

Microfinance and Self-Help Group Bank Linkage Programme—Its role in alleviation of rural poverty: A case study in Hooghly district of West Bengal

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Abstract: A major segment of Indian rural poor, especially the rural women, do not have access to financial products and services of formal banking system. These financially disadvantaged poor mainly take recourse to informal sources like village money lenders, traders, family and friends to meet their immediate financial needs. Self-Help Groups (SHGs) in addition to its approach towards self-management and development of its members, play an important role in financial intermediation. The Self-Help Group Bank linkage programme ensures access to low-cost financial services for its members. The present study is based on an empirical survey of 300 Self-Help Group members in Pandua and Dhaniakhali blocks in Hooghly district of West Bengal, India. This paper attempts to examine the performance of microfinance based SHG-Bank Linkage programme and explore its impact on alleviation of rural poverty in the study area. The SHG-Bank linkage programme has had a major impact in the socio-economic conditions of the SHG members by providing them with better access to savings and credit from the formal banks. The study concludes with the major findings and provides few suggestions for future research and policy making decisions.

Keywords: Microfinance, Self Help Group, poverty alleviation, Financial inclusion

JEL code: C31, G21, I31, I32, I38

INTRODUCTION

Finance plays a central role in the process of economic development of any country. It is a well-established fact that countries with better developed financial systems experience faster economic growth (Levine, 1997). Improving financial access and building inclusive financial systems is important for economic development. In India, however, large sections of the rural poor are still excluded from basic financial services as they do not have access to the formal financial institutions and therefore informal lending still remains strong (Basu and Srivastava, 2005). These financially disadvantaged rural poor are always in need of small loans for either their income generating activities or to meet their emergency needs and therefore take recourse to informal sources like village money lenders, traders, family and friends for credit. The formal banks are reluctant to provide them with small credits due to high transactional cost, lack of proper collaterals besides limited outreach and coverage. As per Dasgupta (2005), the lacklustre performance of both public and private sector banks in extending large credit to the weaker sections of the society is due to their high level of Non-Performing Assets (NPA). The formal banking system and the various poverty alleviation programmes initiated by the government have not succeeded in meeting their obligations towards the rural poor (Ravi & Chakrabarti, 2011). Due to the need for an alternative model for the poor, the concept of micro finance evolved which involves providing easy and affordable access of micro credits to the rural poor.

Micro finance by definition involves several provisions of financial services such as savings, small credit, money transfer

and insurance rendered to low income people and in addition includes skill upgradation, entrepreneurial development that would enable them to overcome poverty (NABARD, 2006-07). Micro finance programmes have gained recognition for being an effective instrument for combating poverty, improving the quality of life and living standards of the poor, especially the rural women. Access to micro finance through the Self-Help Groups (SHGs) is considered an effective tool for alleviation of the rural poverty and sustainable development. A Self-Help Group is a small homogenous association of rural poor, especially women, having similar economic and social background and having a desire to collectively perform common purpose. It usually comprises of 10 to 20 members who help each other to solve their problems and promote savings amongst them for financial stability. The group values personal interaction and mutual aid as means of ameliorating problems of its members who perceive it to be very pressing and personal (Lalita & Nagarajan, 2002). The group members accept mutual responsibility for joint self-help and trust each other to an extent that none of them will dominate or exploit the group.

The Self-Help members save regularly small amount of money, mutually agreeing to contribute to a common fund and to meet their emergency needs. SHG operates on the principle of self-help, solidarity and mutual interest with increased awareness of group members, self-reliance and transparency (Gain & Satish, 1996). This type of solidarity lending is often triggered by NGOs, organising poor communities in rural areas of India, triggering social and financial support. In India, SHGs represent a unique approach that not only involves access to low cost financial services through self-management but also in socio-economic development of its members. Thus, micro-finance and self-managed SHG model are often the first step to financial inclusion for the rural poor through the participation of the community. The SHG members create a common fund by voluntarily contributing to save small amount of money on a regular basis. This pooled resource helps to make the SHG financially stable. The group manages the pooled resource in a democratic way and funds are managed meticulously with a far greater responsibility and commitment among the members towards the utilization of the amount for the approved purposes and in repayment. The groups develop their own management system and accountability for handling the resources generated (Rao, 1994). The Self-Help Group Bank linkage programme is part of a microfinance operation wherein there is a lot of emphasis in a savings-based credit, flexibility in lending and operations, delinking credit from the bondage of collateral documents, group lending, group decision in fixing repayment schedule and skill development (Lalitha & Nagarajan, 2002).

The concept of micro credit and micro finance can be traced back to 1976, when Prof. Muhammad Yunus of Bangladesh started women's group in his country and developed the concept of thrift and savings amongst the rural poor. Prof. Yunus had observed that traditional banks did not offer any micro loans at even reasonable interest rate to the rural poor due to high risk of default. He had however believed that given the chance, the poor would repay the loan. This led to the concept of micro credit and micro finance which subsequently resulted in the establishment of Grameen Bank in Dhaka, Bangladesh in 1983.

