing market price of Rs.4). Last year, he earned about Rs.20,000 within a span of merely 25 days by transporting hay from the field to the military camp at the daily wage rate of Rs.80. During part of the time he saved, he cut grasses and built up stocks for his own animals to the tune of 3,000 pulas (i.e., 10 quintals). Under this new arrangement, which came up after the formation of FPCs, the village animals are allowed to graze in pre-specified forest compartments as per prior agreement between their FPC and the Forest Department. If he decided to cut grasses and sell them to the military camp, he could have made Rs.150 for himself and another Rs.15 for his FPC's community fund by supplying hay at his present capacity of cutting one and a half quintal per day. This is much better than earning a daily wage of Rs.40 per day (at most Rs.50 if the official minimum wage rate is honoured by the employer), which is not always available and often requires travel to far-off places, even if available. Both Ram Bilas and Ram Chandra Sharma report that the maximum a person earned during the last grass-cutting season was Rs.5,000, whereas an average grass-cutting villager earned around Rs.2,500 in cash. Due to stoppage of indiscriminate grazing by local villagers as well as by cow-herds from far off places, the resulting vegetative growth has allowed them to continue grass cutting at least up to the end of March, and still they confess they are not yet in a position to exhaust cutting of all grasses. Due to total ban on grazing by outside groups, who used to come to this part of the country from far-off places, Ram Bilas reports that those people have disposed off their animals. Ram Bilas realizes that those cow-herds were free-riding on their forests, which they alone are now protecting. He feels that the villager has now more choices. Such is the emotional bondage that every now and then he is referring to the forests as their forests! So, random cow-grazing by persons like Ram Bilas has now become a matter of the past. People like him have switched over to a more efficient economic system!

The military personnel come here on hay procurement drive towards the end of the rainy season (i.e., end-August or early-September) and continue operation till about end of March. They have pressing machines to make cubes of hay through pressing, which are easier to transport to far-off border areas. As they are still far from achieving their target level of procurement, they are keen to augment supply. What can the villagers and their FPCs do in response to their strong demand? The following suggestions came up in course of discussion:

- To make more grass-growing FPCs aware of and take advantage of this potential demand.
- To evolve technological devices to facilitate quicker cutting and transport of grasses from the field to the military camp for pressing.
- To develop better transportation network especially for those FPCs, which are currently located far from the metal roads.
- To arrange for better and quicker transport of cut grasses from forest slopes and hillocks.
- To increase grass productivity of forests in general (currently estimated at around 2-3 quintals per hectare, inclusive of dense forests, where grass productivity is usually lower) in both quantitative and qualitative terms through necessary technological interventions as a long-term strategy to meet growing demand and augment FPC income.

Have the villagers and the military forces so far encountered any contradiction or conflict of interests arising from the abject poverty and lack of sufficient awareness on the part of the villagers, on the one hand, and strong demand for hay from the military establishments on the other? The following instance deserves special mention in this context.

A section of private contractors tried to take advantage of this situation and employed poor and illiterate villagers on low wages to cut grasses for them and supply the same to the military camp. Since the contractors were interested in making quick money, they didn't supervise the grass-cutting operations properly, so that a lot of low-quality grasses and weeds, besides perished and blackened materials got included in the bundles supplied by them. The contractors claimed their money from the military camp as per weight and specified rates on the plea unless they were not in a position to pay to the villagers the promised daily wages unless they were paid properly. The matter took the form of a conflict between the camp, on the one side, and the contractors and the villagers, on the other side. The matter could be resolved amicably due to timely intervention of the DFO, who personally came to spot with his team, briefed and convinced the villagers about the true significance of the incident. It was an important lesson for the villagers. They resolved not to be trapped any more by the profit-seeking contractors and be careful in supplying only quality materials to their client.

Another very important clue about the quality of hay has come out through learning by doing. If rains fail to be continuous, as they often are, ban tulsi plants, which usually surface during this period, tend to grow faster than the grasses during the intermittent gaps. This tends to erode the quality of grass. Because of the direct interface between the consumers of hay-the military forces, and their suppliers – the FPC members, the consumer side problem has already been communicated to the supplied. Now, it is the task of the suppliers as well as their patrons-namely, the Forest Department to organize systems and methods to take out the weeds. If the Forest Department can organize sale of these ban tulsi plants/leaves, as these are believed to have medicinal uses, through identification of and strategic alliances with suitable clientele groups, the task of getting rid of the non-desired ban-tulsi plants can be performed in an easy and painless manner. In fact, the collection of ban-tulsi plants and leaves will provide an additional source of income to the FPC-members.

Is there a possibility that the FPCs of Harda may lose their valued customer of hay? The answer is yes. So long as hay is available in abundant quantities and comparable qualities from other parts of the state and the country, any silly handling of the customer's demand specifications and requirements (due to failure to supply minimum acceptable quantities or due to undesirable bargaining by the trade unions of farmers and their FPCs/Panchayats over prices) may herald a premature death to the forward market linkage, the local villagers are currently enjoying. This may not be true though if the FPCs of Harda can build up strong customer-loyalty through supply of distinctly superior quality of hay-which is obviously an extremely difficult task to achieve, especially with pure and unprocessed raw materials.)

What will happen if accidentally or in the natural course of events the forest villages lose their valued customer of grasses? Is there any other way of augmenting the demand for grass? At this stage, there are at least three distinct alternatives. It is wise to explore all the alternatives, instead of keeping all the eggs in one basket. These alternatives are:

The villagers and their FPCs can use more of their own grass and produce more livestock and livestock products for themselves in the market. The local breeds of bovine stock used to grazing rather than stall-feeding seem to be constraining factor at this juncture. But it is possible to overcome this constraint through technological improvement of the local breed through crossing, which will enable greater stall-feeding rather than mere grazing of animals. An admixture of this grass with suitable nutrients can also make the same material more attractive to the local animals.

All the areas in the country are not surplus in grasses, nor all the villagers in the country keep indigenous varieties of animals. Hence there is potential for export of hay to identified deficit areas by suitable associations of FPCs.

FPCs and their promoters (i.e., the Forest Department and the relevant NGOs) may also explore in consultation with suitable R & D organizations in the country possible industrial uses of grass to produce - say, paper and paper boards, and even electricity through burning of grass-bricks.

Chapter 8

Summary, Conclusions and Recommendations

Section 1: Background of the Study

8.1 Throughout the world and especially in the developing countries, micro-credit is found to be filling in the vacant space between traditional formal and traditional informal lenders (See, for example, Datta et al, 2013). This is happening because in most developing parts of the globe and even in pockets of the developed world, there is a huge number of potential borrowers who are either non-standard in terms of personal attributes and projects, or lack marketable collateral, besides having high transaction costs for their relatively small loans which prevent them access to the traditional formal sources of credit provided by the organized banking sector. On the other hand, these people continue to become victims for centuries to usurious rates of interest and non-affordable terms of credit of traditional moneylenders. It is in this context, a new form of credit called micro-credit emerged, thanks to several path-breaking efforts in various parts of the globe. Professor Muhammad Yunus of Bangladesh's *Grameen* Bank, who popularized and put it on global landscape has contributed further to its acceptance and growth, besides encouraging a lot of entrepreneurs to make further experiments on micro-credit.

8.2 India being a large developing country with huge pockets of poverty became an important abode of micro-credit, or to use the more general term, micro-finance. In spite of having a fairly large network of micro-finance in India and elsewhere, which has been there for quite some time, statistically rigorous results clearly confirming or rejecting the positive impacts of micro-finance on the poorer sections of the community and especially the main target group of womenfolk, are few and far between. Naturally, the question of sustainability of micro-finance institutions (MFIs) repeatedly crops up among academicians, practitioners and policy makers around the issues of sustainability and its definition in operational terms – namely, whether the term refers to mere financial sustainability and of individual borrowers or their groups or the promotional bodies, whether there is sustainability of income, expenditure and asset generation process of the micro borrowers, whether these borrowers develop robust shock absorbing-capacity, whether there is stability in intra-family, inter-family and extra-family relations of the borrower households, whether there is socio-political and environmental compatibility of the micro-finance system and whether it is possible to work out a pragmatic regulatory framework to sustain the system.

8.3 Besides spelling out in precise terms the objectives, coverage and the sample design, the study provides a detailed overview of the literature on the impact of micro-finance, an analysis of NABARD's secondary data on the Micro-finance Movement in this country, and an analysis of detailed primary data collected from the state of West Bengal. Analysis of secondary and primary data is supplemented by insights from several case studies in the states of Andhra Pradesh and Kerala, and from several additional case studies on NABARD-promoted SHGs and JLGs from a small number of districts in the states of Gujarat and Maharashtra. In order to evolve a road map for development of this sector, the study has looked around and identified several illuminating examples across different states, which can provide further clues to tap the potential of the movement in terms of areas, sectors and providing solutions to some of the burning issues of micro-finance. The study concludes by providing a set of recommendations for possible implementation in the near future.

Section 2: Objectives

8.4 The precise objectives of the study were:

1. To provide a review of the literature on micro-finance impact and the methodologies applied therein;
2. To analyse available secondary source data and to undertake selected case studies based on interaction with national and state level policy making bodies to bring out the stylized facts, features and trends in this sector;
3. To bring out factors contributing to or inhibiting sustainability of individual households, groups and even promotional agencies (if relevant data are available) based on primary data; and
4. To provide a road map to achieve sustainability in the true sense of the term.

Section 3: Major Points arising from Review of Literature

8.5 Review of the literature on impact of microfinance seems to suggest that the impacts are highly context-specific as it varies widely from study to study, as highlighted by Brau and Waller (2004). As Armendariz and Morduch (2010) argue, even for carefully conducted impact evaluation studies, the impacts are more 'measured' than anecdotal evidence would suggest. In the absence of a clear consensus, any fresh study including the present one thus assumes significance in providing additional evidence on presence or absence of such impacts. Nevertheless, this literature has done great job by summing up the problems identified in the existing approaches about data and methodology used – especially by three major reviews - one by Duvendack et al (2011), second by Brau and Waller (2006) and the third by Karlan (2001).

8.6 Although there is a general belief in the internal validity and credibility of randomized control trial (RCT) based findings, such studies don't seem to provide 'credible evidence in a timely and useful manner' from policy point of view (Duvendack et al (2011), p.44). The allegations are briefly as follows. First, unless randomization process is masked to both the treater (the MFI agents conducting the study), and the treatee (the clients), that they are being treated differently relative to some others in an experiment, the randomization process tends to suffer. Second, it is very difficult to ensure that the participants are selected prior to non-participants. It raises the fear that control households may be influenced by MFIs or their agents. Third, although the randomization process is supposed to pick up the participants on an intension-to-treat basis, very often the loan officers fail to blindly select participants totally ignoring certain apparently unobservable characteristics. Fourth, problems in adherence to treatment arises if there are possible but unintended dissimilarities in treatment across treated groups. Such fears arise, for example, when loan officers visiting some treatment households more frequently as compared to others. Fifth, if some households, which are a part of the population frame, become subsequently unavailable during sample study, an attrition and response bias creeps in. Sixth, even when control households are not visited by a particular MFI, such households may have been visited and influenced by some other MFIs. For example, whenever a control household is surveyed, it may, in the absence of appropriate de-briefing, lead to a speculation that these households too will be provided loans and thus may change their behavior. Seventh, spill-overs and spill-ins are likely to take place when information about presence or absence of MFIs in particular locations do flow across observations, and thus influence the behavior of survey households. Finally, although no significant direct (e.g., health, education, subjective well-being) or indirect (impacts on consumption expenditures) impacts are found in these studies, there is still need to measure impacts on a broader set of behavior, including measurement of change in opportunity sets. As a result, it is doubtful whether based on RCT results 'we can accept the null hypothesis of no impact with a high level of confidence' (*ibid*, p.47).

8.7 The pipeline design generally suffers from non-random allocation and failure to have comparable control groups and drop-outs. Duvendack et al (2011, p.53) has raised a number of questions to determine the sanctity of this methodology a positive answer to all these is next to impossible to achieve in a real world situation where a lots of constraints creep in as historically datum, and the researcher is left with very little option other than applying refined statistical technique to arrive at unbiased results.

8.8 Panel or cross section data before/after and with/without methodology seems to have perused in many cases non-random allocations with the resulting risk of confounding selection and the program placement bias. Although elaborate analytical methods are used to compensate for the above-stated weaknesses in the research methodology, certain fundamental defects seems to have remained, as argued by Duvendack et al (2011,pp.58-59).

8.9 The second major review article on methodology by Brau and Waller (2006), after covering more than 350 articles came to the conclusion that 'impact assessment requires adoption of research methodologies capable of isolating specific affects out of a complicated wave of causal and mediating factors and high decibels for random environmental noise, as well as attaching specific units of measurement to tangible and intangible impact that may or may not lend themselves to precise definitions or measurement (*ibid,* pp. 26-27).

8.10 Karlan (2001) has highlighted the problems in not using an adequate size of dropouts in the control group as well as problems in using new clients as control groups in cross-sectional studies. He argues that failure to accommodate drop outs along with treatment household leads to incomplete sample bias or attrition bias. Besides, there is selectivity bias, arising because of peer selection problem and institutional dynamics, which can be corrected only through longitudinal study covering static as well as dynamic changes of new clients side by side with the same for treatment groups.

