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Impact of Micro-credit on the Agrarian Economy – A Case Study in Hooghly District of West Bengal, India

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Abstract

This study focuses on the impact of micro-credit upon the livelihood of rural households based on empirical study over 549 stakeholders of SHGs (Self Help Groups) in Hooghly district of West Bengal State in India. One of the distinct areas of the study concerns with the comparative analysis of different rural enterprises propagated through micro-credit. Another objective of this study has been to compare and contrast income as well as savings position of the sample households before receiving financial credit. Additionally, this study attempted to discriminate between high-performing and low-performing stake-holders on the basis of selected socio-economic indicators.

The aggregate savings-income relationship among the stakeholders using regression analysis with dummy variables referring to time-periods was examined. The groups of stakeholders in terms of performance using Linear Discriminant Analysis (LDA) were also studied. Characteristics of groups have also been identified by LDA method.

This study revealed striking impacts of micro-credit on the livelihood of rural households, particularly on the resource-poor, marginal households in terms of income, employment and savings. However, degree of impact has varied across different rural enterprises. Micro-credit has expanded employment opportunities of rural women irrespective of enterprises. This study also found high-level of performing scores among the groups being engaged in non-agricultural or non-farm activities.

In fine, some policy measures have been advocated for improvement of livelihood of rural households.

Keywords: Return on Investment, garrett's ranking, regression with dummy variable, aggregate savings-income relationship, Linear discriminant analysis (LDA).

The policy of liberalization under the globalize economy is based on 'fund bank approach'. The Indian economy has faced a competitive and deregulated financial and banking sector within the maximum possible thrust on market orientation. The

Narshima Committee appointed by RBI (1991) recommended that in new liberal regime the government must withdraw from formal rural credit sector within a discontinuation of the interest rate subsidy in the priority sector in rural lending. The formal banking sector was criticized largely for its inefficient and non-viable operation particularly in rural sectors. The role of formal rural credit has been disregarded since the introduction of the New Economic Policy of Rao-Manmohan after reform of financial and banking sector.

Thus, the need of alternative policies, systems and procedures leading to the efficient financial systems which would fulfill the requirements of the poorest, especially of the women members of such households by emphasizing on improving the access of them to micro-credit and microfinance was undeniable. The network of existing rural banks was reconstructed to focus on creating alternative organizations and finding ways and means to improve the access of the poor to existing banking network. Micro-finance is assumed to have an immense importance in under developed and developing economy in the view of its efficacy in credit disbursement, loan repayment and reduction of poverty. It has acquired a spectacular fame in several such countries like Bangladesh, Indonesia, Philippines, Kenya, and Bolivia. The experience over the world has proved that the poor has a meager scope to get access to timely and adequate credit to meet their emergent need. In India, despite large banking network, majority of the poor, especially in rural area has either no access or inadequate access to the formal banking system due to lack of initiatives in adopting and implementing the innovative method of banking with the poor. Thus, the importance of establishment a link between informal credit system and formal banking institutions for accelerating the pace of implementing credit programme for the poor is highlighted.

The chief objective of the study is to examine the efficacy of micro credit movements in Hooghly district of West Bengal, India. The specific objective is to evaluate the functioning of stake-holders with reference to economic activities undertaken, benefits derived and the impact of micro-credit system on the livelihood of rural households.

Methodology

In 1950s, Community Development Programmes marked the first efforts at alleviation of rural poverty in India. Integrated Rural Development Programme (IRDP) launched in 1976 was the first major intervention on eradication of rural poverty by generating self employment. But the deficiencies related to poor recovery of loans (around 41%) due to uncoordinated action by supporting programmes the Swarnajayanti Grameen Swarozgar Yojana (SGSY) was launched in 1st April,1999 replacing IRDP and its complementary programmes. The main task of SGSY to give proper guidance the cluster based activities by identifying few key activities in each block to be taken up by self-help groups (SHG).

The study is addressed to Hooghly district which happens to be a mixed profiled district of the state West Bengal, India in terms of different socio-economic characteristics. About 94% of total area belongs to rural area where 65.97% of total population live as can be seen in state census report. Four blocks out of 18 blocks contained in the district were selected through SRSWOR. Twenty villages were selected purposively on the basis of availability of the self-help group (SHG) works as the alternative policy of financing the hardcore poor to alleviative poverty brings the concept of SHG into the picture. Fifty two (52) SHG were selected for the present study depending upon the maximum possible income generation programmes under taken by the groups in the four blocks using convenience sampling. Each group contains on an average 10-12 members. The ultimate sample size was 549 members from different SHGs.