The Self-Help Group movement in India, dated back to 1985, was driven under the leadership of Mysore Resettlement and Area Development Agency (MYRADA), a non-government organization (NGO) working in backward and drought-prone areas in southern states of India. The primary focus of the movement was to set up a SHG model wherein the rural women are made aware about thrift and the importance of cheap credit. By 1986-87, the MYRADA projects had more than 300 SHGs whom training had been imparted on organising meetings, setting meeting agendas, keeping minutes of the meeting, basic accounting, etc. In 1987, in order to assess the efficacy of SHGs as an effective instrument of credit delivery, NABARD provided financial grant of Rupees one million to MYRADA. Subsequently, SHGs were also promoted in other parts of India through other NGOs. Based on the initial success of the group-based approach for financial lending to the rural poor, especially women, NABARD launched a pilot project in 1991-92 in partnership with NGOs for promoting the Self-Help Groups. The objective of the project was to ensure savings within the group and within the existing legal framework. Steady progress of the pilot project led to the Reserve Bank of India (RBI), in 1992, accepting the SHG model as an alternate and effective credit option for the rural poor.

Micro Finance in India has helped to improve the quality of life for the rural poor. The National Rural Livelihoods Mission (NRLM) set up in 2011 by the Ministry of Rural Development, Government of India, has taken up the task of

promoting financial inclusion of the rural poor. Its primary focus is on promoting self-employment and organisation of the rural poor. The various financial services include credit, savings, insurance and payments and remittance facilities. In addition to the access to financial services, especially credit, by the rural poor, there has been remarkable development in women empowerment and poverty alleviation by diversifying their livelihood. A study covering 560 member households belonging to 223 SHGs spread over 11 states of India, shows a positive economic impact of SHG on indicators such as average value of assets per household, average net income per household, employment and burrowing for income generating activities (Puhazhendi&Satyasai, 2000). The involvement of the members in the group activities had a great impact in boosting their self-confidence and improving their communication skills.

Under this backdrop, this paper attempts

1. To examine the performance of Microfinance based SHG-Bank Linkage programme in the study area
2. To explore the impact of SHG-Bank Linkage programme on alleviation of rural poverty in the study area

DATA AND METHODOLOGY

The study is based on primary data collected from field survey on Self-Help Groups in Hooghly district of West Bengal. The data used for the empirical analysis in this paper investigates the SHG-bank linkage programme of the surveyed area. The data was collected from two blocks Pandua and Dhaniakhali in Hooghly districts of West Bengal during the period 2017-18. Additionally, recall data for the year 2014 was also collected. The field survey was undertaken in 6 villages of Pandua block viz Boichigram, Berala, ItachunaKhanyan, Pandua, PonchgoraToregram, Haraldaspur and 4 villages of Dhaniakhali block viz Belmuri, Bhandarhati, Dashghara and Mandari. Data from the surveyed villages was collected with the help of two broad categories of survey research using the questionnaires and interview. The questionnaire was prepared in such a way so that data of the SHG members are obtained before and after joining SHG. The schedule for the interview was prepared by discussing with the NGO officials, SHG leaders and the SHG members.

In probability design, simple random sampling technique and stratified sampling technique has been used. These techniques are objective to give each item in the target population equal chances of being picked into sample. Out of the total number of SHGs which had completed one year, 40 were selected for the sample in Pandua block and 20 from Dhaniakhali block. Five individual members were selected from each group for interviews. Total 300 households were surveyed. Individuals selected for interview were from different age groups, occupation, economic and marital status. The main criterion for selecting the SHGs in the study area was that the SHGs must consist of members who had completed minimum one year. The secondary data was collected from different journals, books, relevant documents, newspapers and records of National Rural Livelihood Mission (NRLM) under Ministry of Rural Development, Govt. of India.

On the basis of the data collected, we have discussed the performance of SHG-Bank linkage programme and analysed how this saving and credit facilities encouraged them to buy productive assets and help them to reduce poverty. We have used a tabular method to quantify the performance of SHG-Bank linkage programme. We have used both statistical and econometric techniques to analyse the data. Logit Regression Method was used to analyse the nexus between poverty and SHG credit facilities.

SHGs-Bank Linkage in the Study Area

The primary growth strategy of the Self-Helps Groups is to meet the increasing credit requirement of its members. The members can take loans from their collective savings in case of any emergencies in order to tide over their financial crisis or for the purchase of any asset for their income generating activities. The group members decide amongst themselves the quantum of loan to be disbursed to the members who require them and the repayment instalments at a mutually agreed rate of interest during their periodic meetings. The group ensure collective wisdom and puts peer pressure in order to ensure that the credit availed is judiciously used and the repayments against the credit is made on a regular basis. Once the Self-

help group accumulates sufficient capital, it can then avail credit from the formal financial institutions. In order to allow the rural women, to circumvent the challenges of exclusion of the formal banking services, RBI regulations mandates the formal banks to offer collateral free loans at low interest rates to the SHG. Through the SHG bank linkage programme, the SHGs can avail loans from the formal banking institutions. Accessing savings services from the formal banking institutions ensures providing security to the pooled resources of the Self-help groups. Further, it also helps in inculcating the habit of savings amongst its members, thereby leading to a desired maturity in terms of group and financial dynamics.