8.11 In view of the above-stated critique of the methodology used in MFI impact evaluation, it seems there is not even a single study which can strictly pass the tests – not merely in the context of MFI evaluation, but also in the context of any evaluation in general. Can the real-world afford to stop undertaking some well-intentioned studies just because it is not simply possible (because of resource constraints or otherwise) to follow strictly random experimental designs? Actually, a real-world MFI entrepreneur can quite legitimately try to assess the impact of his treatment and interventions on his clients (rather than trying to assess the impact of MFI treatment vis-à-vis the rest of the world at large), given whatever historical constraints he is subjected to. Just because historical constraints are there in drawing samples as per the strict statistical principles, should we stop undertaking any research study at all, or gather the courage to undertake a cautious and careful study to provide probably some biased and second-best or third-best results on impact assessment with some indication about the direction and sources of bias, so that the real world can at least move on? It is in the latter spirit the current study has been undertaken to provide to the Ministry some operational clues to assess and improve sustainability of micro-finance for the years to come.

Section 4: Findings from secondary data analysis (namely, NABARD's annual micro-finance status reports)

8.12 Probably NABARD's annual micro-finance status reports are the only source of presumably authentic and relatively exhaustive data on the state of micro-finance in this country. These status reports provide, among other things, some basic information on SHG-Bank linkage programme through SGSY (now-a-days NRLM) and NABARD – namely, on the activities of SHGs and MFIs and on innovative steps and support services of stakeholders of this sector. The data provided are based on returns submitted by participant banks like commercial banks (both public and private), RRBs, and cooperative banks. Besides providing data on savings with Banks, credit provided and NPAs across banking agencies and geographical areas, these annual reports (2006-07 to 2014-15, which are covered in this study) also provide NABARD's analysis of the data thus compiled. In this study an attempt is made to provide an independent analysis, while having a critical look at the data and the existing analysis so as to bring out the potential for publishing these valuable data sets in a more disaggregated form permitting more refined analysis and policy making for the future. The major findings are as follows:

- While the total number of SGSY/NRLM SHGs is increasing at a fairly sharp rate, those with loans outstanding is increasing at a slower rate. The fact that the second curve is lying below the first is probably not a bad sign, but the fact that the second one is slowing down is a matter of concern, if it means decline in business rather than merely in repayment of loans. The curve displaying number of SHGs, which are disbursed loans remains stationary, and it improves slightly beyond 2013-14. This is an area of serious concern, especially when the total number of SGSY/NRLM-SHGs is increasing at a sharp rate, thus implying an increase in the proportion of SHGs not being disbursed loans. Unfortunately, NABARD's status reports do not draw attention to this aspect of the problem, nor do they provide any explanation for it. Similar concerns arise for NABARD-promoted SHGs as well as exclusively women SHGs (Figures 3.1a-c).
- The fact that average fresh loan amounts are above and growing faster than the average outstanding amounts implies that there is net pumping in of money into the economy of the SHGs, presumably generating multiplier effects. The observation that the average SHG saving with banks is fairly constant over the years, in spite of apparent increase in gross SHG savings, means that the SHGs are probably utilizing a larger fraction of their own savings for internal lending, while holding only a fixed amount with banks for precautionary purposes.

Although these are apparently welcome features, the fact that the loan outstanding grows faster than fresh lending raises concern over timely repayment of past loans (Figures 3.2a-c).

- NABARD's published data for the last eight years seems to suggest that the number of SHGs having savings with banks, but which did not get any loan during the year, nor did have any loan outstanding during the same year (and thus getting out of the loan cycle (not clear whether due to demand failure or supply failure) is increasing at a very steady rate for commercial banks, especially since 2009-10. Though this figure is increasing also for RRBs and cooperative banks, the rate of growth is milder – maybe due to better proximity and closeness of RRBs and cooperative banks vis-a-vis their clients as compared to commercial banks (Figure 3.3).
- SHG savings with bank as percentage of loan outstanding separately for all SHGs and those under commercial banks, RRBs and cooperative banks display decline since 2010-11. However, the figures are larger for cooperatives than the same for RRBs and commercial banks. Whether this difference is indicative of the fact that SHGs promoted by cooperatives are getting less impetus (maybe because of cooperative conservativeness) for internal lending as compared to their counterparts promoted by RRBs and commercial banks is an important hypothesis to test and probe for necessary corrective action (Figure 3.4).
- Fresh loans to SHGs as percentage of loan outstanding for all SHGs and those under commercial banks seem to be displaying steady decline since 2008-09. A similar decline is seen for RRBs, though this figure shot up during the last year. In case of cooperatives, this figure is steadily increasing till 2010-11, though there is a mild decline during the last year. The fact that these percentage figures are considerably higher for cooperative banks as compared to the other two types of organizations, and the least for commercial banks, may be attributed to conservative lending by commercial banks as compared to RRBs, which are generally more conservative in this regard relative to cooperative banks. Cooperatives probably enjoy the maximum level of acquaintance with their customers (Figure 3.5).
- The incidence of non-performing assets (NPAs) as percentage of loan outstanding for SHGs is much higher for cooperatives as compared to the other two categories of lending agencies. Further, it has grown steadily for commercial banks till 2012-13, though it started climbing down during the last two years. For cooperatives, trend in this figure is clearly upward, though there are occasional ups and downs and this figure shows some reversal of trend in the last two years. For RRBs this figure remained nearly steady below 4% till 2010-11, but it started rising steeply since then (Figure 3.6).

- NABARD's Micro-finance Status Report of 2010-11 shows that "the rural household coverage is less than 50 per cent in 19 states, while the coverage shows more than the number of rural households in 7 states (apparently on account of multiple membership)" (*ibid* p.vii). Unfortunately, the next year's status report does not report on this aspect of the SHG-Bank Linkage Programme. At this juncture one can raise a few questions not only about the quality of data reporting, but also about the implementation of the programme, for possible caution in the future. First, as this linkage programme is going on not merely in rural areas, but also in urban and semi-urban areas, one is not sure whether estimated number of rural households or poor rural households would be the correct denominator to arrive at the percentage figures in columns 8-9 of Table 3.1. Ideally, one should report the percentage figures separately for rural, semi-urban and urban areas, as coverage areas can clearly be demarcated into these categories following the official definitions. Second, any household, whether poor or not, can join an SHG and enjoy the benefits of SHG as an instrument of development and empowerment. So, it is not clear whether NABARD has captured only BPL families under its definition of 'poor' households. Third, there is a tendency not only on the part of credit-hungry households to get registered under as many SHGs/JLGs as possible to maximize credit inflows, but also on the part of organizers of SHGs/JLGs to take a lenient view towards capturing of clients in order to maximize monetary and non-monetary benefits for them. In this situation, it is not possible for any reader to find out whether unusually large percentage figures as reported above are due to callousness in data collection and reporting, or due to opportunism on the part of the borrowers and lenders under SHG-Bank Linkage Programme. Only careful scrutiny and reporting, as expected from NABARD as well as the state/central machineries of NRLM, can provide a rough but reasonable estimate of the extent of over-coverage of households interested to be part of this movement.
- Banks also provide financial resources to micro-finance borrowers through other institutions. Four different types of MFIs, which get the benefits of MFI-Bank Linkage Programmes, are: (i) NGO-MFIs registered under Societies' Registration Act, 1860 or the Indian Trust Act, 1880; (ii) Cooperative MFIs registered under the State Cooperative Societies' Act/Mutually Aided Cooperatives Societies' Act/Multi-State Cooperative Societies' Act; (iii) NBFC-MFIs (not for profit) incorporated under Section 25 of the Companies Act, 1956; and (iv) NBFC-MFIs (for profit) incorporated under the Companies Act, 1956 and registered with the RBI. Figure 3.7 shows that average loan amount disbursed per MFI has increased steadily from all banks and especially from commercial banks, though these figures have started falling since 2010-11 – maybe because of the AP crisis in October 2010.

The figures for RRBs, though still insignificant, have gone up mildly since 2008-09, and have improved again in 2012-13. The figures for coop banks have remained insignificant compared to the rest.

- Although Figures 3.1 - 3.9 are prepared out of NABARD's Micro-finance Status Reports of 2006-07 to 2014-15, it is important to draw attention to the quality of data reporting, its scrutiny and tabulation. First, as credit is provided in different dates during a year, a loanee may appear not only under loans disbursed during the year, but also as an entity whose loan is outstanding, though not overdue, by the end of the same year. So, there may be an overlap between the number of MFIs that are disbursed loans and those that have loans outstanding. As a result, it is not clear to the reader whether these two figures together will constitute the total number of MFIs, which are under the MFI-Bank Linkage Programmes. So, we don't know whether some MFIs are getting out of the loan cycles, as the study has brought out in the context of SHGs. Second, the figures reported are highly unstable. For example, number of MFIs disbursed loans by cooperative banks during 2009-10 is zero, whereas it becomes NA during the next year, but again it shows up as 4 during 2011-12. It appears the reporting system is not mandatory for the MFIs with respect to their banks/financial institutions. As a result, it appears neither the funding agencies nor NABARD have any control over reporting of data, not to speak of ensuring the quality of data. If this suspicion is correct, reporting of data of this quality may do more damage than providing help to this sector. The MFI industry, and especially those MFIs under strict RBI control, must take cognizance of the problem and undertake urgent, pre-emptive steps to resolve this problem to prevent policy failures.

8.13 It is amply clear that there is a serious dearth of secondary data on micro-finance related matters. NABARD and SGSOI/NRLM, which are the two main agencies promoting the SHG movement, have tremendous responsibility in making authentic data available for analysis, monitoring and policy-making. Unfortunately, the states have so far failed to produce the requisite data. NABARD which has been trying to put together secondary data on micro-finance, has to go a long way to make their data usable and authentic for the purpose in hand. NBFC-MFIs seem extremely reluctant to share their data, though they are making use of public funds in the form of priority sector lending of commercial banks, which are being diverted towards them. Moreover, NBFC-MFIs are often caught in fierce cut-throat competition with each other without knowing the reality or the truth about where they stand. So, both public and private sector banks/agencies promoting SHGs and the NBFC-MFI themselves must arrange to make the relevant data available to the public not only in public interest, but also in their own interests.

Section 5: The Sample Design

8.14 Sampled primary data from the state of West Bengal is mainly used to probe directly the issues pertaining to sustainability of SHGs and JLGs. The choice of the state of West Bengal is influenced by two considerations: first, the author has prior acquaintance with the geography and the movement in the state; second, Bandhan, the largest NBFC-MFI in the country at this stage with its headquarter in West Bengal happened to be the only MFI, which, like the state unit of NRLM, allowed collection of primary data from anywhere in this state. So, it was decided to concentrate on the southern part of Bengal and pick up three clusters – one from a relatively affluent area (in district of Nadia), and two from relatively backward areas (in districts of Bankura and North/South 24 Parganas), where both SHGs and JLGs (Bandhan promoted) were functioning.

8.15 Once these three clusters are purposefully selected after visits to several potential pockets, the study team prepared a comprehensive list of SHGs and JLGs (under Bandhan) functioning in these areas. From each comprehensive list, the study drew a two-stage stratified random sample of 72 SHGs and JLGs and 144 member households consisting of (i) old groups and borrower households which enjoyed the benefits of micro-credit for at least 2 years; (ii) new groups and client households who had recently joined (within 2 years from date of joining); and (iii) those who are parts of reconstituted categories of groups - reconstituted after they became defunct or non-functional for some time. The study aims at judging the impact of micro-credit on the first category of groups and households as compared to the same for the other two control categories, which either hardly got any treatment effect or got only truncated treatment effect.

Section 6: Findings from analysis of primary data from West Bengal

8.16 The study has attempted to provide best possible answers on the question of sustainability of SHGs and JLGs by drawing a random sample of 72 groups and 144 borrower households from three selected clusters of the state of West Bengal using a Pipeline Approach, which involves statistical approximation based on fairly reasonable assumptions about the behaviour of the population. Only statistical tables supported by selective Student's t and paired t tests, rather than more rigorous regression equations are prepared to find out whether and to what extent the historical performance of SHGs/JLGs and their clients conform to the notion of sustainability, and what else needs to be done to reach that goal[1]. The methodology followed for primary data analysis

[1] This is to remind those who have still high faith in relevance of t-tests that such tests are neither necessary, nor sufficient conditions to ensure significant effect of an independent variable on a dependent one not merely because there is almost always a set of other independent variables which instead of remaining

made a clear distinction across pre-determined/exogenous, input/output and outcome variables in evaluation of any intervention measure to avoid confusion between causes (i.e., pre-determined initial conditions or intervention measures), immediate effects (which may be looked upon as direct output from intervention) and final goals (appropriately called outcomes), unlike in many evaluation studies of government programs, where nominal outlays and not even application of physical inputs and efforts are cited as measures of program output. Given the broad parameters of the sample data, three characteristics are identified – namely, whether the group/member corresponds to SHG or JLG, older or newer groups, and reconstituted or non-reconstituted categories within older groups[2]. Analysis of primary data is limited to paired-t testing of hypotheses that these three above-stated demarcating variables have any impact on group or individual member household performance. Two types of t-tests are performed: first, Student's t-test to see whether or not inter-temporal changes (i.e., before and after joining in group) in relevant output/outcome variables are significantly different from (mostly, greater than) zero; second, paired t-tests to see whether or not spatial changes within the three above-stated demarcating variables are significantly different or not.