Following regression analysis with introduction of dummy variable was employed to find out whether the aggregate savings-income relationship had changed between the two periods, before and after joining the SHG

$Y_i = \alpha_1 + \alpha_2 D_i + \beta_1 X_i + \beta_2 (D_i X_i) + u_i$ ---------- (1)

Where,

Y_i = Savings in rupees

X_i = Income in rupees

U_i = Disturbances

D_i = {1, for the first period

0, for the second period}

Assuming, $E[u_i] = 0$, from equation (1) it can be derived,

$E[Y_i / D_i = 0, X_i] = \alpha_1 + \beta_1 X_i$,

$E[Y_i / D_i = 1, X_i] = (\alpha_1 + \alpha_2) + (\beta_1 + \beta_2) X_i$

The extent of impact was measured in terms of income changes of the respective members after joining SHGs. Members were classified into two distinct groups, viz; high-performing group(0) and low-performing group(1). High-performing group represents those members who raised their income by 15% or more after becoming members. Linear Discriminant Analysis (LDA) was used to classify cases into groups by a prediction equation, also to test theory by observing whether cases are classified as predicted and to investigate difference between or among groups in most parsimonious way. In order to identify the factors influencing the discrimination of two groups viz. 0 and 1, the function used is given by:

$$Z = \sum_{i=1}^{k} \lambda_i . Z'_i$$

Where,

K is number of independent factors

λ_i is the determinant function co-efficient

The basic assumption on which the entire LDA is based on is that each and every group or class belongs to multivariate normal population. This assumption warrants for precise estimation of probabilities and subsequent test of significance. But it is very difficult to get such data from the micro level. To tackle this problem the whole sets of data were transformed into standard normal variate:

$Z'_i = [\{X_i - \text{mean}(X)\} / \text{standard deviation}(X)]$.

Let d_i is the difference between the means of Xi

S_j is the variance covariance matrix

The λ's are obtained by solving the system of equations.

$(\lambda_i)(S_{ij}) = d_i$

To test the discriminating power of the function, the test statistics (T.S)

$$T.S = \{n_1 n_2 (n_1 + n_2 - k - 1) / K(n_1 + n_2)(n_1 + n_2 - 2)\} \times D^2$$

Where, D^2 is the Mahalanobis function and obtained as

$$D^2 = \sum_{i=1}^{k} \lambda_{ii} . d_i$$ and,

n_1 and n_2 are sample sizes.

The test statistic follows F distribution with K and $(n_1 + n_2 - k - 1)$ degrees of freedom.

The percentage contribution of different factors towards group discrimination has been worked out as:

$[\lambda_i d_i / D^2] \times 100$.

Results and Discussion

Status of the groups is considered to estimate the current performance and to through light on their future activities. Out of 52 sample groups interviewed, most are formed by the NGOs a sufficient time back. Nine NGOs functioning in the district are Hijli

Inspiration, Servik Vivekananda Gram Seva Sanstha, Balipur Flarence Nightiugala Community Welfare Centre, Shree Sanchari, Ratanpur Nabarun Sangha, Consortium for Training Research and Development (CTRD), SPADE, Madanpur Mayarati Society and Calcutta Youth Self Employment Centre (CYSEC). Previously NGOs formed a large no of groups in Hooghly district. But in the absence of their continuous patronage a large no of groups either broken down or became seek. Now a day most of the groups are formed by Panchayet Samittee with the help of the resource persons in order to provide skill development training to the SHG members. Out of the selected 52 groups 38 groups are "women only" groups, 8 are "male only" groups and the rest 6 groups are gender neutral or mixed in nature.

Age of the Groups

The distribution of selected SHGs according to periods of function is presented in Table-1. Most of the groups are formed a sufficient time ago by the NGOs with the size of 10 to 12 which are self-managed.

Table 1: Period of Selected SHGs

Period of SHG	No of SHG
< 1 year	0
1-4 year	4
4-6 year	38
>6 year	10
Total	52

Profile of the Members

The members of the groups come mostly from poor and back stepped section of the society. Mainly families suffering from inadequate live hood opportunities are drawn for group formation. There are 549 members in 52 groups. An analysis of the composition of the membership indicates some features which are given in Table-2.