After the formation of SHG, it takes a minimum of six months to one year to settle to a stable pattern. Soon after a SHG is formed and after one or two meetings are held, the savings are collected from its members. The SHG has to pass a resolution in the group meeting, signed by all members, indicating their decision to open savings bank account with the bank. This resolution and authorisation from the SHG have to be filed with the bank. The bank then opens the savings bank account in the name of the SHG. Loan can be given to the SHG for various purposes for its members. The bank does not decide the purpose for which the SHG gives loans to its members. The purpose may be for emergency needs like illness in the family, marriage, etc. or for buying of assets for income generation or repairing their home etc. In this case, the group internally decides the purpose for which loans are to be given to its individual members. The SHG and the bank holds several discussions during the loan appraisal stage so as to enable the bank to arrive at a credit decision. For the credit being availed by the SHG from the banks, the terms and conditions stipulates joint liability, which is clearly made understood to all its members. The SHG ensures that all the repayments to the bank are done on a regular basis without any default. This is done by setting aside a portion of the total collection made by each member during their weekly meetings. In case any member defaults on payment due to any genuine reason, the group squares up for the default amount and pass on the instalment amount to the bank as per the contract. However, the group exerts peer pressure on the borrowing members for their repayment. Due of this internal pressure within the group, the bank gets a much better repayment from the SHG.

Pandua and Dhaniakhali are Community Development (CD) Blocks under the administrative division of Chinsurah sub division of Hooghly district in the Indian state of West Bengal. As per the data of Census of India, 2011 Pandua CD Block had a population of 316197, of which 265863 were rural and 50334 were urban, whereas Dhaniakhali CD Block had a total population of 320,534, all of which were rural. Self-Help Group. Both Pandua and Dhaniakhali Blocks in the Hooghly district have large number of Self-Help Groups.

The number of the SHG, its members and the bank linkage details in the study area of Pandua Block has been shown in Table 1 below:

Table 1 SHG and Member Profile Monitoring Report Pandua Block

Sl no.	Gram Panchyat	Total SHG	Total members	Members with Bank Account	Members without Bank Account
1	Bantikabainchi	258	2541	609	1932
2	Beloondhamasin	181	1906	331	1575
3	Berelakonchmali	106	1299	256	1043
4	Haraldaspur	221	2287	1372	915
5	Itachunakhanyan	225	2288	807	1481
6	Jamna	212	2288	546	1742
7	Jamnagarmondalaii	117	1239	271	968
8	Jayerdwarbasini	248	2991	911	2080
9	Kshirkundi-Namajgram-Niyasa	201	2232	514	1718
10	Ichhobadapur	190	2045	1331	714
11	Panchagara-Toregram	92	1008	437	571
12	Pandua	154	1691	899	792
13	Rameswarpur-Gopalnagar	180	2156	895	1261
14	Sarai-Tinna	216	2221	1566	655
15	Shikhirachanpta	134	1437	303	1134
16	Simlagarhvtasin	237	2542	1032	1510
	Total	2972	32171	12080	20091

Source: NRLM report on SHGs 2018-19

From Table 1 above, we can infer that there are 2972 SHGs in the Pandua block consisting of 32171 members. However, out of the total number of SHG members only 12080 members have bank accounts. Thus, more than 20000 members are yet to have bank accounts for availing bank credit.

The number of the SHG, its members and the bank linkage details in the study area of Dhaniakhali Block has been shown in Table 2 below:

Table 2 SHG and Member Profile Monitoring Report Dhaniakhali Block

SI no.	Gram Panchyat	Total SHG	Total members	Members with Bank Account	Members without Bank Account
1	Belmuri	174	1824	822	1002
2	Bhandarhati-I	148	1716	1179	537
3	Bhandarhati-II	200	2112	1476	636
4	Bhastara	197	2039	1553	486
5	Dashghara-I	173	1822	892	930
6	Dashghara-II	207	2225	1730	495
7	Dhanekhali-I	198	2111	1517	594
8	Dhanekhali-II	164	1749	966	783
9	Gopinathpur-I	198	2039	1863	176
10	Gopinathpur-II	221	2323	1877	446
11	Gudubari-I	159	1716	1214	502
12	Gudubari-II	187	1964	745	1219
13	Gurap	351	3902	1775	2127
14	Khajudahamilki	233	2462	1615	847
15	Mandra	188	2021	1262	759
16	Perambuasahabazar	245	2588	2089	499
17	Somaspur-I	185	1962	1589	373
18	Somaspur-II	205	2180	1641	539
	Total	3633	38755	25805	12950

Source: NRLM report on SHGs 2018-19

From Table 2 above, we observe that there are 3633 SHGs in the Dhaniakhali block consisting of 38755 members. However, out of the total number of SHG members only 25805 members have bank accounts. Thus, 12950 members are yet to have bank accounts for availing bank credit.