8.17 In group level analysis, the base level exogenous features examined are group age in years (GAGE), % of Hindu upper caste (PCUPC), % of scheduled caste/tribe and other backward castes (PCSCE), % of illiterate members at joining (PCILLJ), % of BPL members at joining (PCBPLJ), and % of exclusively labor members at joining (PCLABJ) within groups. The input variables identified at group level are: average annual loan per member from Bank/NBFC (AVLN), average number of group meetings per annum (AVMT), average % attendance in group meetings (AVATPC), average group grant received per annum (AVGNT), average annual man-days of training received from all sources (AVTRN) and from NGO/NBFC (AVVTE), average number of annual visits of important personnel from NGO/NBFC (AVVIP), average annual number of outside expert visits through NGO/NBFC (AVEXP), time delay in months between joining in group and first external loan (DELAY) on the presumption that these input factors are likely to influence performance. Four output factors, which seem to result directly from application of inputs, are identified: % of loanee members in group (PCMEM), %

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constant do exert positive or negative influence over the dependent variable, but also because the choice of dependent and independent variables must pass through rigorous statistical tests rather than being based on mere presumptions.

[2] Reconstitution is a property of older groups, which sometimes become defunct due to lack of cohesion within the group often leading to dropping out of some members. When such groups are revived through entry of fresh members and/or straightening out of prior problems, they are called re-constituted groups. Obviously, beneficial group effects would often get truncated for re-constituted as compared to non-reconstituted groups. So, it becomes an interesting point to check whether and to what extent reconstituted groups perform as compared to their non-reconstituted counterparts.

effectiveness of training imparted as assed by groups (EFFTN), % of stipulated benefits realized (PCTBEN) and % share of group activity successfully continuing (GASUC). Five outcome variables are identified at group level, which don't arise directly as output from application of inputs through SHG/JLG, but result from interaction with several other factors: % loan repaid (PCREP), difference in % illiteracy (DIFILL), % of BPL (DIFBPL), % of labor member (DIFLAB) and change in higher-tier organization's attitude towards members in group (CBEHAV) between joining and now. Attempts are made through Student's t and paired t tests whether the underlying intertemporal/spatial (i.e., across two categories) changes are significantly different or not. As delays in availability of loans to SHGs are found to be especially large, a more systematic analysis of the different components of such delays are also made in this section to throw further light on this matter.

8.18 A similar exercise is made at client level by categorizing observed data into exogenous, input/output and outcome variables. Household level outcomes or performances are judged in terms of changes in basic family attributes – its demography and education (Panel I), family expenditure pattern (Panel II), its food security, diet and clothing status (Panel III), its tangible and intangible asset holding (Panels IV & V), its savings and insurance position (Panel VI), its income together with income composition (Panel VII), access to credit sources and broad pattern of credit use (Panel VIII), status of micro-business enterprise (Panel IX) and the nature of family and social dynamics (Panel X). While paired t-tests are performed on all these variables after spatial classification of households into their belonging into SHG vs. JLG, younger vs. older categories, and reconstituted vs. non-reconstituted categories (within older groups), Student's t-test is performed only on those variables, which capture intertemporal changes between now and the time they had joined the groups to ascertain whether or not these changes are significantly different from or larger than zero.

Findings from group level analysis

8.19 In this context the major findings are as follows:

- While seeking to find out whether or not SHGs and JLGs are significantly different in terms of important initial characteristics like their age, caste and religious composition, extent of illiteracy, BPL membership and extent of exclusively labour households, it is found that only composition of higher caste Hindu members is significantly higher and composition of BPL members significantly lower for JLGs as compared to their SHG counterparts. It means SHG and JLG groups can be treated as similar in terms of their initial attributes except for these two characteristics, implying that NBFC-promoted JLGs seem to have attracted relatively more of higher caste Hindu members and less of exclusively labour households than SHGs. This statistically significant bias of JLGs vis-à-vis SHGs ought to be kept in mind while interpreting observed differences in performances of these groups (Table 4.1a). While assessing impact of older groups (2 years and above in existence) vis-à-vis newer ones (less than 2 years in existence), no significant difference is found in initial exogenous variables, except by definition, in terms of duration (Table 4.1b). Between old reconstituted and old non-reconstituted groups, again, there is no significant difference is found in initial conditions, except in terms of their duration (Table 4.1c)[3].

- In terms of provision of a disciplined system of inputs like loan per member, holding of group meetings, ensuring attendance in group meetings, supply of grants and trainings, number of visits to bank/NBFC required per successful loan, arrangement of internal monitoring and exposure to expert visits and time required to provide external loan after starting of the group, which are likely to affect performance in terms of immediate results (referred to as output from the process) as well as desired outcomes, the attributes where JLGs, being for-profit institutions, seem to have done significantly better than non-profit and government process-dependent SHGs, are: supply of average size of loan per member per annum (Rs.8917 vs. Rs.1259), number of member trips to NBFC for a successful loan (0 vs. 1.23 for SHGs), average annual monitoring (13.89 days vs. 0.03 days), and much quicker delivery of external loan (0.67 months vs. 22.41 months). The only attribute where SHGs have contributed significantly better than JLGs is in average size of grant given per group (Rs.1593 vs. Rs.29.53), which may simply mean that SHGs are being tempted more than their counterpart JLGs through supply of paltry amount of assistance to some of them! (Table 4.2a). In terms of application of process inputs, though older groups seem to have received in general (i.e., in most of the identified parameters) more favourable treatment than the younger ones, it is statistically significant only in terms of training days in general (AVTN) and training from promoting organizations (AVTNN) (4.07 vs. 1.57 and 0.24 vs.0.00, respectively), and average interactions with promoting organizations (AVINT) or number of visits of important personnel (AVVIP) (5.76 vs. 0.00, and 7.59 vs. 0.00, respectively). Thus, application of inputs seems to have stabilized at higher level for older groups. Newer groups, however, are significantly better off compared to older ones in terms of easier receipt of loans, as measured by incidence of visits for a successful loan (RVISIT), as better treatment of newer groups in providing loans is expected (0.17 vs. 0.60) (Table 4.2b). Among the various inputs, average annual interactions of NGO/NBFC with group (AVINT) and average number of

[3] In both cases it is significantly larger for older and old non-reconstituted groups.

annual visits of important personnel from NGO/NBFC are significantly larger for old non-reconstituted groups than old reconstituted groups. The reverse is true for only average annual training days from NGO/NBFC – apparently to put more efforts towards reconstituted groups (Table 4.2c).

- Of four different output measures of SHG/JLG lending process identified in this study – namely, extent of loanee members within group (PCMEM), extent of effectiveness of training of all kinds (as perceived by the group called EFFTN), extent of stipulated benefits realized by group (PCTBEN), and % share of group activity, if any, which is successfully continuing (GASUC), it is no wonder that all these measures are, on average, higher for SHGs as compared to JLGs, though there none of these differences is statistically significant due to huge variations within and across groups of either category. Only in case of % loanee members within group, the average figure is significantly higher for JLGs than SHGs (81.97 vs. 47.38), which is understandable due to strong profit motivation of NBFCs coupled with their fairly autonomous operations free of government and/or bank bureaucracy (Table 4.3a). Among the same four output indices identified, the older groups seem to have performed significantly better, as expected, in terms of effectiveness of training in general (EFFTN) (51.14 vs. 33.33 for newer groups). However, the reverse is true in terms of % stipulated benefits realized (PCTBEN) (98.33 for newer groups vs. 88.64 for older ones) which may be due to greater efforts being put into newer groups (Table 4.3b). In terms of these output indices, no significant difference is observed between old reconstituted and old non-reconstituted groups (Table 4.3c).
- Out of the five outcome variables identified – namely, % of loan repayment (PCREP), difference in illiteracy rate (DIFILL), difference in % BPL members (DIFBPL), difference in % of exclusively labour members (DIFLAB), and change in higher tier organization's behaviour towards group (VBEHAV), only the last one displays statistically significant improvement over time in JLGs over SHGs (this index being 2.64 for JLGs vs. 2.11 for SHGs). In terms of intertemporal changes after joining in groups, there is significantly positive improvement in terms of reduction in % of illiterate members (DIFILL) and % of exclusively labour households (DIFLAB) – relatively more for SHGs in the former case (7.47% vs. 4.48% for JLGs) – apparently due to SHGs' greater developmental focus, and relatively more for JLGs in the latter case – apparently due to latter's greater business development focus (14.67% vs. 8.65% for SHGs). Thus, instruments of SHG/JLG while successful in reducing illiteracy and casualization of labour, are not strong enough to force reduction in % of BPL members (Table 4.4a). In terms of the same five outcome variables identified, only decline in % of

exclusively labour members (DIFLAB) is found to be significantly higher for older compared to newer groups (12.72 vs. 0.00), meaning greater reduction in casualization of labour in the former than in the latter. Moreover, reduction in illiteracy (DIFILL) and in casualization of labour (DIFLAB) are significantly larger than zero, as per Student's t-test, only for older groups. That significant benefits flow mostly to older rather than newer groups is a pointer towards the existence of a gestation lag for flow of benefits to stabilize and make any noticeable impact on the program beneficiaries (Table 4.4b). In terms of these outcome variables, while there is significantly positive intertemporal improvement for old reconstituted groups in all indices, this is not true for old non-reconstituted groups in terms of reduction of illiteracy and BPL members. These improvement outcomes are not however significantly different between reconstituted and non-reconstituted groups (Table 4.4c).

Findings from beneficiary household level analysis

8.20 As in case of group level data, analysis of household level data involves categorization of created variables into exogenous (mostly initial conditions), input/output and outcome (from SHG/JLG lending process) variables to see whether and to what extent the last two categories of variables vary across three main beneficiary characters – namely, whether belonging to SHGs or JLGs, or older vs. newer groups, or to reconstituted or non-reconstituted groups. The major findings in this context are:

- With respect to the household level initial conditions considered in this study – namely, household caste and religion status (CREL), duration of membership (DURMEM), family size (FAMMJ), % of students and especially students (PCSTUDJ and PCSTUDFJ), % of members with special skill (PCSKILLJ), % of children working outside/inside the household (PCCHWOJ and PCCHWIJ), both SHG and JLG categories of beneficiary households are found similar except for duration of membership (DURMEM) and % of children members working inside (PCCHWIJ), which are significantly higher for SHGs as compared to JLGs (7.23 vs. 5.73, and 2.85 vs. 0.00, respectively) (Table 4.5a). Between older and newer group members and among exogenous variables, only membership duration, naturally, and % of students in family at joining are significantly larger for older group households (Table 4.5b). Non-reconstituted households are similar to their reconstituted counterparts in all dimensions of exogenous variables except duration of membership, which is significantly more for non-reconstituted groups (Table 4.5c). Thus, the initial conditions are far from similar across the three demarcating variables – a matter which can't be ignored in a more rigorous multivariate regression analysis.

- Of the several identified input/output variables of the lending process – namely, average number of visits to member by office staff (PNVISIT), index of behaviour of office staff towards members (BEHAVE), # of other loans by the member (OTHSL), cumulative and average loan to member (CUMLOAN & AVLOAN), cumulative & average outstanding liability of member (OUTLOAN & AVOUT), only PNVISIT, CUMLOAN, AVLOAN, OUTLOAN and AVOUT are found to be significantly higher for JLG members than for SHG members (1.33 vs. 0.48, 22694 vs. 12651, 6285 vs. 3233, 7363 vs. 4250, 3573 vs. 1001, respectively), while only OTHTSL is significantly higher for SHG members than for JLG members (0.33 vs. 0.10). These differences seem to be reflecting relatively greater urge and lesser constraints in operation on the part of the organisers of JLGs than that of SHGs towards meeting the demand of borrowers (Table 4.6a). In this context, PNVISIT, AVLOAN and AVOUT are significantly larger for older group members, while CUMLOAN, OUTLOAN and OTHTSL are significantly larger for newer group members, as expected (Table 4.6b). Regarding differential impact of members from old non-reconstituted groups vis-à-vis their reconstituted counterparts on input/output variables, In this regard, only PNVISIT and CUMLOAN are significantly larger for old non-reconstituted members than their reconstituted counterparts, which is also consistent with our expectations (Table 4.6c).
- While considering several outcome variables dealing with changes in demographic and educational status of member households – namely, extended family status (DEXTEND), % of earning members (DEARNM), % of male & female students in family (DSTUDM & DSTUDF), index of maximum education among males & females (DMAXEDM & DMAXEDF), % of members with special skill (DSPSKILL), and % of children working outside and inside family (DCHLDWO & DCHLDWF), statistically significant changes are observed only in DEARNM (larger in JLG members than in SHG members - 8.86 vs. 2.95) and DMAXEDF (larger for JLG members - 0.33 vs. 0.14). Intertemporal changes in maximum education index of males and females in member household (DMAXEDM & DMAXEDF) are, however, significantly larger than zero (as per Student’s t-test) for both groups. This slight difference in result is probably attributable to a relatively greater developmental focus of SHGs as compared to JLGs (Table 4.7a). While examining possible differential impact of older vs. newer groups on household level outcome in demography and education, it appears older and newer group members seem alike, as none of the constructed indices are found to be significantly different as per paired t-test (Table 4.7b). In this context, however, significant differences are noted only in changes in household extension status (improved in reconstituted cases, while declined in non-reconstituted cases) and in household earning status (declined for reconstituted cases,

but improved for non-reconstituted cases) (Table 4.7c). It seems there is no simple explanation for the observed results in Tables 4.7b-c.

