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ENHANCEMENT OF SOCIAL CAPITAL THROUGH PARTICIPATION IN MICROFINANCE: AN EMPIRICAL INVESTIGATION

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Abstract

Generation of social capital among the poor village women through microfinance participation emerges an important aspect of rural development programme. This paper presents a method of calculating Social Capital Index and on the basis of two periods longitudinal primary data establishes the fact that enhancement of the value of Social Capital Index is more among the participants of microfinance programme under SGSY scheme than the nonparticipants.

Key words: Microfinance, Social Capital, Impact Evaluation

JEL Classifications: C90, G21, I38

ENHANCEMENT OF SOCIAL CAPITAL THROUGH PARTICIPATION IN MICROFINANCE: AN EMPIRICAL INVESTIGATION

Introduction:

Social capital indicates connection with in the social network. The concept of social capital highlights the value of social relations and the role of co-operation and confidence to get economic results. It refers to the process between people which establishes network norms, social trust and facilitates co-ordination and co-operation for mutual benefits. World Bank had considered social capital as one of the vital resources to bring out the desirable outcomes for any development programme. In any rural society, social capital among the individuals can be generated through interaction with same rural community members of homogeneous category or of heterogeneous category or with an organization like NGO or any development officer. Social capital cannot be generated by individuals acting on their own but depends on the capacity to form new associations and networks. It is actually a non material enhancement of asset which can help the participant to get more information about different aspects of family welfare programme mainly about health, nutrition and education.

In India the joint liability microfinance system is operated through forming Self-Help Group (SHG). It is a small group of poor village married women mainly belongs to same village who have voluntarily come forward to form a group for improvement of their social and economic status. Groups are not always formed on the basis of 'self selection mechanism'. Sometimes it is formed with the influence of NGO or District Rural Development Authority (DRDA) under local panchayet. Membership size of SHG is a crucial factor for generating social capital among the group members. Small size permits closer ties among members and can reduce costs of information within the group. Close social relationship between the group members, bank employees or DRDA members can help the SHG borrowers to acquire knowledge

about utilization their micro-credit properly. Each SHG member has to present herself in the group meeting organized by the group she belongs which is happening at least twice in each month. This meeting encourages regular interaction among members of highly localized communities which was almost absent in poor rural communities before group formation. Frequent meeting among the group members help them to monitor the activities of each other regularly which also plays a significant role to reduce the possibility of default among the borrowing members through increasing the possibility of proper utilization of credit. This meeting helps the SHG members to come out from their home and participate in different family and village related matters with other fellow village women of same group or other group or nonmembers. It also improves social strategy with in the society they live. The basic objective of this paper is to investigate whether the participation in microfinance programme under SGSY scheme operated by Government of India help the poor rural women to improve their social capital.

A brief overview of Literature:

Lidgerwood (1999) had mentioned that success of microfinance system depends on generation of social capital mainly among the participants because it depends on trust between the borrower and lender. Mayoux (2001) on the basis of seven microfinance programmes in Cameroon had shown that this programme not only builds social capital among the participants but also this enhancement plays a significant role to improve empowerment among the participants. Ito (2003) and Maclean (2010) had mentioned that social capital plays the role of social collateral in microfinance system which can play a key role in making sustainable financial services for the poor. Benjamin, Field and Pande (2009) had shown that more frequent interaction among the group members build social capital and improves their financial activities. But no one have tried to quantify social capital or have tried to properly investigate whether enhancement of social capital is more among the microfinance participants in compare to the nonparticipant. We are here trying to do that.

Methodology:

To investigate this we shall have to compare the enhancement of social capital of SHG members with those of nonparticipant individuals having almost similar socio-economic household background. The first group is treatment group and the second group is the 'control group'. To identify the treatment effect on selected individual's, one need for each participant an analogous non-participant particularly in the base period. But there is a possibility of sample selection bias. The bias is due to differences in unobservable and few observable characteristics. In any microfinance system the unobservable features of the sample respondents belong to treatment group are like entrepreneurial capacity or motivation of borrowers which brings about systematic relationship between programme participants and outcomes and the latter relates to lack of appropriate comparison groups in the same locality. To minimize sample selection problem, careful selection of the samples belongs to non-treatment group is required such that they will have almost same distribution of observed characteristics.