RESULTS AND DISCUSSION

The rural poor are in the economically and socially weak section of the society. This section of people generally lacks the collateral securities and identity documents which are mandatory for opening a savings account in a formal bank. Access to financial services of the bank is important for the economic development and social enrichment of the rural poor. The Self-Help Groups have been instrumental in providing basic financial services to its members. The SHG members are able to open savings bank account and save small amount of money. The members are able to avail credit facilities from the bank are six months of operation. The SHG jointly takes the responsibilities for group borrowing and group repayment. The SHG bank linkage programme has helped to fill the existing gap in the formal financial network and extend the outreach of formal banking to the rural poor.

The following Tables 3,4 and 5 shows the various indicators of performance of the SHG-Bank linkage programme in the study area in Pandua and Dhaniakhali block.

Table 3 Performance of SHG-Bank Linkage Programme

SI No.	Description	Particulars	Pandua Block		Dhaniakhali Block	
			Frequency	Percentage	Frequency	Percentage
1	SHG Tenure	1-4 Years	37	18.5	24	24
		5-8 Years	108	54	38	38
		8-12 Years	43	21.5	33	33
		> 12 Years	12	6	5	5
		Total	200	100	100	100
2	Frequency of group meetings	Weekly	121	60.5	45	45
		Fortnightly	56	28	22	22
		Monthly	23	11.5	33	33
		Total	200	100	100	100
3	Decision Making in SHG	All members-by Voting	108	54	36	36
		Group leaders	77	38.5	53	53
		Combination of above	15	7.5	11	11
		Total	200	100	100	100
4	Trainings Received by SHG Members	<20	24	12	20	20
		21-40	36	18	48	48
		41-60	78	39	27	27
		61-80	62	31	5	5
		Total	200	100	100	100

Source: Field Survey 2017-18

The above Table 3 shows that the majority 54 percent of SHG in Pandua Block and 38 percent in Dhaniakhali block have been in existence for about 5-8 years. The remaining groups were about 1-4 years old (18.5 percent in Pandua Block and 24 percent in Dhaniakhali block), 8-12 years old (21 percent in Pandua Block and 33 percent in Dhaniakhali block) and more than 12 years old (6 percent in Pandua Block and 5 percent in Dhaniakhali block). It is also observed that the frequency of group meetings were conducted on weekly basis by 60 percent, on fortnightly basis by 28 percent and on monthly basis by 11.5 percent of the SHGs in Pandua block and on weekly basis by 45 percent, on fortnightly basis by 22 percent and on monthly basis by 33 percent of the SHGs in Dhaniakhali block. In the case of decision Making in SHG, the majority (54 percent) of the SHGs expressed that decisions were made by all the members of SHG by casting votes in Pandua block whereas group leaders (53 percent) took important decisions in Dhaniakhali block. From the above Table 3 we can infer that the majority of the SHGs in Pandua block received 41-60 and in Dhaniakhali block majority of the SHGs attended 21-40 training programmes.

Table 4 Performance of SHG-Bank Linkage Programme

SI No.	Description	Particulars	Pandua Block		Dhaniakhali Block	
			Frequency	Percentage	Frequency	Percentage
1	Number of Loans taken	Once	142	71	67	67
		Twice	31	15.5	16	16
		Thrice	24	12	10	10
		More than thrice	3	1.5	7	7
		Total	200	100	100	100
2	Utilisation of Loan	Consumption – Education & Health	47	23.5	25	25
		Consumption – others	66	33	31	31
		Assets	78	39	36	36
		Others	9	4.5	8	8
		Total	200	100	100	100
3	Bank loan Repayment schedule	12 months	7	3.5	2	2
		24 months	76	38	45	45
		36 months	95	47.5	37	37
		48 months	12	6	12	12
		60 months	10	5	4	4
Total	200	100	100	100		
4	Frequency of Discussion Between Bank	Frequently	68	34	45	45
		Sometimes	77	38.5	27	27
		Rarely	36	18	19	19
		Never	19	9.5	9	9
Total	200	100	100	100		
5	Awareness of the terms and conditions of loan	Total Awareness	48	24	27	27
		Partial Awareness	85	42.5	45	45
		Unaware	67	33.5	28	28
		Total	200	100	100	100

Source: Field Survey 2017-18

It is clear from the Table 4 above that in both the blocks majority of the SHG members took loan at least once. In the case of utilisation of loan more than 35 percent of the SHGs have utilized the loan for purchasing productive or non-productive assets and nearly 30 percent of SHGs have utilized the loan of various consumption purposes like marriage, festivals, repayment of loan etc in both the blocks. In Pandua block most of the members repayment their loan in 36 months and in Dhaniakhali block in 24 months. Regarding frequency of discussions between bank official and SHGS about repayment schedule, 34 percent of the SHG members in Pandua block and 45 percent of the SHG members in Dhaniakhali block stated that the bank officials frequently discuss with them about the repayment. Table 4 shows that most of the members in both the blocks were partially aware of the terms and conditions of the loan.