Table 2: Profile of SHG Members

Percentage of members of the age group 18-50 years	87.00
Percentage of Hindu members	84.00
Percentage of Muslim members	16.00
Percentage of SC/ST members	33.56
Percentage of widows	10.00
Percentage of literates	80.00
Percentage of members having kutcha house	81.00
Percentage of members having pucca house	6.00
Percentage of members having cutcha-pucca house	13.00

Most of the SHG members in this study belong to marginal farming community as can be seen in Table-3. About 15 percent of the sample members have no land and about 26 percent belong to small farm holding having an average of 3.52 acres of cultivated area.

Table 3: Distribution of SHG Members according to Size of Cultivated Land

Cultivated land (acre)	No. of SHG member	Percentage of SHG members	Average size of land(acre)
Nil	82	14.93	Nil
Up to 2.5 acre(marginal farmer)	325	59.20	1.48
2.2 to 5.00 acre(small farmer)	142	25.86	3.52
Total	549	100	

Reasons for joining SHGs

Major reasons for joining SHGs have been identified according to the opinion made by the sample respondents which are as follows:

- To start income generation programmes (80.78 percent).
- To improve their socio-economic condition in the society (78.89 percent).
- Without sufficient time and energy loss and at the same time with minimum transaction cost credit is available at an earlier opportunity (77.68 percent).
- To save themselves from the clutches of money lenders (72.13 percent).

Savings

Savings are undertaken in all the groups on monthly basis and the amounts saved varied from Rs. 20 to 50 per member. The savings are pooled together in a common fund and utilized for inter loaning among the members.

Credit

Almost all members of the groups had taken loan, sometimes more than one time from their savings account and from the C.C A/C. On average each member has taken four to five loans. Of the total number of loans taken (2512), around 2 percent are small loans (< Rs.1000) as can be seen in Table-4. Around 13 percent of the loans are big loans (> Rs. 5000). Around 25 percent of total loans belong to the ranges of Rs. 3000-4000 and Rs. 4000-5000 each time separately.

Table 4: Extent of Loan to the Sample Members

Extent of Loans in Rs.	Number of Loans
< 1000	50 (1.99)
1000 - < 2000	265 (10.55)
2000 - < 3000	605 (24.08)
3000 - < 4000	628 (25.00)
4000 - < 5000	639 (25.44)
5000 - <10,000	230 (9.15)
>10,000	95 (3.78)
Total	2512 (100.00)

Note: Figures in the parentheses indicates percentage of the total.

The period of loan in all the groups is medium term and repayable by five years in 60 equal installments along with interest rate. At the outset, members borrowed for consumption purpose and after that they slowly shifted their focus to production purpose. Purpose wise distribution of loans is shown in Table-5.

Table 5: Distribution of Loans at different Purpose

Purpose of Credit	Number of loans
Animal Husbandry	261 (10.39)
Household Expenses	514 (20.46)
Agriculture	465 (18.51)
Medical Expenses	494 (19.66)
Education	173 (6.88)
Repayment of old loan	73 (2.90)
Housing	367 (14.61)
Trade and micro-enterprises	165 (6.57)
Total	2512 (100.00)

Note: Figures in the parentheses indicates percentage of the total.

Activity Assisted

All the 52 groups got the assistance for group activity as no individual assistance is granted in this system. The members have chosen a wide spectrum of income generation programmes (IGP). Nine different types of IGP namely, Paddy Processing, Goat Rearing, Weaving, Bag making, Areca-nut Processing, Readymade Garments, Tailoring, Cigar(local) Making and Fishery are found to be adopted by the sample groups.

Nature of Income Generation Programme may be broadly classified as manufacturing and non-manufacturing income-oriented programmes which can be depicted in Fig.3.