- Regarding family expenditure position at the end of the treatment period in terms of several parameters as reflected in average expenditure on food, clothing, education, health and loan repayment (FOODYE, CLOTHYE, EDUYE, HELTHYE, and REPAYYE, respectively), and % shares of consumption, health cum education and loan repayment expenses in total expenditure (PCCON, PCHLEDU, and PCREPAY, respectively), only CLOTHYE, HEALTHYE and PCHLEDU have significantly larger values for SHG members than JLG members (5435 vs. 4431, 5740 vs. 3129, and 23.36 vs. 17.70, respectively), while values of REPAYYE and PCREPAY are consistently and significantly larger for JLG members than SHG members (9762 vs. 6973 and 21.62 vs. 14.76, respectively) – quite consistent with relatively stronger developmental orientation of SHGs and much higher interest burden of JLG borrowing (Table 4.8a). Between older and newer group members, however, no significant difference is noticed in terms of current family expenditure status (Table 4.8b). Between old reconstituted and non-reconstituted group members, and among various attributes of family expenditure status considered, only average food expenditure and % share of consumption expenditure are found to be significantly larger for reconstituted cases. This is probably indicating greater stabilization in non-reconstituted categories. The opposite is true for loan repayment expenditure and its % share (which raises a matter of concern) (Table 4.8c).
- Regarding food security, diet and clothing status of SHG and JLG households, as captured by current food security (FSTAT), diet improvement (DIETDUM), clothing improvement (CLTHDUM), and diversification in diet and clothing (PCDIET & PCCLTH) status, it is observed that intertemporal changes are significantly greater than zero for DIETDUM and CLTHDUM as per Student's t-test for both groups, while the extent of diversification in clothing (PCCLTH) is only significantly more in JLGs than SHGs (96.81 vs. 91.70) (Table 4.9a). The fact that the current food security is significantly better for newer group than for older group members is either reflecting a selectivity bias in newer group members (meaning more affluent members entering new groups) or that the newer group members are feeling lesser pinch of loan repayment burden as compared to their older counterparts (Table 4.9b). Regarding food security, diet and clothing status, no significant difference is noticed between old reconstituted vs. non-reconstituted group members (Table 4.9c).
- Among indices constructed to indicate improvement in different types of asset holding – namely, household assets (ASSTDUM), productive assets (PRODDUM), agricultural assets

(AGRIDUM), livestock asset (LIVEDUM), non-farm assets (NFRDUM) and machine assets (MACHDUM), as well as diversification in holding of household assets (PCASST) and productive assets (PCPROD), intertemporal change is found to be significantly above zero in all assets for both groups of households. As per paired t-tests, SHG households seem to have performed significantly better in terms of improvement in agricultural (AGRIDUM) and livestock (LIVEDUM) assets compared to their JLG counterparts (0.57 vs. 0.31 and 0.64 vs. 0.32, respectively). This is also true about diversification in holding of productive assets (0.57 for SHG households vis-à-vis 0.31 for their JLG counterparts. However, the opposite is true about improvement in holding of non-farm (NFRDUM) and machine assets (MACHDUM) (0.38 vs. 0.08, and 0.24 vs. 0.21, respectively). Thus, while SHG households have concentrated more on acquiring agricultural and livestock assets, JLG households seem to have concentrated more on improving their holding of non-farm and machine assets (Table 4.10a). Compared between older and newer group households, while intertemporal improvement in tangible assets is significantly positive in all aspects and both groups, except for non-farm assets and newer group, older members seem to have done significantly better in respect of temporal improvement in and diversification of household assets, and also in temporal improvement of non-farm assets (Table 4.10b). Between old reconstituted vs. non-reconstituted group households, positive and significant intertemporal improvements are observed in holding of all types of tangible assets for both categories. However, significantly better results are achieved with respect to improvement in productive assets by non-reconstituted group, as expected, and with respect to diversification of household assets by reconstituted groups (Table 4.10c).

- While dealing with improvement in SHG/JLG households' holding of intangible assets or social capital – namely, familiarity with important village personnel (FAMDUM), social networking through involvement in important village organizations (NETDUM), and diversification in holding of the two above-stated assets (PCFAM & PCNET), it is found that intertemporal improvement in the two types of intangible assets is significantly larger than zero under both groups. Not only that; these two assets seem to have grown relatively more in SHG households than in JLG households, given relatively greater developmental focus of the former (0.97 vs. 0.90 and 0.54 vs. 0.40, respectively) (Table 4.11a). For older and newer group members, there is positive and significant temporal improvement in familiarity and networking status for both categories, but there is no other significant difference between them (Table 4.11b). While assessing impact of group reconstitution on holding of intangible asset holding, both constituted and non-reconstituted groups seem to have achieved positive and significant temporal improvement in familiarity and networking, though it is significantly larger for reconstituted group members. The latter result may be due to greater urge on the part of reconstituted group members to quickly acquaint and establish themselves in the society (Table 4.11c).

- While examining improvement in savings (SAVDUM), insurance (INSDUM), and diversification in savings and investment (PCSAV & PCINS), the results display significantly greater than zero improvement in savings and insurance coverage between joining in groups and now for both SHG and JLG households. However, these improvements are not significantly different between these two groups. Nevertheless, diversification in savings and insurance coverage seems to be significantly greater for SHG households than JLG ones (27.8% vs. 21.18% and 19.4% vs. 11.39%, respectively) (Table 4.12a). In older and newer group members, there is positive and significant temporal improvement in savings and insurance status for both, but there is no significant difference between the two (Table 4.12b). Table 4.12c displays significantly positive improvements in saving and insurance holding over time in both reconstituted and non-reconstituted categories of households. However, diversification in savings portfolio is significantly more in reconstituted category – probably reflecting greater urge in them to look for better alternatives to fill in the loss due to reconstitution.
- As far as diversification of income sources (PCAGINC, PCLAINC, PCNFINC, and PCSEINC for incomes from agriculture, labour, non-farm and service, respectively) as well as extent of improvement in overall income since joining (PCINC) are concerned, the findings are that while diversification in agricultural and labour incomes is found to be significantly more pronounced in SHG households than in JLG ones (36.50% vs. 17.58%, and 35.07% vs. 9.42%, respectively), the opposite is true about diversification in non-farm income (70.83% for JLG households and 24.98% for SHG ones). There is hardly any significant difference in the indices of diversification in service income between the two categories. This is expected given differences in emphasis or orientation of SHGs and JLGs. However, between joining and now there appears to be significantly positive improvement in overall income for either category, though it is significantly more for JLG households (17.3%) as compared to SHG ones (13.02%) (Table 4.13a). For older and newer group members, there is positive and significant temporal improvement in overall income for both, which is however significantly more for older category, but there is no significant difference between the two categories in any other type of income diversification (Table 4.13b). Though Module Table 4.13bc displays significantly positive intertemporal improvement in overall income for both reconstituted

and non-non-reconstituted group households, it is not significantly different across these two groups, nor is there any other significant change in this Module.

- While dealing with temporal improvement (IMFOR, IMSFOR and IMINFOR, respectively) as well as current shares of credit (FORBB, SFORBB, and INFORBB, respectively) from the three major sources – formal, semi-formal (i.e., SHGs & JLGs) and informal, besides the nature of use of credit – whether mostly for consumption alone or for production too, as captured by an index called LUSDUM (0-1), we find the following: significantly positive intertemporal change in share of formal credit for SHG households, but not for JLG ones; shares of semi-formal credit achieving significantly positive intertemporal change for both categories of households; and informal credit share registering significantly positive improvement only for JLG households, as expected. Moreover, intertemporal change in % shares of formal credit is significantly more pronounced for SHG households than for JLG ones (10.4 vs. 0.00), while the opposite is true for intertemporal change in % shares of semi-formal (21.76 vs. 2.8) and informal (4.17 vs. -2.8) credit. In fact, decline in % share of informal credit over time for SHGs is a note-worthy achievement, though it is not statistically significant. Currently, % share of formal credit is significantly larger for SHG households (10.07 vs. 3.47), the same for semi-formal credit is significantly larger for JLG households (11.57 vs. 3.70) and the same for informal credit significantly larger for SHG households (27.5 vs. 17.5), as compared to their counterparts in the other category of households. Thus, even though formal credit seems to have made some inroads into SHG households, they are still dependent on informal sources for a large chunk of their credit needs. Incidence of joint use of credit (i.e., for production alongside consumption) seems significantly more for JLG (0.35) than SHG (0.22) households (Table 4.14a). While examining possible differential impact of older vs. newer group members on access to credit, we find positive and significant temporal improvement in % share of formal and semi-formal credit for older members, but there is no significant change anywhere else in Table 4.14b. While assessing the impact of group reconstitution on access to credit, we find positive significant improvement in % shares of formal and semi-formal credit in both reconstituted and non-reconstituted groups. Temporal improvement in formal credit share and diversification in formal credit sources are also significantly more for reconstituted groups – maybe because of greater renewed efforts towards reconstituted group members (Table 4.14c).
- When we turn to the current status of clients' micro-business, we see that micro-enterprises of JLG households are significantly above their counterparts in SHG households in terms of average sale per month (AVSALE) (1576 vs. 614), average annual profit (AVGPRF) (5483 vs.

3586), diversification in profit use (PCPRFUS) (54.4% vs. 27.31%), and in terms of diversified ways of improvement in enterprise (PCWAYS) (50.35% vs. 20.95%). SHG enterprises seem to face significantly more problems than JLG ones (PCPROB) (21.69% vs. 3.53%). Qualitative differences in clients, on the one hand, and in service towards them by the promoting organizations, on the other, seem to have generated this difference. However, JLG enterprises face significantly more risks in terms of CV of monthly sales (CVSALE) (525% vs. 205%) and CV of annual profit (CVPRF) (1828% vs. 1195%) as compared to their SHG counterparts. Obviously, both types of organizations are yet to evolve effective tools to bring down such large variation in their sales and profit, as reported to the study team for the last three years of their functioning (Table 4.15a). There is absolutely no significant difference in enterprise status between the older and newer group members, which is a bit surprising as it appears to negate the basic pipeline effect on business enterprise development (Table 4.15b). Group reconstitution too has no significant effect on micro-business performance (Table 4.15c).

- The study has examined family and social dynamics outcomes of households through construction of several indices to capture temporal improvement in spousal relations (SPREL), intra family relations (FAMREL), neighbourly relations (NEBREL), community participation (CCPART), and in member's decision making with respect to family credit, family expenditure and children matters (POWCRM, POWEXM and POWCLM, respectively). It has also constructed indices to examine diversified reasons for improvement in spousal relation, intra-family relation, community participation and group cohesion (PCSPOUS, PCINTRA, PCFEST and PCGMEET, respectively). In this context, the findings are: positively and significant temporal improvements are noted for both categories of households in all the above-stated dimensions (following Student's t-tests), though significant spatial improvements (following paired t-tests) are observed more in JLG households than in SHG ones only in terms of spousal relations, family relations, neighbourly relations, and in client's decision-making power on expenditure and children related matters. But significantly more reasons are found for improvement in intra-family relations and community participation in SHG households than in JLG ones. Improvement in most family and social dynamics of SHG/JLG households is no doubt a great achievement, though it may not have spanned all dimensions, which will probably take more time. Relatively greater improvement in relations and empowerment of clients in JLG households as compared to SHGs ones is probably due to relatively greater business success of JLG enterprises, in spite of greater risks they are exposed to. Given their stronger social and developmental focus, no wonder SHG households have achieved improvement in intra-family relation and community participation in significantly more dimensions than their counterparts in JLGs (Table 4.16a). Regarding impact of duration of group, there is positive and positive and significant intertemporal improvement in all types of relationship and empowerment for both older and newer groups except in case of empowerment in credit related matters for newer groups. Moreover, older members seem to have done significantly better in terms of improvement in spousal, intra-family and neighbourly relations, and also in more dimensions of intra-family relations. Newer members have done significantly better only in terms of multiple dimensions of group cohesiveness, as is expected of them (Table 4.16b). Regarding effect of group truncation, although both groups seem to have achieved positive and significant changes over time in all types of relations and empowerment indices, there is no significant difference in the achievement of these two groups with respect to family and social dynamics (Table 4.16c).