Table 5 Performance of SHG-Bank Linkage Programme

SI No.	Description	Particulars	Pandua Block		Dhaniakhali Block	
			Frequency	Percentage	Frequency	Percentage
1	Supervision of the SHGs	NGO	76	38	42	42
		Bank	53	26.5	18	18
		SHG federation	49	24.5	22	22
		Government	22	11	18	18
		Total	200	100	100	100
2	Problems in SHGs	Groups Internal conflicts	36	18	12	12
		Default in loan	65	32.5	28	28
		Migration of member	41	20.5	18	18
		Not following the rules	17	8.5	16	16
		Leadership problem	10	5	11	11
		Lack of marketing support	23	11.5	8	8
		Lack of NGOs support	8	4	7	7
Total	200	100	100	100		
3	Suggestions for the Development of SHGs-Bank Linkage	Formation of SHG federation	48	24	20	20
		Large loan amount	96	48	42	42
		Training and workshop	35	17.5	25	25
		Marketing support for SHG Members	21	10.5	13	13
		Total	200	100	100	100

Source: Field Survey 2017-18

From Table 5 above, we observe that the Supervision of SHGs, NGOs (38 percent of the SHGs in Pandua block and 42 percent in Dhaniakhali block), banks (26.5 percent in Pandua block and 18 percent in Dhaniakhali block), SHG federation (24.5 percent in Pandua block and 22 percent in Dhaniakhali block) and Government (11 percent in Pandua block and 18 percent in Dhaniakhali block) have taken the responsibility of supervising the SHGs for their better performance. It is found from the Table 5 that default in loan, violating the rules and regulations, migration of members and conflicts among group members were the main problems faced by SHGs. Regarding suggestion provided in the Development of SHGs the respondents opined that providing large loan amount and training for SHG members for SHG products were most important for the development of SHGs.

SHG-Bank Linkage Programme and Rural Poverty in the study area

In 2015, an estimated 736 million people worldwide were living below the international poverty line (IPL), currently set at US\$ 1.90 in 2011 purchasing power parity (PPP) dollars, and India with 176 million poor people, continued to have the highest number of people in poverty and accounted for nearly a quarter of the global poor (World Bank Report, 2018). The planning commission of India estimates the incidence of poverty by evaluating the poverty ratio, which is the ratio of number of poor to the total population expressed as percentage. It had released estimates of poverty for 2011-12 as 21.9 percent based on the report of the expert group (Tendulkar). However, in 2012, the planning commission constituted a new expert group headed by Mr. C. Rangarajan for deriving a new methodology for estimation of poverty. The expert group (Rangarajan) outlined that the new poverty line should be based on certain normative levels of adequate nourishment, clothing, house rent, conveyance and education, and a behaviourally determined level of other non-food expenses. Estimation of poverty line was made based on the independent survey of households by Centre for monitoring Indian

Economy (CMIE), a leading business information company and using a different methodology wherein a household is considered poor if it is unable to save. As per the Rangarajan report presented in 2014 incorporating the new methodology, the monthly per capita consumption expenditure of Rs. 972 in rural areas and Rs. 1407 in urban areas is treated as the poverty line at the all India level. Based on the methodology outlined in the Report, the poverty ratio at all India level for 2011-12 comes to 29.5 percent. in contrast to 21.9 percent as estimated by Tendulkar methodology, bringing 93.7 million more people under below poverty line (BPL). The poverty line based on monthly per capita expenditure in rural and urban areas for 2011 for the state of West Bengal is Rs 934.10 and Rs 1372.68 respectively (Rangarajan report, 2014).

This paper aims to explore whether SHG borrowers leads to purchase productive asset which results in alleviating poverty. The data was not only collected from old SHG members but also from newly enlisted SHG members who have not yet received loans. Asset accumulation serves as a potential exit avenue for chronic poverty. In our surveyed villages, we find that SHGs positively impact asset creation. The impact occurs primarily through livestock accumulation, purchase of sewing machine or small shop etc. Members move away from pure agriculture as an income source towards other types of income. We find that the interaction of training matters for asset creation. The monthly per capita income status of the respondents in the study area during the Pre-SHG Borrowing stage and Post SHG Borrowing stage have been arranged in the ascending order and then grouped into 10 classes.

The estimated monthly per capita income of the households in the study area has been compared with the poverty line (rural) of Rs 934.10 for West Bengal based on the Rangarajan report, 2014. In order to analyse the extent of poverty and to quantify the role of income after receiving loan through joining SHG we have used the income status of the respondents in the study area during the Pre-SHG stage and Post SHG stage as shown in the Table 6 below:

Table 6 Monthly per capita income of the household status of respondents in Pre-SHG and Post-SHG stage Pandua Block