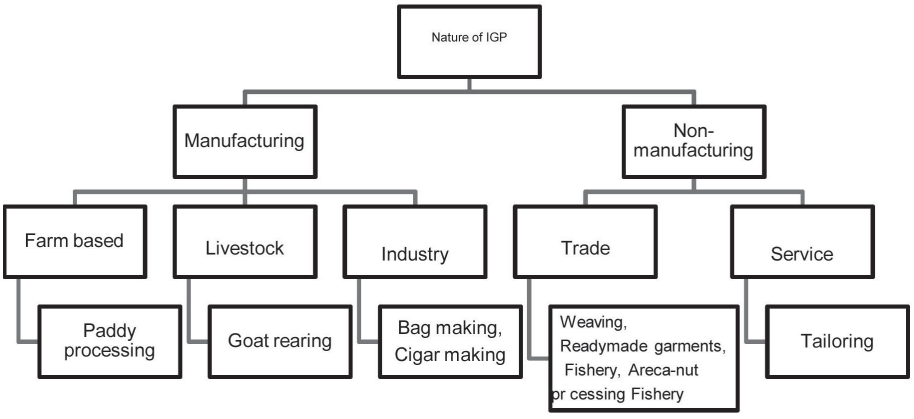

Fig.3: Nature of IGP

It is revealed from Table-6 that majority of the members out of the 52 groups have gone for farm based activity followed by trade related activities and then by livestock based activity. Two sectors like, cottage industry and service have been preferred by small number of members.

Table 6: Nature of Activities Adopted by the Sample Members

Nature of Activity	Number of members engaged
Farm based activity	189 (34.42)
Livestock based activity	137 (24.95)
Industry	31 (5.65)
Trade	182 (33.15)
Service	10 (1.82)
Total	549 (100.00)

Note: Figures in the parentheses indicates percentage of the total.

Level of Participation in SHG activity

Members have to participate in various activities of the SHG. But SHG do not force any member to participate in every activity of the group. Here five activities of SHG have been chosen to calculate the participation index of the members. Participation index gives us the intensity of involvement of a member in different activities as can be presented in Table-7.

Participation Index = $\Sigma W_i / N$

Where ΣW_i = Weighted sum of participation of the members in the different category of activities of the SHG.

N = Sample size

In calculating participation index we have made the following consideration.

- If a member participates in any activity every times then we assign him / her value 1 and if he / she participates sometimes then we assign him / her value ½, i.e. for yes → 1 and for sometimes → ½.
- Two activities have been given the weights of 20 and rest four have been given the weights of 15.

Table 7: Level of Participation in SHG Activity

Activity Weights	Farm based	Livestockbased	Industry	Trade	Service
A 15	1560	1447.5	660	3182.5	439
B 15	1685.5	1586	980	3151.5	390
C 20	1850	1812	1027	2958	535
D 20	2115	2618	1343	3506	628
E 15	2087.5	1348.5	918	3086	585
F 15	2236	2240	720	2202	619
Total	11534	11052	5648	18086	3196
Sample size	177	153	81	246	47
ParticipationIndex	65.16	72.23	69.73	73.52	68.0

Note:

- A = Do you participate in all the meetings yearly / monthly?
- B = Do you give your opinion in every decision?
- C = Do you actively participate in all the activities of the group?
- D = Do you contribute to the savings of the group regularly / consistently?
- E = Do you motivate other people or the management about the prospects / procedure of such group activity?
- F = Do you utilize loan productively / unproductively?

Extent of Investment

The investment varies from trade to trade. Activity wise extent of investment indicates that around 35 percent of total investment was in farm based activity as shown in Table-8. About 22 percent of total investment was in livestock based activity. Nearly 36 percent of total investment was in trade sector. Only 1.5 percent was in service sector. On an average each individual has made an investment of Rs.21,834.

Table 8: Extent of Investment on different Activities

Type of Investment	Amount of Investment (Rs.)
Farm based	4250000 (35.45)
Livestock	2670000 (22.27)
Industry	582000 (4.85)
Trade	4305000 (35.91)
Service	180000 (1.50)
Total	1,19,87,000 (100.00)

Note: Figures in the parentheses indicates percentage to the total investment.

In case of any deficit, members raise funds from their C.C.A/C. Out of the total investment of Rs.1,19,87,000/- , 94 % of the funds have been provided under SGSY scheme which include loan and subsidy and the other 6 % is raised by way of loan from the C.C.A/C of different groups. Total investment per member is Rs. 21,834 of which Rs.20,382 was made out of loan and subsidy under SGSY scheme and Rs. 1452 was made out of C.C.A/C of the members.

Economics of the Trade

In order to find out earnings from each of the activity undertaken by the members, revenue generated and the expenditure incurred to generate the revenue by each group per annum under the activity have been calculated. This has helped us to arrive at the net income per annum for each activity. The profit margin on investment is calculated by dividing the net income by investment for each activity which has been presented in Table-9.