8.21 As primary data analysis would probably remain incomplete unless we probe deeper into the type and reasons of delay in activating the bank-SHG linkage process[4], the reasons behind drop out of clients under both SHGs and JLGs, and income shock absorption pattern of both groups, this is done in the next few paragraphs. An important performance criterion utilized to evaluate the performance of SHGs and JLGs at group level is delay in completing the processes for providing linkages between SHGs and Banks on the one hand and JLGs and MFIs on the other. The delay parameters pertain to (i) having bank linkage after group formation; (ii) starting internal lending after group formation; (iii) getting first loan from the bank/MFI; (iv) completing the first test after group formation; and (v) completing the second test after group formation. However, only the last delay parameter is applicable in case of JLGs. The main findings in this context are as follows:

- The average delay in having bank linkage is smallest (2.21 months) for older groups as compared to the same for other two groups (about 8 months).
- The average delay in starting internal loaning system is 9 months for reconstituted group and 12.17 months for older group, while delay in getting the first loan from bank after group formation is more or less the same for reconstituted and older groups (about 22-23 months).
- Between old and reconstituted groups, the average delay in completing the first test is considerably less for the former group than the latter (17 vs. 24 months), while the

[4] Delay in completing process of Bank-SHG linkage being too time consuming, the study probed it further in greater details for 22 SHGs, which could provide the requisite information. Observations on detailed analysis of delays in completing the process by SHGs is provided in Appendix 4.1.

opposite is true with respect to delay in completing the second test (71 vs. 40 months). Not only these average figures are disproportionately high, so also are their coefficients of variation (CVs), which raise doubts about reliability of these average figures.

- Both Coop and BCKV-promoted SHGs are yet to apply tests. Besides, the former have not yet implemented internal loaning system while the latter are yet to realize any bank loan, obviously signifying that the sooner these SHGs join either of the two broad processes, the better[5].
- NGO-promoted SHGs seem to be taking on average lesser time than PRI-promoted ones in getting bank linkage as well as in passing second test, though the reverse is true with respect to delay in passing the first test.
- In providing the first bank loan Coop-backed SHGs have displayed maximum efficiency (taking 20 months) as compared to the other two categories (Table 4.17).

8.22 Turning to JLGs promoted by NBSC-MFIs, the delay in getting the first loan is nil (i.e., almost instant) for new groups, 0.6 month for older groups and 1.5 months for reconstituted groups. These figures are in striking contrast to those in the context of SHGs for the same parameters.

8.23 The study finds unfavourable group dynamics and enterprise-related problems as the two major reasons for drop outs among SHG clients (with 32 – 33% importance), while external factors, programme policies and personal reasons seem to have lesser importance (claiming 20%, 18%, and 14% importance, respectively). Among JLG clients, the most prominent reasons for drop out are: programme policies (51% weightage), enterprise reason (39% weightage) and unfavourable group dynamics (34% weightage), while external factors and personal reasons have only 25% and 14% weights, respectively. If difficulties in interpersonal comparison across SHG and JLG clients are ignored, one can argue that each of the aforesaid reasons play stronger role among JLG rather than SHG clients. JLG clients are found to be much more sensitive to programme policies than SHG clients.

8.24 While probing the extent of income shocks and shock-absorption capacity of SHG and JLG members, the following observations are made:

[5] Only one NABARD-promoted SHG from the cluster of North 24 Parganas operating with support from an NGO called Youth Development Centre got selected in our random sample. Although we have not differentiated it from the dominant category of SHGs under SGSY/NRLM scheme in our tabular presentations, we have taken note of the distinctive performance of this SHG as well as the sample households from this SHG, while arriving at the conclusions in the last section of this chapter.

- The CV of income is higher for old SHG members than for new ones, but the highest value of CV is observed for reconstituted SHG members. In case of JLG households, the value of CV is consistently higher for old group members than for their counterparts in other two groups. Thus, income fluctuations seem to have increased with longer loan cycles, even though average incomes rise with longer credit interventions.
- Regarding incidence of earning shortfall during the last three years, it seems that the risk distribution has become flatter (with probabilities of very small and very large shortfalls being higher, and those of moderate shortfalls lower) for old group members as compared to new group members in case of SHGs. Interestingly, the risk distribution of income shortfalls in case of JLGs seems to have shifted to the right, thus signifying that while the risk of small shortfalls has gone down, that for large shortfalls has increased. For both SHGs and JLGs, therefore, there is need for not only insurance, but also even reinsurance for protecting them against large income shortfall risks.
- Living in extended families and networking through friends/relatives for possible mutual support are the two major *ex ante* steps undertaken by the SHG households against income shortfalls, the incidence of these two reasons together being highest (30%) for old group members, moderate (21%) for reconstituted group members and lower (14%) for new group members. Similar is the situation with JLG members in old groups (with 46% incidence) and reconstituted groups (with 42% incidence); for JLGs case, however, members of new groups don't undertake these steps – they take precautionary steps to avoid health hazards (with weightage of only 10%).
- In terms of posterior steps, the prominent options used by old and reconstituted SHG members are: relying on past savings and mortgaging of assets, with weightage of 14% each. Members of new SHGs however, use two different posterior steps: selling of assets and reducing consumption of basic goods like food, clothing, etc. which have a combined weightage of 21%. Thus, new SHG members are worse of as compared to those under old and reconstituted SHGs, as the latter are not required to cut down their basic goods consumption, nor to sell off their assets outright. For old and reconstituted JLG members, the two prominent posterior steps to handle income shocks are: relying on past savings and mortgaging of assets, and borrowing from friends/relatives at zero interest, with their combined weightage being 30% and 33%, respectively. The prominent posterior option used by new JLG members is relying on past savings. Thus, in case of JLGs too, old and reconstituted members are not required to sell off their assets outright, nor to depend exclusively on interest-free loans from friends/relatives. For both JLGs and SHGs, it is clearly

found that older groups have performed better than newer groups in terms of undertaking some positive *ex ante* measures or ex post measures. Moreover, the incidence of both *ex ante* and *ex post* measures is higher for JLGs than SHGs.

Conclusions from primary data analysis

8.25 The observed strengths of SHGs and JLGs in the context of West Bengal are several. First, both SGSY/NRLM and NBFC-MFI categories of SHGs/JLGs have created a vast network in the state, which is by no means a small achievement. Second, they have made small loans available to small clients for purposes, which are non-standard and hence non-appreciated and maybe even looked down upon as petty and unworthy of any cash flow analysis by the *babus* of the formal credit sector. In course of field testing of questionnaires, the study has come up with a fairly comprehensive list of the various purposes for which loans are made by this intermediate category of micro-credit institutions, which we have termed as semi-formal to distinguish them from formal credit, on the one hand, where the relevant clients have hardly any access, and from informal credit, on the other, where these clients can easily access credit, but often at usurious terms and conditions. Third, access to formal sector credit may have lesser borrower transaction cost for large loans and against marketable collateral, these anonymous and faceless clients without marketable collateral and non-standard projects are getting loans at much lower monetary and non-monetary transaction cost for themselves. Fourth, it appears there is better targeting of beneficiaries under SHG/JLG programmes, as compared to other flagship government schemes in the country. Fifth, while most government schemes including priority sector lending policy of formal banking sector have failed to pump in enough money and provide impetus for growth of the so-called unorganized and non-formal sector in rural hinterlands and semi-urban/urban pockets, pumping in credit through SHG/JLG route seems to be generating the much required multiplier effect towards financial inclusion. Sixth, as the findings of this study demonstrate, there is significant, though certainly limited economic as well as social benefits of SHGs/JLGs. Finally, unlike what is commonly believed, there is considerable complementarity between SHG and JLG loans – while SHGs concentrate relatively more on consumption loans as well as loans for agriculture and allied activities (as much as 81%), the JLGs seem to be concentrating more on loans for cottage industries, trade and business and services (to the tune of 88%) as it can be seen from the relative weightage of loans for various purposes as found through scrutiny of individual loans.

8.26 Although SHGs and JLGs have become a part and parcel of the West Bengal economy and especially for poor and backward families which are mostly excluded from formal banking sector, and although this instrument has raised a lot of hopes in the minds of these people as well as policy makers, there is no denying the fact that these institutions suffer from certain serious weaknesses, which ought to be addressed through suitable policy and removed at the earliest for their sustainability. Since there are differences in the nature of their weaknesses, we shall deal with this subject separately for SHGs and JLGs.

8.27 In case of SHGs, the vast network created seems to contain a large amount of 'fat', far more than any reasonable estimates, apparently because of multiple entries and a large number of defunct units. Second, officials do not claim to have created some higher tier organizations to reinforce the SHG movement, nowhere within the sample areas we could come across any such organization, nor did the respondents talk of their roles. Third, maintenance of records demands a lot to be done, especially at group and individual level, except for SHGs promoted by one Youth Development Centre (YDC) in Sandeskhali-II Block of North 24 Parganas, and those promoted by one Rural Cooperative at Gontra village in the district of Nadia. Even though we have encountered in the sample only one NABARD-promoted SHG operating under YDC, its relatively better functioning and maintenance of records seems to be partly due to better designing and monitoring of NABARD-promoted SHGs, and mostly due to the presence of a relatively well functioning NGO which is allowed under NABARD scheme to perform the handholding role at least in initial stages. Fourth, even the instrument of SHG can be adopted by any group to achieve growth through mutual support. Probably the SHGs promoted by Gontra Cooperative and the extension wing of BCKV in the village of Goragachha could be better off if they could utilize the benefits of internal lending as well as of external lending and support to strengthen training and awareness creation. Fifth, two types of general complaints seem to be plaguing the SHG movement in West Bengal – (i) serious lack of timely initiative on the part of bank officials to guide and help the SHGs as reflected in disproportionate delays in achievement of prescribed land marks like passing of first test, second test, etc. and opening of cash-credit account for the groups; and (ii) alleged failure of Resource Persons (RPs) to conduct business as prescribed to them by the state government as well as the state unit of NRLM to serve the interest of SHGs more than that of their own cadres. Given the fact that there are large subsidies and grants in SHG schemes, it is no surprise that there will be some rent-seeking behaviour on the part of the clients, their monitors or hand-holders (be they government bureaucracy, NGOs, banks or RPs appointed with the good intention of providing professional help), as a result of which the opportunistic goals of these helpers may supersede the cherished goals of the schemes. Unless and until good and strong federations of SHGs are created through careful selection and screening of not only clients but also other functionaries on the one hand, and through development and application of rigorous MIS on the other, deviation and indiscipline accompanied by no or limited success are likely to continue. Last but not the least, in spite of frequent clamour against the bank officials for providing not enough loans on time, the fact remains that there is inadequate effective demand for productive investment by clients, which alone can lead to higher and steady income flows from newer and value added products. Neither the bank officials, nor the PRIs, nor the officials or RPs, and not even most of the NGOs do have enough capability and urge to play leadership role to plug in these lacunae in the SHG movement.

8.28 Although the JLGs, as observed in case of Bandhan in West Bengal, seem to have much more disciplined in terms of record-keeping, performance evaluation and guidance – apparently because of stricter RBI regulations, stringent bank/donor monitoring and above all the compulsions of competition and profit making, they too seem to be suffering from certain serious limitations. First, though they have apparently better records, they do not make it public, even though MFIs also draw a large chunk of public sector bank resources earmarked for priority sector lending. It appears that the JLGs under Bandhan have subsumed a large part of borrower transaction cost by minimisation of borrower's trip to branch office for loans and repeat loans, as long as repayments are regular, the lender's transaction cost must have increased. So whether and to what extent the NBFC-MFIs are making super-normal profits, as often alleged in the literature, remain an unresolved issue because gross profits, operational costs and transaction cost as opposed to transformation cost (i.e., cost of transformation of borrowings from the market into small JLG loans) are not yet been estimated for this sector with reasonable accuracy. Second, availability of large pool of educated but unemployed youths in West Bengal has no doubt helped Bandhan to recruit from this pool its credit officers at a fairly low cost with great advantages of socio-economic proximity of these officials to its clients. But this short term advantage may not be sustainable in the future unless the expectations and aspirations of this pool of ground level workers are fulfilled through increased flow of monetary benefits and training opportunities to build up their human capital. Third, though economic benefits to clients seem to be stronger to JLG clients than SHG clients, Bandhan seems to have achieved it so far only through steady rise in working capital loans, but as further expansion of existing business enterprises becomes increasingly difficult, Bandhan must find ways and means to encourage its credit officers as well as clients to go in for modern technology, better organizational skill and more value added production for premium markets. Last but not the least, cut-throat competition by NBFC-MFIs to poach each other's clients through aggressive and/or multiple lending, unless controlled through self-regulation rather than merely through RBI stipulation (which is difficult to enforce) may ruin the customers (through spending an increasing proportion of their income on loan repayments, as we have seen earlier) as well as the MFI lenders.