Monthly per capita income of the household of SHG member (Rs)	Pandua Block					
	Pre SHG (nos.)	Percentage	Cummulative Percentage	Post SHG (nos.)	Percentage	Cummulative Percentage
Below Rs 1000	137	68.5	68.5	65	32.5	32.5
Between Rs 1000-2000	48	24	92.5	91	45.5	78
Between Rs 2000-3000	12	6	98.5	24	12	90
Between Rs 3000-4000	2	1	99.5	11	5.5	95.5
Between Rs 4000-5000	1	0.5	100	2	1	96.5
Above Rs 5000	0	0	100	7	3.5	100
Total	200	100		200	100	

Source: Field Survey 2017-18

Table 7 Monthly per capita income of the household status of the respondents in Pre-SHG and Post-SHG stage Dhaniakhali Block

Monthly per capita income of the household of SHG member (Rs)	Dhaniakhali Block					
	Pre SHG (nos.)	Percentage	Cummulative Percentage	Post SHG (nos.)	Percentage	Cummulative Percentage
Below Rs 1000	81	81	81	42	42	42
Between Rs 1000-2000	13	13	94	46	46	88
Between Rs 2000-3000	3	3	97	7	7	95
Between Rs 3000-4000	2	2	99	3	3	98
Between Rs 4000-5000	1	1	100	1	1	99
Above Rs 5000	0	0	100	1	1	100
Total	100	100		100	100	

Source: Field Survey 2017-18

From Table 6 and Table 7 above, we observe that participation in Self Help Group and receiving loan by the respondents have vastly impacted their monthly per capita income of the household through the purchase of productive assets. We also observe that the percentage of monthly per capita income of the household below Rs 1000 for the respondents in Pandua Block during Pre-SHG Borrowing stage and Post SHG Borrowing stage was 68.5 percent and 32.5 percent respectively and in Dhaniakhali Block was 81 percent and 42 percent respectively. For the percentage of monthly per capita income of the household of the respondents between Rs 1000 to Rs 2000 during Pre SHG and Post SHG in Pandua Block was 24 percent and 45.5 percent respectively, and the same in Dhaniakhali Block was 13 percent and 46 percent respectively. Similarly, for the percentage of monthly per capita income of the household between Rs 2000 to Rs 3000 during Pre SHG and Post SHG, was 6 percent and 12 percent respectively in Pandua Block and 3 percent and 7 percent respectively in Dhaniakhali Block. The remaining small numbers of respondents had monthly per capita household income above Rs 3000 as shown in Table 6 and Table 7.

Although the poverty line (rural) for West Bengal has been considered as Rs 934.10 by the Rangarajan Committee, in this analysis, for simplicity, we have considered monthly per capita income of the household below Rs 1000 as Below Poverty Line (BPL). Thus, based on our estimate of poverty line (rural) for West Bengal, in Pre-SHG period 68.5 percent of the SHG members in Pandua block and 81 percent in Dhaniakhali block are lying below the poverty line whereas in Post-SHG period the figure decreases to 32.5 percent in Pandua block and 42 percent in Dhaniakhali block (Table 6 and Table 7). This implies that poverty level of SHG members of our surveyed villages decreased by about 52 percent in Pandua Block and 48 percent in Dhaniakhali Block. This data clearly shows the immense role played by the SHG in alleviating the poverty in the study villages. Moreover, there is substantial inequality in the distribution of income. SHGs have provided them the opportunity to open a bank account, save money. This has helped to improve their finance and thus alleviate poverty to a large extent.

Determinants of Poverty

To examine the determinants of poverty a qualitative response model like logit model is proposed in this study. The logit regression model has been tested using the household level data through field survey in Pandua and Dhaniakhali block of Hooghly districts. We have used logit regression model to analyse the relationship between poverty and SHG-Bank linkage programme.

The probability that a household will be poor can be specified as:

$$P_i = F(\alpha + \beta X_i) = \frac{1}{1 + e^{-(\alpha + \beta X_i)}}$$

Where P_i is the probability that i^{th} household will be poor given X_i , where X is a vector of explanatory variables and e is the natural logarithm. The above equation can be written as:

$$P_i [1 + e^{-(\alpha + \beta X_i)}] = 1$$

where $\alpha + \beta x_i = \log \left[\frac{P_i}{1 - P_i} \right]$ and $\frac{P_i}{1 - P_i}$ is the odds ratio, whose log gives the odds that a household is poor.

The model to be estimated is specified as

$$\log \left[\frac{P_i}{1 - P_i} \right] = \alpha + \beta_1 AGE_i + \beta_2 EDULVL_i + \beta_3 DEPRATIO_i + \beta_4 CASTE_i$$

$$+\beta_5 OWNLAND + \beta_6 SHGMEM + \beta_7 TRNG + \beta_8 ASSET + \epsilon$$

Here the dependent variable is Poverty (*POVR*) which is a dummy variable equal to '1' if the household belongs to BPL and equal to '0' if the household belongs to APL.