Table 9: Returns on Investment from different Trades

Trade	Return on Investment(in %)
Paddy Processing	86.00
Goat Rearing	75.00
Weaving	62.00
Bag Making	57.00
Areca-nut Processing	65.00
Readymade Garments	59.00
Tailoring	60.00
Cigar Making	62.00
Fishery	65.00

The rate of return on investment varies from trade to trade. It was observed that the family members of the group members are also involved in different processes of the activities. As for example the Paddy to Rice activity involves the family members at different stages. Similarly, Cigar making also involves family members. This gives rise to a high return on investment. Considering the investment made and the

return on investment it could be inferred that around 274 members out of 549 are earning a differential increase of income of the amount Rs. 1600 per head per month. Remaining 275 members are earning a differential increase of income within the range of Rs. 800 to Rs. 1200 per head per month. Thus all the members with financial assistance from SGSY have an improvement of their total income per month. But it also comes out from the result that SGSY assistance should be increased and assistance should reach the members without delay and in full amount. Because of inflation when the assistance reaches the members after a time gap they need more money to continue the job. The members should be guided for proper utilization of the assistance. Members should also try to use the assistance more efficiently.

Benefits Received by SHG Members Under SGSY Scheme

Due to join in SHGs, there have been a lot of changes in economic and social condition of the people. Here benefits are divided in to six categories. Constraints and problems faced by the participants have been prioritized by Garrett's Ranking Technique in the following manner:

Percentage position = $\{100(R_{ij} – 0.50)\}/N_{j,}$

Where,

R_{ij} = Rank given for the ith item by the jth individual, and

N_j = Number of items ranked by the jth individual. The percentage position of each rank was converted into scores using Garrett table. For each constraint scores of individual respondent were added together and were divided by total no. of respondents for whom scores were added. Thus, mean score for each constraint was ranked by arranging them in the descending order.

Table 10: Benefits Received by the Sample Respondents

Sl.No	Benefits	Total Score	Mean Score	Rank	No. of Respondents
1.	Increased income	28436	60.12	1	473
2.	Better access to credit facilities	23033	51.76	2	445
3.	Received new skill/ training	17778	48.05	4	370
4.	Reduced work load	9542	35.08	6	272
5.	Better status and decision making power	14549	41.10	5	354
6.	Participation in social service and organized action	20371	49.93	3	408

Table-10 represents the ranking of benefits enjoyed by the sample respondents according to their importance.

They assigned the first rank to "increased income". Just because of the fact that all the sample respondents feel that joining SHG has enhanced their income significantly. They can think of a better future. Then they placed their second choice to "better

access to credit". This is because of the fact that since now they are part of SHG they are entitled to a credit market which was impossible for them so far earlier. Then they assigned third rank to "participation in social service and organized action". The membership of SHG has helped them to organize together and voice their grievances in unison. Then came" received new skill/training" in the fourth position. Since because of the fact that being a part of SHG they are now entitled to acquire training and new skill in different work from different sources. The fifth rank was given to "better status and decision making power" within the family and society after joining SHGs. Lastly "reduced work load" was placed at the sixth position i.e. all the sample respondents feel that joining SHG did not reduce their work load or in other wards it has enhanced their working hour. Thus, the benefits from the scheme are found to be encouraging and empowering the sample members in the study area most of whom are women.

Difficulties Faced by the SHG Members

Table-11 records the problems encountered by the sample SHG respondents during the course of their production activity. They put the first rank to "non availability of timely credit". This is because of the non-cooperation of bank regarding timely processing of loan. Without currency in hand they face the problem of delayed starting of work. Then they placed second rank to "marketing problems". After that third rank was given to "competition from mechanized better quality substitutes". "Lack of transport facilities" was placed to the fourth place and "lack of co-ordination in the activities of the group members" to the fifth place. Lastly came the remaining two cases of "difficulty in getting raw materials" and "lack of regular work" in the sixth and seventh place. So one thing is clear that the respondents are getting more or less regular work and raw materials are easy to avail. These two poses no intensive problem to them.

Table 11: Difficulties associated with the Sample Respondents

Sl.No.	Benefits	Total Score	Mean Score	Rank	No. of Respondents
1.	Difficulty in getting raw materials	15980	44.89	6	356
2.	Lack of regular work	14845	38.46	7	386
3.	Lack of co-ordination in the activities of the group members	15771	48.23	5	327
4.	Marketing problems	23989	55.02	2	436
5.	Competition from mechanized better quality substitutes	21314	51.36	3	415
6.	Non-availability of timely credit	25946	61.05	1	425
7.	Lack of transport Facility	14583	50.46	4	289

Savings-Income Relationship

A structural stability of savings-income relationship has been studied to find out

whether the mean savings of the sample members after join the SHG is different from that of before join with change in income. Table-12 reveals that both α_2 and β_1 are significant in all cases except cigar making. The model postulates that the savings functions in both periods in relation to the level of income have different intercepts. In other words it can be stated that the level of mean savings of the second period is different from that of the first period with change in income. Moreover it also can be stated that the change of savings is associated with change of income.