Section 7: Observations from selected case studies from the states of Andhra Pradesh and Kerala

8.29 A short assessment of SHG/JLG programs in these two states raises both hopes and concerns. Hopes arise because of the meticulous ways both the states have gone ahead in mustering resources, innovative ideas and unique plans to bring about a change in the profile of the village poor and especially of the womenfolk. However, there is a significant difference between the approaches of AP and Kerala. While Kerala has gone in for community participation in the structure of the program as well as in its implementation by placing this popular program under Department of Self-government, AP has not put PRI institutions at the centre stage of control, though it too has sought the support of PRIs. AP has put the Movement at the control of the Department of Rural Development. However, given the dominance of government Departments and importance of government support and resources, it is an open question whether the Movement has maintained or lost its autonomy. No doubt, many new things and ideas are emerging and also getting implemented, but several concerns continue to arise. First, MIS continues to be poor as no data could be obtained at SHG/JLG or even at their association level over time and space, which could be rigorously analysed to judge comparative performance and guide policy directions. It seems the SHGs/JLGs visited by the study team do have the requisite data, but apparently they are not being gathered and systematically analysed for monitoring and development purposes. In spite of promises and repeated reminders, the study could not lay fingers on anything beyond performance claims in terms of fulfilling certain targets from both these states. The second concern is about the huge expenditure being incurred by these states in promoting this Movement. Unless government can gradually withdraw, it will invariably be extremely difficult to sustain large expenses with results highly dependent on and probably not commensurate with such expenses. Nevertheless, some of the brilliant ideas like organic agriculture, thrust on horticulture, eco-tourism etc., which are being implemented in these two states are worth pursuing as a matter of policy. Whereas AP has concentrated more on productive investments, Kerala with its long tradition has pursued a mixed blend of productive investment and welfare activities. With relatively greater emphasis on welfare measures in Kerala, however, sustainability becomes more difficult to achieve, if not becoming impossible, if productive investments don't fetch sustainable returns due to lapses in governmental design and implementation.

Section 8: Observations on NABARD-promoted selected SHGs from Gujarat and Maharashtra

8.30 These case studies bring out several important lessons for NABARD, in particular, and for the SHG Movement in general. First of all, MIS has to be sufficiently strengthened, and the NGOs/PRIs involved must be communicated this message in clear terms, based on the observed micro-data deficiencies pertaining to internal and external borrowing and the costs thereof, savings and investments and returns thereof activity-wise, timing and effectiveness of both formal and informal trainings and grants, etc. Only then extremely useful micro-data can be created, which can be put at the disposal of reputed researchers and research organizations, and not merely analysed in-house, to guide policy as well as evolution of the future MIS system. Second, NABARD – to justify its continuation as a developmental bank, must persuade the Central Government to give a serious thought of putting allied agricultural activities on the same footing as agriculture, in terms of interest rate concession, as allied activities often go together with agriculture not only because Nature is a common factor, but also because crop cultivation alone is no longer a gainful proposition, as it used to be in the past. Third, innovative investment projects must be chalked out based on resource availability and human resource capability in specific regions; else the SHG/JLG movement will turn out to be a trick to make extremely poor people net lenders to the banking sector against awfully low rates of rates of interest on their unused savings. Fourth, the next generation of SHG/JLG members must be provided access to other government Department schemes if they are to be induced to take up education and become part of the mainframe economy. Unless corruption at most entry points can be ruthlessly contained, only SHGs can proliferate even to future generations of educated children of SHG members, but no meaningful purpose will be served. Finally, various low-cost insurance schemes not only of insurance companies, but also of mutual type must be propagated through effective awareness creation and training in favour of SHGs/JLGs, if these poor communities are to be protected against multiple contingencies including health hazards and loss of lives, earnings and assets.

Section 9: Ingredients for success from Illuminating cases across the country

8.31 The poor communities around the world has hardly any idea or capability to start innovative business, nor any marketable collateral to access formal credit to finance their petty, non-standard activities at reasonable terms and conditions. The SHG Movement started with a promise to empower these people. Given zero or even negative initial endowments, scope for quick success is extremely limited, unless the physical and/or human resource endowments are good and the systems and processes evolved during the journey towards development are robust and comprehensive enough to overcome the structural limitations and bottlenecks which often stand in the way of progress. Sometimes it is possible to demonstrate temporary success due to some luck factor or due to strong doses of government support, which though has a tendency to be spread thinly across vast areas and a very large size of beneficiaries. So, such sporadic success stories don’t have the property of sustainability. Success stories around the world has shown that SHGs/JLGs as instruments of collective action, if used properly under an appropriate leadership, can help poor communities not only overcome their lack of marketable collateral to access credit, but also initiate a spiral process of growth for them through enterprise development. With this conviction, as it began to be ingrained in the minds of the study team, it decided to look around for examples to bring out ingredients necessary to build up a stronger case and an expanded domain for application of this instrument. The main findings arising out of these efforts are as follows:

- While SHGs/JLGs can be started in any resource-poor community, their scope for and chances of success would be higher if these instruments can be applied in a more disciplined and systematic fashion to capture huge benefits for hitherto neglected and untapped natural resource endowments located in the domains of these poor communities. To give examples, two priority areas are identified– namely, the vast water bodies of Damodar Valley Corporation (DVC) located in the twin states of West Bengal and Jharkhand and with strong fisheries potential, and the western-side, tribal forest areas of West Bengal, commonly referred to as *Paschimanchal* with demonstrated potential for cultivation of turmeric and complementary crops.
- Examples of four community hospitals – namely, EMS Memorial Hospital in Malappuram district in Kerala, *Shushrusha* Citizens' Cooperative Hospital at Mumbai, *Jai Kishan* Hospital at Gandevi in Gujarat, and Rotary International Eye Hospital at Navsari in Gujarat, which are engaged in providing cheap medical services to members as well as local area population, are cited to highlight the fact that SHG/JLG members can be encouraged through policy to be associated with such hospitals rather than big corporate hospitals to make optimal use of their own hard-earned money and/or RSBY funds for medical treatment.
- Example is cited of a large group of SHGs in the slum areas of the cities of Pune and Mumbai, which are organized under an NGO called *Annapurna Parivar* to highlight how mutual health insurance can be provided at extremely low cost (currently, Rs.120 per person per annum for an annual assured coverage of Rs. 15,000 per person) using judicious internal processes and by roping in community hospitals, which have a soft corner for serving poorer communities usually attracted to the SHG/JLG Movement.
- Example is also cited of one Amalsad Multipurpose PACS in Gandevi Taluka of Navsari District in Gujarat, which through evolution of mutually reinforcing activities and/or organization has practically avoided the need for insuring farmers' credit. Through organizing input marketing, sale of all consumer needs, supply of free extension education and agricultural machineries at exemplary nominal lease rates, marketing of major farmer crops in premium markets after all primary and secondary processing and making cheap but

quality education and medical facilities available in nearby areas through promoting of Trusts, it has shown how it has subsumed input and consumer purchase risks, output sale risk and capacity failure risks of farmers without asking for costly compulsory insurance alongside credit, besides opening up thousands of investment opportunities for itself as well as its farmers. It also shows how such successful cooperative organizations can be made into a federation of SHGs/JLGs in mutual interest.

- The famous thrift cooperatives of men and women, promoted by the Cooperative Development Foundation (CDF) in and around the districts of Warangal in Telangana, show not only how SHGs can be evolved and formalized over time, but also how strong and permanent business activities (milk and paddy seeds in their case) can be created to keep thrift and investment motives strong and alive for ever.
- The examples of *Krishi Vigyan Kendra* attached to Navsari Agricultural University in Gujarat and of one Farmers' Club at village Vanjar of Sabarkantha district in Gujarat highlight the need for networking across suitable organizations as well as suitable agents to perform this networking task to connect SHGs/JLGs and their members and leaders to the Knowledge Society and appropriate lobbying organizations.
- The example of once-famous Versova Fishermen's Cooperative Society in Mumbai, which is facing rapid decline following the global phenomenon of too many people chasing too few fish in the oceans highlights how the instrument of SHGs/JLGs can help re-engineer its fate through regular and organized sale of value-added fish products by their womenfolk, which they are in any case doing, but only occasionally.
- Finally, the example of *Bhagini Mandal* within the famous Warana Sugar Cooperative Complex near Kolhapur in Maharashtra highlights the need for internal leadership, which alone can feel and articulate the needs of the people, come up with a mission, vision and implementable plan, and thus spearhead the spiral process of growth to achieve sustainability. Even then, the need for continuity in leadership remains as sustainability demands a continuous relay race – a matter, which policy can't ignore even if does everything else other than promoting autonomous leadership.

Section 10: Recommendations

8.32 There are broadly three recommendations arising out of this study – first, on the need for evolution and utilization of a suitable MIS; second, on the need to correct faulty program designs; and third, the need for networking with appropriate organizations to get connected to the Knowledge Society, which alone can sustain the SHG Movement.

8.33 Given serious dearth of secondary data on micro-finance related matters, NABARD and SGSY/NRLM, the two main agencies promoting the SHG Movement must discharge tremendous responsibility in making authentic data available for analysis, monitoring and policy making. Unfortunately, the states have so far failed to produce the requisite data. NABARD, which has been trying to put together secondary data on micro-finance, has to go a long way to put its data in usable and authentic form at the levels of SHGs and their higher-tier organizations. Unless micro-data provides clues about the group dynamics, social dynamics, family dynamics as well as on economic and process parameters, supplemented by appropriate quasi-macro/macro-data on group and government funding and support, no meaningful conclusion can be reached on sustainability of these organizations, not to speak of policy measures to guide sustainability. NBFC-MFIs are extremely reluctant to share their data, though they too are making use of public funds in the form of unspent funds earmarked for priority sector lending by commercial banks, which are being diverted towards them. Moreover, NBFC-MFIs are often caught in fierce cut-throat competition with each other without knowing the reality or the truth about where they stand. So, both government and the NBFC-MFIs themselves must arrange to make the relevant data available to the public not only in public interest, but also in their own interests. Examples of MIS at Amalsad Mandali, thrift cooperatives under CDF, SHGs under *Annapurna Parivar*, as cited in this study, ought to be publicized and utilized to teach what good MIS means.

8.34 Several corrective measures are needed to get rid of faulty project designs. First, though both states of AP and Kerala have gone ahead meticulously in mustering resources even from multinational agencies, innovative ideas and unique plans to bring about a change in the profile of the village poor and especially the womenfolk through the SHG Movement, there appears to be one important lacuna. While Kerala has gone in for community participation in the structure of the program as well as in its implementation by placing this popular program under Department of Self-government, AP has put the Movement at the control of the Department of Rural Development. However, given the dominance of government departments and importance of government support and resources, it is an open question whether the Movement has maintained or lost its autonomy. Naturally, the chance and scope for sustainable success would be larger, the stronger the initial endowments – be it a physical resource like a vast pool of water bodies or cultivable land, or human resource like availability of visionary leadership which alone can craft, run and fine tune organizations in a manner so as to minimize opportunism and maximize value creation for SHG/JLG members. Naturally, policy makers and activists keen to utilize the SHG instrument to achieve empowerment and sustainable growth of the poorer communities are better advised to concentrate more on areas and pockets, which better fulfil these conditions, rather than thinly spreading their resources and energy over a large and untargeted population. Second, the Finance Ministry as well as NABARD/RBI need to give a serious thought of putting allied agricultural activities on the same footing as agriculture, in terms of interest rate concession, as such activities often go together not only because Nature is a common factor, but also because crop cultivation alone is no longer a gainful proposition, as it used to be in the past. Third, innovative investment projects must be chalked out based on resource availability and human resource capability in specific regions; else the SHG/JLG movement will turn out to be a trick to make extremely poor people net lenders to the banking sector against awfully low rates of rates of interest on their unused savings. Fourth, the next generation of SHG/JLG members must be provided access to other government department schemes if they are to be induced to take up education and become part of the mainframe economy. Unless corruption at most entry points can be ruthlessly contained, only SHGs can proliferate even to future generations of educated children of SHG members, but no meaningful purpose will be served. Finally, various low-cost insurance schemes not only of insurance companies, but also of mutual type must be propagated through effective awareness creation and training in favour of SHGs/JLGs, if these poor communities are to be protected against multiple contingencies including health hazards and loss of lives, earnings and assets.