Table 8 Description of Variables of Logit Regression Model

Variables	Expected Sign	Variable description
Dependent variable <i>POVR</i>		Poverty of the household <i>POVR</i> =1; if the household belongs to BPL <i>POVR</i> =0; if the household belongs to APL
Explanatory Variables		
<i>AGE</i>	+	Age of SHG member in years
<i>EDULVL</i>	-	Formal education that a female SHG member acquires by attending school, college and university etc. which is counted by the number of years of education
<i>DEPR</i>	+	Dependency Ratio which indicates the proportion of number of non-working members to the total number of family members in the household
<i>CASTE</i>	-	Caste of a woman is considered as categorical variable. GEN = 1, if a woman belongs to General Caste and 0 otherwise.
<i>OWNLAND</i>	-	Total land owned by the household in acre (1 acre = 4,047 m ²)
<i>SHGMEM</i>	-	Duration of SHG membership. It is counted by number of months.
<i>TRNG</i>	-	Training of female SHG member which enhances to purchase productive asset leading to increase in income. <i>TRNG</i> = 1, if a woman has training which helps in enhancement of her productive skills and 0 otherwise.
<i>ASSET</i>	-	<i>ASSET</i> =1 for productive asset purchased through bank loan <i>ASSET</i> =0 Non-productive asset purchased through bank loan

The logit regression model has been tested using the household level data through field survey of Pandua and Dhaniakhali Block of West Bengal. The regression result for Pandua Block is given in the Table 9 below:

Table 9 Regression result of Pandua Block

Dependent Variable: POVR

Method: ML - Binary Logit (Newton-Raphson / Marquardt steps)

Sample: 1 200

Included observations: 200

Convergence achieved after 10 iterations

Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
AGE	0.100657	0.020977	4.798504*	0.0000
EDULVL	-4.977567	2.456872	-2.025978**	0.0428
DEPRATIO	0.358474	0.265908	1.348115	0.1776
CASTE	-0.335084	0.584003	-0.573771	0.5661
OWNLAND	35.81725	18.43309	1.943095**	0.0320
SHGMEM	-0.039956	0.009212	-4.337366*	0.0000
TRNG	-0.139363	0.762272	-0.182826	0.2549
ASSET	-2.265767	0.947861	-2.390399**	0.0168
Mean dependent var	0.450000	S.D. dependent var	0.498742	
S.E. of regression	0.240521	Akaike info criterion	0.508287	
Sum squared resid	11.10730	Schwarz criterion	0.640220	
Log likelihood	-42.82874	Hannan-Quinn criter.	0.561679	
Deviance	85.65748	Restr. deviance	275.2555	
Avg. log likelihood	-0.214144			
Obs with Dep=0	110	Total obs	200	
Obs with Dep=1	90			

Source: Estimated using EviewsSoftware package based on field survey data

*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

The regression result for Dhaniakhali Block is given in the Table 10 below:

Table 10 Regression result of Dhaniakhali Block

Dependent Variable: POVR
Method: ML - Binary Logit (Newton-Raphson / Marquardt steps)

Sample (adjusted): 1 100
Included observations: 100 after adjustments
Convergence achieved after 7 iterations
Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
AGE	0.191066	0.052373	3.648194*	0.0003
EDULVL	-1.998557	0.622725	-3.209372*	0.0013
DEPRATIO	0.999009	0.540519	1.848239***	0.0646
CASTE	0.909461	0.948948	0.958389	0.3379
OWNLAND	1.106486	1.984132	0.557668	0.5771
SHGMON	-0.031675	0.012481	-2.537882**	0.0112
TRNY	-1.226881	0.946758	-1.295876	0.1950
ASSET	-2.014252	0.993944	-2.026525**	0.0427
Mean dependent var	0.440000	S.D. dependent var	0.498888	
S.E. of regression	0.261853	Akaike info criterion	0.589227	
Sum squared resid	6.308144	Schwarz criterion	0.797640	
Log likelihood	-21.46133	Hannan-Quinn criter.	0.673575	
Deviance	42.92267	Restr. deviance	137.1860	
Avg. log likelihood	-0.214613			
Obs with Dep=0	56	Total obs	100	
Obs with Dep=1	44			

Source: Estimated using Eviews Software package based on field survey data

*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

From the above Tables 9& 10, we observe that in most of the cases, the results are consistent with our hypothesis. As expected (*AGE*) has been found to be a positive and significance influence on poverty (*POVR*) in both Pandua and Dhaniakhali block in Hooghly District. This can be explained in the way that young and energetic female members are more interested in taking loan and starting new business to become financially independent compared to elder members. The younger members of the SHG can earn more income as compared to the elder one thus helping to reduce poverty. We have hypothesized that educated member (*EDULVL*) get better earning opportunities and thus help to reduce the probability of incidence of poverty. In both the blocks the result is consistent with our hypothesis. In fact, education helps the members to realise the necessity of earning and improve their standard of living in a better way than low-educated and illiterate persons. The households with larger dependent member in the family (*DEPR*) the probability of incidence of poverty is high. In fact, larger dependent member puts additional financial burden on the earning member which in turn increases their poverty level. The result is consistent with our hypothesis in both the blocks. However, the impact is significant only in Dhaniakhali block.