Factors Influencing the Performance of SHG

There has been varying degree of impact of SHGs upon the sample members under study. The extent of impact has been measured in terms of income changes of the respective members after joining SHGs. Members have been classified into two distinct groups, viz; high-performing group and low-performing group. High-performing group represents those members who raised their income by 15% or more after becoming members.

A linear discriminant function has been fitted to gain an insight into the relative importance of different variables in discriminating between high-performing and low-performing members. Discriminant function analysis has been carried out using variables which constitute different dimension of the performance.

Table-13 shows the relative importance of important factors in classifying the performance in terms of income changes of the respective members after joining SHGs. It is revealed from the table that relatively high performance group members are characterized by higher in values with respect to the level of non-farm income, change of non-farm income, change of non-farm income in percentage, savings and savings changes comparing to low-performing members. The analysis has extended to examine which of the variables contributes most to the divergence in performance. The contribution to the distance between the two groups is found high with respect to changes in non-farm income. In other wards, it can be stated that the performance of SHG members is clearly explained by their income from non-farm activities.

The adequacy of the discriminant function is evident from the percentage of group bases being correctly classified as 96.36% in Table-14. This confirms that discriminant function is able to classify individual member into high and low-performing groups.

Table 12: Linear Regression Analysis: Saving-Income Relationship

Estimators→ Activities↓	α_1	α_2	β_1	β_2	df	F-ratio	R^2_{adj}
Paddy Processing	91.101	-74.54	0.063	-0.013	3, 374	146.35**	0.536
	(24.461)[1]	(37.552)[1]	(0.031)[1]	(0.161)[1]			
	(3.724**)[2]	(-1.985*)[2]	(2.03*)[2]	(-0.081)[2]			
Goatary	61.104	-34.681	0.014	-0.002	3, 270	338.56**	0.788
	(12.412)[1]	(11.626)[1]	(0.007)[1]	(0.031)[1]			
	(4.923**)[2]	(-2.983**)[2]	(2.013*)[2]	(-0.0033)[2]			
Bag Making	91.375	-38.621	0.036	-0.004	3, 36	84.77**	0.869
	(34.969)[1]	(12.137)[1]	(0.016)[1]	(0.028)[1]			
	(2.613**)[2]	(-3.182**)[2]	(2.284**)[2]	(-0.143)[2]			
Cigar Making	31.35	-12.76	0.004	-0.012	3, 18	2.94	0.4582
	(17.03)[1]	(7.278)[1]	(0.008)[1]	(0.011)[1]			
	(1.841)[2]	(-1.754)[2]	(0.50)[2]	(-1.09)[2]			
Weaving	81.541	-44.191	0.091	-0.007	3, 18	37.48**	0.829
	(45.707)[1]	(21.215)[1]	(0.044)[1]	(0.036)[1]			
	(1.784)[2]	(-2.083*)[2]	(2.068*)[2]	(-0.193)[2]			
Readymade Garments	52.412	-32.251	0.022	-0.007	3, 102	154.89**	0.816
	(12.183)[1]	(16.021)[1]	(0.011)[1]	(0.019)[1]			
	(4.302)[2]	(-2.013*)[2]	(2.038*)[2]	(-0.361)[2]			
Areca Nut Processing	58.973	-29.341	0.014	-0.0012	3, 166	243.76**	0.812
	(6.341)[1]	(9.025)[1]	(0.005)[1]	(0.003)[1]			
	(9.300)[2]	(-3.251**)[2]	(2.783**)[2]	(-0.407)[2]			
Fishery	77.591	-55.761	0.028	-0.0039	3, 62	106.124**	0.831
	(12.723)[1]	(13.864)[1]	(0.0054)[1]	(0.011)[1]			
	(6.098)[2]	(-4.022**)[2]	(5.204**)[2]	(-0.361)[2]			

Contd.