8.35 The third set of recommendations pertain to networking with suitable organizations and change agents, which can strengthen the SHG Movement, lobby for suitable policy changes and connect it with the Knowledge Society. In this context, only a few examples rather than an exhaustive list are provided to flag directions of change and provide a roadmap. First, the instruments of SHGs/JLGs ought to be selectively applied in a disciplined and systematic fashion to capture huge benefits for hitherto neglected and untapped natural resource endowments located in the domains of poor communities. Second, several examples of community hospitals, which are engaged in providing cheap medical services to members as well as local area population, are cited to highlight the fact that SHG/JLG members can be encouraged through policy to be associated with such hospitals rather than big corporate hospitals to make optimal use of their own hard-earned money and/or RSBY funds for medical treatment. Third, example is cited of a large group of SHGs in the slum areas of the cities of Pune and Mumbai, which are organized under an NGO called *Annapurna Parivar* to highlight how mutual health insurance can be provided at extremely low cost using judicious internal processes and by roping in community hospitals, which have a soft corner for serving poorer communities usually attracted to the SHG/JLG Movement. Fourth, example is also cited of one Amalsad Multipurpose PACS in Gandevi Taluka of Navsari District in Gujarat, which through evolution of mutually reinforcing activities and/or organization has practically avoided the need for insuring farmers' credit. Through organizing input marketing, sale of all consumer needs, supply of free extension education and agricultural machineries at exemplary nominal lease rates, marketing of major farmer crops in premium markets after all primary and secondary processing and making cheap but quality education and medical facilities available in nearby areas, it has shown how it has subsumed input and consumer purchase risks, output sale risk and capacity failure risks of farmers without asking for costly compulsory insurance alongside credit, besides opening up thousands of investment opportunities for itself as well as its farmers. The study asks for policy measures so that such successful cooperative organizations can be made into a federation of SHGs/JLGs in mutual interest. Fifth, the famous thrift cooperatives of men and women, promoted by the Cooperative Development Foundation (CDF) in and around the districts of Warangal in Telangana, show not only how SHGs can be evolved and formalized over time, but also how strong and permanent business activities (milk and paddy seeds in their case) can be created to keep thrift and investment motives strong and alive for ever. Sixth, the examples of *Krishi Vigyan Kendra* attached to Navsari Agricultural University in Gujarat and of one Farmers' Club at village Vanjar of Sabarkantha district in Gujarat demonstrate how networking with such organizations can benefit SHGs/JLGs. Seventh, the example of once-famous Versova Fishermen's Cooperative Society in Mumbai, which is facing rapid decline following the global phenomenon of too many people chasing too few fish in the oceans highlights how the instrument of SHGs/JLGs can help re-engineer its fate through regular and organized sale of value-added fish products by their womenfolk, which they are in any case doing, but only occasionally. Finally, the example of *Bhagini Mandal* within the famous Warana Sugar Cooperative Complex near Kolhapur in Maharashtra highlights the need for internal leadership, which alone can feel and articulate the needs of the people, come up with a mission, vision and implementable plan, and thus spearhead the spiral process of growth to achieve sustainability. Even then, the need for continuity in leadership remains as sustainability demands a continuous relay race – a matter, which policy can't ignore even if it does everything else other than promoting autonomous leadership.

Bibliography

Anderson, C l., Locker, l. (2002), "Microcredit, and Social capital, and Common Pull Resources", *World Development.*

Anderson, S., Eswaran, M. (2005), "What Determines Female Autonomy? Evidence from Bangladesh", *BREAD Working Paper No. 101*.

Angrau (2008). An Assessment Study of Community Managed Sustainable Agriculture (CMSA).

Annapurna Pariwar. (2013). *Annual Report (Jan-Dec 2012).* Pune.

Armendáriz, A., Morduch, J. (2005), "The economics of microfinance*", Cambridge: MIT Press.*

Armendáriz, B., Nigel, R. (2008a), "Gender empowerment in micro finance. In Suresh Sundaresan, ed., Microfinance: Emerging Trends and Challenges", *New York: Edward Elgar Publishing, Ltd.*

Armendáriz, A., Morduch, J. (2010), "The economics of microfinance*", Cambridge: MIT Press*.

Ashraf, N., et al (2008), "Female Empowerment: Impact of a Commitment Savings Product in the Philippines", *Economic Growth Centre: Yale University*.

Augsburg, B. (2006), "Econometric evaluation of the SEWA bank in India: applying matching techniques based on the propensity score", *Working Paper MGSoG/2006/WP003: Maastricht University*.

Banerjee, A., et al, (2009), "The miracle of microfinance? Evidence from a randomized evaluation", *http://econ-www.mit.edu/files/4162*.

Barnes, C. (2001), "Microfinance program clients and impact: an assessment of Zambuko trust, Zimbabwe", *USAID assessing the impact of microenterprise services (AIMS).*

Bhandari, L., Kale, S. (2008), "White Paper, Financial Inclusion and Digital Payments"*, Indicus Analytics, New Delhi, September 1, p.2.*

Brau, J., Woller, (2004), "Microfinance: A comprehensive review of the existing literature", *Journal of Entrepreneurial finance and business ventures*.

Browning, M., Chiapori, PA. (1998), "Efficient Intra-household Allocations: A general characterization and empirical tests", *Econometrica: http://www.jstor.org/stable/2999616.*

Chakraborty, K.C. (2009), "Pushing Financial Inclusion – Issues, Challenges and Way Forward"*,* 20th SKOCH Summit, Mumbai, July 17, 2009.

Chemin, M. (2008), "The benefits and costs of microfinance: evidence from Bangladesh", *Journal of Development Studies.*

Chen, MA., Snodgrass, D. (2001), "Managing resources, activities, and risk in urban India: the impact of SEWA bank", *USAID assessing the impact of microenterprise services (AIMS).*

Coleman, BE. (1999), "The impact of group lending in northeast Thailand", *Journal of Development Economics.*

Copestake, J. (2002), "Inequality and the polarising impact of microcredit: evidence from Zambia's copperbelt", *Journal of International Development.*

Copestake, J., Bhalotra, S., Johnson, S. (2001), "Assessing the impact of microcredit: A Zambian case study", Journal *of Development Studies.*

Copestake, J., et al, (2005), "Monitoring the diversity of the poverty outreach and impact of microfinance: a comparison of methods using data from Peru", *Development Policy Review.*

Cotler, P., Woodruff, C. (2008), "The impact of short-term credit on microenterprises: evidence from the Fincomun-Bimbo programme in Mexico", *Economic Development and Cultural Change.*

Datta, S (2011), "Crisis in Indian Microfinance: A Tale of Growth and (No) Regulation", Paper presented at the 86th annual conference of WEA held at San Diego during June29-July3.

Datta, Samar K. *et al* (2013), " Sustainability of Self-help and Joint-liability Group Institutions under Micro-finance", CMA Draft Report, IIM, Ahmedabad.

Datta, S., Nugent, JB, Wang, JL. (2002), "Intra-household Sources of Male-Female Differences in Labor Force Participation"*, International Journal of Development Issues*, Vol. 1, No. 2, pp.29-54.

Datta, Samar K, Singh, Srijanpal, Nilakantan, Rahul, Chakrabarti, Milindo, Das, Milan (2013), *Assessing Impact of Bandhan's Micro-credit and related Development Interventions,* Indian Institute of Management.

Deininger, K., Liu, Y. (2009), "Economic and social impacts of self-help groups in India", *World Bank Policy Research Working Paper No. 4884.*

Dev, M.S. (2007). *End -Term Appraisal of Andhra Pradesh District Poverty Initiatives Project*, Hyderabad: Centre for Economic and Social Studies, 1-67

Dunn, E., Arbuckle, JG. (2001), "The impacts of microcredit: a case study from Peru", *USAID assessing the impact of microenterprise services* (*AIMS).*

Duvendack, M., et al, (2011), "What is the evidence of the impact of microfinance on the well-being of poor people", *http://eppi.ioe.ac.uk.*

Field, E., Pandey, R. (2008), "Repayment Frequency and Default in Micro-Finance: Evidence from India", *http://www.hks.harvard.edu/fs/rpande/papers/repayfreqjeea_1107.pdf.*

Floro, M., Pan Y. (1990), "Informal Credit Markets and the New Institutional Economics: The Case of Philippine Agriculture", *Boulder, CO: Westview Press.*

Folland, S., Goodman, A. C., & Stano, M. (2009). The economics of health and health care (fifth edition ed.). Pearson Education Inc.

Galab, S. & Rao, N.C. (2003). Women's Self-Help Groups, Poverty Alleviation and Empowerment. *Economic and Political Weekly*, 38(12/13), 1274-1283

Garikipati, S. (2006), "The impact of lending to women on household vulnerability and women's empowerment: evidence from India", *World Development.*

Gokhale, K. (2009), "A Global Surge in Tiny Loans Spurs Credit Bubble in a Slum"*, The Wall Street Journal.*

Ghosh, R., (2005), "Microfinance in India: A critique", *Social Science Research Network,* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=735243*, pp-1.*

Ghosh, R., (2005), "Microfinance in India: A critique", *Social Science Research Network, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=735243, pp-5-6.*

Hashemi, SM., et al, (1996), "Rural credit programmes and women's empowerment in Bangladesh", *World Development.*

Kabeer, N. (2001), "Conflicts over credit: re-evaluating the empowerment potential of loans to women in rural Bangladesh"*, World Development,* 29, 1, pp. 63-84.

Kantor,P. (2003), "Women's Empowerment Through Home-based Work: Evidence from india"*, Development and Change, Vol-34.*

Karim, L. (2011). Microfinance and its discontents: Women in debt in Bangladesh. London: University of Minnesota Press.

Karlan, DS. (2001), "Microfinance impact assessments: the perils of using new members as a control group", *Journal of Microfinance.*

Karlan, D., Xavier, G. (2006), "Group versus Individual Liability: A field experiment in the Philippines*", World Bank Policy Research Working Paper.*

Karlan, D., Xavier, G. (2006), "Group versus Individual Liability: long Term Evidence from Philippines Microcredit Lending Groups", *Social Science Research Network Electronic Paper Collection: http://ssrn.com/abstract.*

Karlan, D., Tedeschi, A. (2006), "Female Empowerment: Impact of a Commitment Savings product in the Philippines.", *Social Science Research Network Electronic Paper Collection: http://papers.ssrn.com/sol3/papers.cfm.*

Karlan, D., Zinman, J. (2009), "Expanding credit access: using randomised supply decisions to estimate the impacts", *Review of Financial Studies.*

Karmakar, K.G. (2011), "MFIs or SHGs?", Paper presented at the 86th annual conference of WEA held at San Diego during June29-July3.

Karmakar, K. G., Banerjee, G. D., & Mohapatra, N. P. (2011). Towards Financial Inclusion in India. Delhi: Sage Publications Ltd.

Kaur, R., & Kaur, K. (2012). Scent to strength - An expedition of women entrepreneur on the cooperative road. *Biz n Bytes, 1*, 19.

Kulkarni, N. (2011). A technology requirements and governance framework for Rural Microfinance: An Indian perspective. In A. Ashta, *Advanced Technologies for Microfinance: Solutions and challenges* (pp. 138-140). Hershey, PA, US: Business Science Reference.

Khandker, SR., Samad, HA., Khan, ZH. (1998), "Income and employment effects of microcredit programmes: village-level evidence from Bangladesh". *Journal of Development Studies.*

Khandker, SR. (2005), "Microfinance and poverty: evidence using panel data from Bangladesh", *The World Bank Economic Review.*

Kochhar, S., (2009), "Speeding Financial Inclusion", *National Study on Speeding Financial Inclusion-SKOCH Development Foundation, pp-3-4.*

Kulkarni, Sharmila (2010), *Co-Rays – A Movement called Tatyasaheb Kore*, published by Warana Sugar Factory (Kolhapur, Maharashtra) on the occasion of its Golden Jubilee Celebration.

Leist, H. (2004). *Brief Technical Report on Swasthyapurna Mutual Health Fund.* Pune: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH.

McGuinness, E. (2011). *A fine balance: A case study of the client value of health microinsurance—Uplift I.A.* Pune: Financial Services Assessment project.

Mahmud, S., et al, (2012), "Measurement of Women's Empowerment in Rural Bangladesh", *World Development.*

Manser, ME., Brown, M., (1980), "Marriage and Household Decision making: A Bargaining Analysis", *International Economic Review*, *21(1), 31.44.*

McElroy, MB., Horney, MJ. (1981), "Nash Bargained Household Decisions", *International Economic Review, 22(2): 333.349.*

McKernan, SM. (2002), "The impact of microcredit programmes on self-employment profits: do non-credit programme aspects matter?", *Review of Economics and Statistics.*

Menon, N. (2006), "Non-linearities in returns to participation in Grameen bank programmes", *Journal of Development Studies.*

Morduch, J. (1998), "Does Microfinance Really Help the Poor? New Evidence from Flagship Program in Bangladesh", *http://www.nyu.edu.*

Morduch, J. (1999), "The Microfinance Promise", *Journal of Economic Literature.*

NIA (2010). An Assesment of the Micro Insurance Initiative (MIA). National Insurance Academy, Pune.

Pitt, MM., Khandker, SR. (1998), "The impact of group-based credit programmes on poor households in Bangladesh: does the gender of participants matter?", *Journal of Political Economy.*

Pitt, M., Shahidur,K.,McKernan, S., Latif, A. (1999), "Credit programs for the poor and reproductive behaviour in low income countries: Are the reported causal relationships the result of heterogeneity bias?" *Demography 36(1)(February): 1–22.*

Pitt, M., Khandker, SR., Cartwright, J. (2006), "Empowering women with microfinance: evidence from Bangladesh", *Economic Development and Cultural Change*.

Planning Commission. (2012). Twelfth Five Year Plan Volume 3. Delhi.