It is a fact that people belonging to General caste get more loan and other facilities from SHG in the rural area as compared to people belonging to Schedule caste, Schedule Tribe or Other Backward caste. Therefore, it is hypothesized a negative relationship between caste (*CASTE*) and the probability of the incidence of poverty. As expected, caste is negatively related to poverty in Pandua block. However, in Dhaniakhali block we have contradictory result i.e. positive results between caste and poverty though in both the blocks the results are insignificant. We expected that households with

more own land (*OWNLAND*) has a negative impact on poverty because wealthier households have several options to earn money and therefore the probability of the incidence of poverty is low. In contrary to our hypothesis, in both the blocks we have observed contradictory result i.e. own land have positive impact on poverty level. In fact, in our surveyed villages most of the respondent are very poor and they don't have much land property. However, the result is significant only in Pandua block.

The most important finding of this study is impact of duration of Self-Help Group Membership (*SHGMEM*) on poverty and we hypothesized a negative relationship between the two. As expected, the results indicate that there is a negative and significant relationship between duration of Self-Help Group Membership and the probability of the incidence of poverty in the study area. SHG Bank link programme has made it easier for themembers to access formal loan with an affordable cost of borrowing in order to meet their most critical expenditures and use their income to improve their standard of living. The SHG members have been able to avail loan for investing in various small-scale income generating activities like dairy, retail shop, tailoring, etc which help them to reduce the probability of the incidence of poverty in both the blocks.

We observe from the Tables 9 and 10 that a negative relationship was found to exist between the training (*TRNG*) received by the women and poverty level. Training helps the members to learn new skills in different income generating activities which in turn leads to upliftment of their livelihood resulting in decreasing the probability of the incidence of poverty. However, the results are insignificant in both the blocks of the study area. As expected, assets (*ASSET*) has been found to have a negative and significant impact on poverty level in both Pandua and Dhaniakhali block. Productive asset accumulation serves as a potential exit line for chronic poverty in our surveyed villages. If the SHG members purchase productive assets with their loan amount they have become financially independent and it is easier to them to repay loan and increase their standard of living. However, in our study area sometimes we see members spent their loan amount on unproductive assets like utilise the money received from the bank as loan for repair of their houses or spent the whole loan amount on daughter's marriage or on treatment of family members. In these cases, it becomes difficult to repay loan and increase their standard of living. We observed from our regression analysis that whenever the SHG members spent their loan amount on purchasing productive assets it is possible for them to increase their income and reduce the probability of the incidents of poverty.

CONCLUSION

The Self-Help Group has played an important role in helping its naïve female members to learn financial discipline and also be aware of the importance and advantage of using formal financial services. The SHG-Bank linkage programme has had a major impact in the socio-economic conditions of the SHG members by providing them better access to savings and credit from the formal banks. Through the SHG-Bank linking programme, the rural women in the study area, who earlier were living below the poverty line, came out of poverty through a combination of skill development, market assistance and financial assistance. There has been good progress of SHGs covered under such poverty alleviation initiatives in terms of the number of SHGs savings and credit linked. In our study area, majority of the SHG members took loan at least once. In the case of utilisation of loan, more than 35 percent of the SHGs members have utilized the loan for purchasing productive or non-productive assets and nearly 30 percent of SHGs members have utilized the loan for other purposes like marriage, festivals, repayment of loan, etc in both the blocks. In Pandua block, most of the members repaid their loan in 36 months and in Dhaniakhali block in 24 months. Receipt of loan by the SHG members have vastly impacted the monthly per capita income of the household through the purchase of productive assets. The poverty level of SHG members of the surveyed villages decreased by about 52 percent in Pandua Block and 48 percent in Dhaniakhali Block. This data clearly shows the immense role played by the SHG in alleviating the poverty in the study villages. The results of our logit regression analysis indicate that there is a negative and significant relationship between duration of Self-Help Group Membership and the probability of the incidence of poverty in the study area. After joining SHG, the members have been able to avail loan for investing in various small-scale income generating activities like dairy, retail shop, tailoring, etc which helps them to reduce the probability of the incidence of poverty in both the blocks in the study area.

Policy prescription

The major suggestions / recommendations on the development of SHG-Bank Linkage programme are as follows.

1. For long term sustainability of the SHGs, it is imperative to develop several group-based income-generating activities.
2. The loan amount to the SHG members should be fixed based on the actual requirement of the planned projects and should be revised on a regular interval. Loan requirement towards non-productive activities should be given less priority.
3. Approval of loans to the SHG members should be decided mutually and amicably without any bias on caste and religion. No members should try to force upon their views on other members.
4. Localised training to the SHG members should be imparted at the village level for each and every village with the active support of the local village panchayat. All the members should be informed about the training in advance so as to ensure full participation.
5. The agencies providing support to the SHGs should ensure that all the guidelines, financial procedures and documentation for availing loan from the bank are properly communicated to the members.
6. All the banks should have SHG cell and dedicated nodal officer to look into the grievance of the SHG members. There has to be mutual trust between the bank officials and SHG members for proper implementation of the SHG link programme.
7. For the promotion of SHG bank linkage programme at the grass roots level, the NGOs should be fully supported by the state government and the local authorities.

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