Estimators→ Activities↓	α_1	α_2	β_1	β_2	df	F-ratio	R^2_{adj}
Tailoring	98.87	-84.98	0.020	-0.001	3, 16	44.05**	0.879
	(25.30)[1]	(32.51)[1]	(0.008)[1]	(0.111)[1]			
	(3.907**)[2]	(-2.614*)[2]	(2.526*)[2]	(-0.009)[2]			
Overall	36.381	-31.682	0.031	-0.003	3, 1094	819.31**	0.691
	(3.390)[1]	(4.941)[1]	(0.003)[1]	(0.002)[1]			
	(10.731)[2]	(-6.412**)[2]	(11.065**)[2]	(-1.618)[2]			

Note: Figures in the parentheses under 1 and 2 are standard errors and t-statistics of the estimators respectively.

α_1 is constant.

α_2, β_1 and β_2 represent regression co-efficients related to the variables D_i , X_i and $D_i.X_i$ respectively.

** Significant at 1% probability level.

* Significant at 5% Probability level.

Table 13: Factors Discriminating the Performance of SHG Members** Significant at 1% probability

Variables	Wilks' Lamda	Mean Group(0)	Mean Group(1)	Mean Difference (di)	Coefficient Discriminant Function(λi)	Distance (λidi)	Percentage Contribution
Age	0.978 (0.443)	40.10	36.5476	-3.5524	-0.132	0.4689	4.2826
Education	0.984(0.212)	2.98	3.2629	0.2829	-0.497	-0.1406	-1.2841
Total cultivated land	0.997(0.005)	1.135	1.1529	0.0179	2.538	0.0454	0.4146
Attendance	0.954(0.931)	69	74	5	0.011	0.055	0.5023
Income from farming activity	0.978(0.073)	6450	6056.251	-393.749	0.001	-0.3937	-3.5958
Change of income from farming activity	0.965(0.114)	650	562.5666	-87.4334	-0.001	0.0874	0.7983
% change of income from farming activity	0.934(0.999)	9.468	0.2984	-9.1696	0.102	-0.9353	-8.5423
Income from non-farm activity	0.798(5.142*)	15442	22425.75	6983.75	0.001	6.9837	63.7839
Change of income from non-farm activity	0.637(24.127**)	1615	5125	3510	0.001	3.51	32.0577
% change of income from non-farm activity	0.642(23.872**)	9.4371	28.142	18.7049	0.006	0.1122	1.0247
Savings	0.832(8.13**)	198.5	500.521	302.021	0.001	0.3020	2.7582
Total Credit	0.976(0.062)	2610	2532.975	-77.025	0.001	-0.077	-0.7033
Savings Change	0.865(11.143**)	115	425.3468	310.3468	0.003	0.931	8.5031

** Significant at 1% probability level

* Significant at 5% probability level

Figures in the parenthesis are the F-statistics with (1, 547) df.

Table 14: Classification Results of Groups
Predicted Group Members

Group	Group 0	Group 1	Total
0	320	0	320
1	20	209	229
0	100	0	100
1	8.73	91.27	100

Original Count %

Conclusion

Efficient financial systems for an economy are vital for poverty alleviation as well as for building organization changing economic base and institution within society. Micro-credit will, however, reach the maximum number of poor clients with the optimal effect only when they are recognized as a national priority, integrated into the financial sector, and complemented by measures for skill development and social mobilization. Fortunately, this practice in India has much to offer to the rural population. The effectiveness of the programme is evaluated by studying four selected blocks of Hooghly district of West Bengal, India with a sample of 549 SHG members supported by SGSY whose objective is to enable poor families in the rural areas to cross the poverty line. At the beginning a large proportion of the members spent their loan for consumption purpose. Gradually they shifted their interest to productive work. The sample respondents have chosen nine different types of income generation programmes. Nearly all members have raised their income and savings after joining SHG under SGSY programme. It is also revealed from the study that the performance of the sample members is clearly explained by their income from non-farm activities. The adequacy of test in classifying the performance of the sample members is evident as 96%.

Thus, emphasis should be given to the resource-poor rural households on strengthening inter-sector convergence for technical guidance providing a separate setup with professional touch for execution of micro-credit. Rural households are to be encouraged for creation of awareness and motivation to adopt the need based production oriented activities at the village level. Further, institutional support, particularly financial support at the village level needs to be strengthened. Simultaneously, extension activities at village level through Government, NGOs, and Farmers' institutions need to be widened.

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