Rahman, A. (1999), "Micro-credit initiatives for equitable and sustainable development: Who pays?", *World Development, Vol 27.*

Rahaman, M., DaVanzo, J. (1998), "Do better family planning services reduce abortion in Bangladesh?", *The Lancet: http://www.sciencedirect.com.*

Ranadive, J.D. (2004). 'Women's Self-Help Groups in Andhra Pradesh-Participatory Poverty Alleviation in Action' in *A Case Study from Scaling Up Poverty Reduction: A Global Learning Process and Conference, Shanghai:* The World Bank

Rao, S. (2005). 'Women's Self-Help Groups and Credit for the Poor- A Case Study from Andhra Pradesh' in Ramachandran, V.K. & Swaminathan, M. (ed.) *Financial Liberalization and Rural Credit in India*, New Delhi, Tulika Books, 204-237

Rodsenzweig, M., Schultz, T. (1983), "Estimating a Household Production Function: Heterogeneity, the Demand for Health Inputs, and Their Effects on Birth Weight", *Journal of political Economy*

RTI (2005). '*Society for Elimination of Rural Poverty (SERP)*' in Information Manual: Rural Development Projects, Schemes and Programmes. Department of Rural Development: Government of Andhra Pradesh, 55-67

Srinivasan, N., (2011), "Microfinance India- State of the Sector Report", *SAGE India,* pp-107-110.

NCEUS (2007), Reports on financing of Enterprises in the Unorganized Sector & Creation of a National Fund for the Unorganized Sector *(NAFUS),* National Commission for Enterprises in the Unorganized Sector, November. www.nceus.gov.in

Robinson, M. S. (1998), 'Microfinance: the Paradigm Shift From credit Delivery to Sustainable Financial Intermediation', *Strategic Issues in Microfinance*.

Schuler, S., Hashemi, SM., Riley, A. (1997), "The influence of women's changing roles and status in Bangladesh's fertility transition: Evidence from a study of credit programs and contraceptive use", *World Development.*

Schultz, T. (1990), "Testing the Neoclassical Model of Family Labor Supply and Fertility", *The Journal of Human Resources.*

Sen, A. (1992), "Missing women." *British Medical Journal 304: 586–587*.

Sen P.K. (2004), "Innovations in Rural Microfinance in India-An Overview", Paper presented at IRMA Silver Jubilee Symposium 2004, *mimeo.*

Sen P.K. (2011), "Microfinance in India: Some Key Features", Paper presented at the 86th annual conference of WEA held at San Diego during June29-July3.

Setboonsarng, S., Parpiev, Z. (2008), "Microfinance and the millennium development goals in Pakistan: impact assessment using propensity score matching", *Asian Development Bank Institute (ADBI) Discussion Paper No. 104*.

Srinivasan, N. (2009), "Microfinance India: State of the Sector Report", *Access Development Services.*

Srinivasan, N. (2010), "Microfinance India: State of the Sector Report"*, Sage Publications*.

Tankha, A. (2012). Banking on Self-Help Groups: Twenty years on. New Delhi: Sage Publications Ltd.

Thomas, D. (1990), "Intra-household allocation: An inferential approach", *Journal of Human Resources.*

Velasco, C., Marconi, R. (2004), "Group dynamics, gender and Microfinance in Bolivia", *Journal of International Development*.

World Bank, (2002), "*World Bank Indicators", Washington, D.C., World Bank.*

Appendix 1

Comments on the Study
"Sustainability of Self-help and Joint Liability Group Institutions under Micro-finance"
by
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The main objective of the study is to analyze the current and future sustainability of the SHG s and JLG s. The study used secondary data from the "Status of Micro-finance in India" reports of NABARD, conducted case studies in Andhra Pradesh and Kerala and also drew from case studies of NABARD-supported SHG s and JLG s in the states of Maharashtra and Gujarat. The study also carried out an extensive primary data survey in West Bengal.

The following are the broad comments / suggestions on the study

1. A small section on micro finance sector may be added in the introductory chapter, giving details of the basic functioning of SHG s and JLG s including the MFI-Commercial bank linkages. This will be useful to readers not familiar with the subject and will enable them to appreciate the later chapters better.

2. Overall, the methodology followed in the study is appropriate. However, the focus appears to be only on successful SHG s and JLG s. The study would be more useful if few cases of non-successful SHG s and JLG s are studied and contrasted with the successful ones.

3. In this context one more state, particularly Andhra Pradesh, may have been included in the primary data analysis. AP had a major MFI crisis in 2010 and would have proved a good study for understanding the factors that can go wrong in the microfinance sector. The issues at the centre of AP crisis were excessive focus on micro-finance and neglect of larger livelihood issues. <u>Since a primary survey in AP is perhaps not possible at this stage,</u> an intensive case study or even a thorough review of some of AP's failed SHG s or JLG s will be very enriching.

4. Most of the tables are described but the explanation is missing. The study will improve a great if explanation is provided in addition to description.

5. It would improve the study a great deal if the sustainability issue is addressed in its various dimensions and constraints studied from all angles– economic (supply and demand side factors), institutional (informal and formal institutions, regulatory framework etc), cultural (peoples' organizational ability and others). Most of the material is already there in the report and only needs to be presented in a more systematic manner.

6. There are a number of grammatical errors and spelling mistakes. Assistance from professional copy editor will improve the report.

7. Table 4.1a – Are differences in means statistically significant? Given the fact that subsequent write-up refers to these differences at length, it needs to be tested whether these differences are statistically significant or not? t-test for difference of group means may be used for this. **This observation applies to <u>all the tables in this chapter and other chapters</u> where statements are based on differences of means**.

8. In this table, some explanation may be attempted for the long delays observed. This also applies to other tables where description can be improved with some explanation.

9. The write-up on table 4.3a does not tally with the table. Please check

10. The write-up on table 4.4b does not tally with the table. "This is also partly reflected in annual % attendance – i.e. 100% for old and reconstituted groups and 95% for old groups". The percentages in the last row of the table are different

11. In table 4.4c, the "total score on all counts" and "per year attendance …" are expected to be correlated since higher is the liking for meetings, higher is the attendance at the meetings. However, this does not seem to be the case. May be explained if possible.

12. In tables 4.5a to 4.5f , mention attendance percentages in the last row as done in tables 4.4a to 4.4f. This will enable the reader to see the link between the total score and attendance

13. Tables 4.6a and 4.6b, although important, are unclear. Do the percentage changes in the table indicate changes in the *composition of the group* or changes in the *status of the members* of the group? In the former, if there is an improvement in the literacy status, it may be that more literate members have replaced less literate ones over time (since inception) making the composition of the group more literate. In the latter case, same members become literate over time leading to improvement in their status. Please clarify this issue. This applies to other percentages as well in these tables.

14. Also in tables 4.6a and 4.6b, please explain the channels through which these changes in literacy, BPL status and occupational composition are coming about? Panel B in these tables (BPL status) has not been discussed at all in the write-up.

Appendix 2: Response to IEG Comments on the Draft Report

1	A small section on micro finance sector may be added in the introductory chapter, giving details of the basic functioning of SHG s and JLG s including the MFI-Commercial bank linkages. This will be useful to readers not familiar with the subject and will enable them to appreciate the later chapters better.	Several sentences added at the end of paragraph 1.2 of Chapter 1 to provide basic knowledge of micro-finance functioning in India, though relevant points are always made while explaining results or drawing conclusions.
2	Overall, the methodology followed in the study is appropriate. However, the focus appears to be only on successful SHGs and JLGs. The study would be more useful if few cases of non-successful SHG s and JLG s are studied and contrasted with the successful ones.	The referee seems to have missed the point that the main empirical chapter (Ch-4) is based on a stratified random sample. Even the secondary data based chapter is based on NABARD's published data for the micro-finance sector, though it may be possible that less successful organizations may not be sharing their data with NABARD. To reflect on the sustainability issues on a broader graphical area – at least in qualitative terms, the author attempted to hurriedly cover AP, Kerala, Gujarat & Maharashtra (Ch. 5-6), where presumably the officials seem to have taken them to visit relatively successful cases. But even then they could not hide the glaring weaknesses, as a careful reader of these chapters can find out, nor could they overshadow the fundamental weaknesses pinpointed in random sample-based Ch-4. When success is so few and far between, question of contrasting successful and failure cases doesn't arise.
3	In this context one more state, particularly Andhra Pradesh, may have been included in the primary data analysis. AP had a major MFI crisis in 2010 and would have proved a good study for understanding the factors that can go wrong in the microfinance sector. The issues at the centre of AP crisis were excessive focus on micro-finance and neglect of larger livelihood issues. <u>Since a primary survey in AP is perhaps not possible at this stage,</u> an intensive case study or even a thorough review of some of AP's failed SHG s or JLG s will be very enriching.	All the basic ingredients for AP Crisis – namely, excessive borrowing from multiple sources, high interest charges on petty local business of unskilled/low-skilled people, hardly or no margin of profit, hardly any hand-holding support – are already there, as a careful reader can see, in the Bengal chapter, though it hasn't so far blown like AP Crisis. As the AP case is studied extensively, nor was it the intention, there was no point in drawing an additional sample from AP or somewhere else. The purpose of quickly visiting AP or Kerala was to find out if they could provide any rays of hope and if yes, how.

4	Most of the tables are described but the explanation is missing. The study will improve a great if explanation is provided in addition to description.	The whole of Ch-4 based on primary data is re-written using a sharper analytical mode – not only by distinguishing exogenous variables from endogenous (input, output & outcome) ones, but also by using more rigorous statistical analysis. Even then results are explained as far as possible, but not at the cost of repetition.
5	It would improve the study a great deal if the sustainability issue is addressed in its various dimensions and constraints studied from all angles– economic (supply and demand side factors), institutional (informal and formal institutions, regulatory framework etc), cultural (peoples' organizational ability and others). Most of the material is already there in the report and only needs to be presented in a more systematic manner.	Hopefully, the revised methodology deployed for primary data analysis in this revised version would look more systematic and methodologically correct compared to the earlier one. While mostly economic and local institutional issues are highlighted during reporting of results in Ch. 3-7, larger including regulatory issues are brought out in the concluding chapter.
6	There are a number of grammatical errors and spelling mistakes. Assistance from professional copy editor will improve the report.	Though a request was made soon after submission of draft report, hopefully the matter will be placed before a professional editor after this final report is submitted. Meanwhile, the lead author has undertaken editing and correction as far as possible.
7	Table 4.1a – Are differences in means statistically significant? Given the fact that subsequent write-up refers to these differences at length, it needs to be tested whether these differences are statistically significant or not? t-test for difference of group means may be used for this. **This observation applies to <u>all the tables in this chapter and other chapters</u> where statements are based on differences of means**.	In the draft report, CVs were given alongside means to provide clues to the reader to find out whether or not to trust mean differences when CVs are too high. Following suggestion of the referee, explicit t-results are shown almost throughout Ch-4 – not only paired t (to judge significance of spatial differences), but also Student's t (to judge significance of intertemporal changes – especially whether greater than zero). However, it must be cautioned that when so many factors are at play, significance of t-test between any two factors is neither a necessary, nor a sufficient condition for significance of relationship between the two – not to speak of the direction of causation. The reader's attention is drawn in this context to footnote 1 to revised Ch-4.
8	In this table, some explanation may be attempted for the long delays observed. This also applies to other tables where description can be improved with some explanation.	See footnote 3 in Ch-4 for explanation of processing delays in SHGs.

9	The write-up on table 4.3a does not tally with the table. Please check.	Tables displaying means of extremely limited number of observations on certain variables, which are susceptible to high errors, are deleted.
10	The write-up on table 4.4b does not tally with the table. “This is also partly reflected in annual % attendance – i.e. 100% for old and reconstituted groups and 95% for old groups”. The percentages in the last row of the table are different.	Captured with explanation in Tables 4.2a-b-c (Ch-4)
11	In table 4.4c, the “total score on all counts” and “per year attendance …” are expected to be correlated since higher is the liking for meetings, higher is the attendance at the meetings. However, this does not seem to be the case. May be explained if possible.	Captured with explanation in Tables 4.16a-b-c (Ch-4)
12	In tables 4.5a to 4.5f, mention attendance percentages in the last row as done in tables 4.4a to 4.4f. This will enable the reader to see the link between the total score and attendance	Only newer individual members are found to have significantly more reasons to have better attendance in group meetings, as pointed out while explaining Table 4.16b in Ch-4 (though this isn’t true at group level).
13	Tables 4.6a and 4.6b, although important, are unclear. Do the percentage changes in the table indicate changes in the *composition of the group* or changes in the *status of the members* of the group? In the former, if there is an improvement in the literacy status, it may be that more literate members have replaced less literate ones over time (since inception) making the composition of the group more literate. In the latter case, same members become literate over time leading to improvement in their status. Please clarify this issue. This applies to other percentages as well in these tables.	As mentioned earlier, a modular approach is followed in this revised version of Ch-4, where both spatial and intertemporal changes are noted in exogenous (initial) conditions, in application of inputs, in generation of direct output from micro-finance, and in various dimensions of outcome, though a formal general equilibrium model showing direct interplay across these factors couldn’t be put forward, nor intended. Though only limited results could be observed, micro-finance has nevertheless expanded earning opportunities and given greater outside exposure to the women folk, thus enabling improvement in certain, but not all fronts. This is explained in text as well as in the concluding chapter.
14	Also in tables 4.6a and 4.6b, please explain the channels through which these changes in literacy, BPL status and occupational composition are coming about? Panel B in these tables (BPL status) has not been discussed at all in the write-up.	See explanation above.