We initially have chosen three gram panchayets Gabberia, Ghateswar and Krishnapur of Mandirbazar block and two gram panchayets Dakhin Raipur and Digambarpur of Pathar Pratima block of South 24 Parganas district of West Bengal as sample blocks and panchayets all of which are economically poor. Then we have to identify the Self-Help Groups under SGSY scheme in those two sample blocks which have formed between April to July 2007 because that time period is here considered as base line period (identified as t_0^{th} period) in our investigation. The information about the time of formation of SHGs during that particular time period was collected from local panchayet offices. We have altogether found 33 such groups (19 of Pathar Pratima block and 14 of Mandir Bazar block). From each group we have chosen 7 members (from one group we have chosen 8 members) randomly. So total sample size of SHG members became 232. During the time of finalizing sample belongs to control group we have chosen the married village women from almost similar household economic background who had not yet joined in any SHG

even at the end line time period i.e. at September-December 2009 from the same villages under same blocks. Total sample size of the respondents belongs to control group after scrutinizing their responses became 156. To become sure about the absence sample selection we shall have to depend on ‘treatment effect model’ calculated on the basis of two step procedures. The modern literature of ‘treatment effect’ begins with contra-factual when each individual has an outcome with or without treatment. But because an individual cannot be observed in both the states at a given time, we cannot observe the values of the explanatory variables in both states in a particular time period. So to avoid this problem, in the baseline period we have to collect socio-economic information of the households from both types of sample married women: (i) those that are joining Self-Help Group and (ii) those that are not joining microfinance programme under SGSY scheme. We have again collected the same information of both types of sample households in our ‘end line’ period. Then we have calculated the change of the outcome variable as well as other necessary explanatory variables between the concerned time periods. In this application, the main reason for collecting longitudinal data is to allow for the unobserved effect to be corrected with the explanatory variables. To remove the unobserved effect, we can difference the data across the two years. Hence to do the impact study, we consider the following first differenced equation.

$$\Delta \text{SCAPITAL}_i = \beta_0 + \beta_1 \Delta \text{NREGS}_i + \beta_2 \text{SGSY} + \Delta u_i \dots \text{Eq.(1)}$$

Here $\Delta \text{SCAPITAL}_i$ is the change of the value of social capital index¹ of the i^{th} individual between the baseline and ‘end line’ time period. $\text{SGSY} = 1$ if the respondent household has joined SHG under SGSY scheme in the base line period and remains member till the end line period and $= 0$ for the non-participants within that time period. In the ‘treatment effect model’ participation in microfinance programme under SGSY scheme is treated as endogenous dummy variable. ΔNREGS_i is the change of the number of man-days of getting employment from

¹ The method of calculating Social Capital Index on the basis of maximum 3 points scale is shown in the Appendix-1

National Rural Employment Guarantee Scheme (NREGS)² between the concerned time period considering previous one year as reference year. This is positive for both types of respondents.

Initially we have to check whether there is any sample selection problem in our investigation and if there is no problem, then we can easily do the impact analysis on the basis of ‘first differenced method’ mentioned in Eq. (1). The basic idea behind the Treatment effect model in a two step procedure is to estimate two regressions simultaneously. The first one is a Probit regression predicting the probability of ‘treatment’ and the second is a linear regression for the outcome of interest as a function of treatment variable controlling for observable confounders. Especially the ‘treatment effect model’ is expressed in two equations:

Selection equation:

$$SGSY = \alpha_0 + \alpha_1 ERORNOT_i + \alpha_2 AGE_i + \alpha_3 VASSET_{it0} + \alpha_4 DRATIO_{it0} + \alpha_5 NREGS_{1t0} + \mu_i \dots \dots \text{Eq.(2)}$$

The participation of a rural woman in SGSY scheme may be influenced by her age (Age), whether she was an earning member of her family in the baseline period (ERORNOT), the value of asset the respondent household owned in the baseline period (VASSET_t), the dependency ratio of the household in t₀th period (DRATIO_{t0}) and total number of man-days of getting employment in the baseline period considering previous one year as reference year (NREGS_{1t0}).

Regression equations: $\Delta SCAPITAL_i = \gamma_0 + \gamma_1 \Delta NREGS_i + \gamma_2 SGSY + \varepsilon_i \dots \dots \dots (3)$

² The basic objective of NREGS is to arrange 100 man-days of employment for each willing economically backward rural household in each financial year mainly in the same locality which may also play a significant role to enhance social capital because more number of days of getting job under NREGS help the poor introvert rural woman to come out from their home and interact with fellow villagers and local panchayet members.

Actually in the above model SGSY is an endogenous dummy variable and to do the evaluation task it is required to estimate γ_2 . Here ε_i and μ_i both are bivariate normal distribution with mean zero and the covariance matrix is expressed as $\begin{bmatrix} \sigma & \rho \\ \rho & 1 \end{bmatrix}$.

‘ ρ ’ basically indicates the correlation between the error terms of the two equations mentioned as Eq.(2) and Eq.(3). ‘ σ ’ is the standard error of the outcome regression mentioned as Eq. (3) if that is linear in nature and $\lambda = \rho * \sigma$. If ‘ ρ ’ is positive and significant, the estimated effect of treatment from single equation estimation will generally be biased and away from zero. STATA will give us whether $\rho = 0$ or equivalently whether $\lambda = 0$ since $\sigma > 0$ or not. If $\rho = 0$ there is no selection bias and we can present single equation estimate mentioned in Equation (1). If $\rho \neq 0$, there is sample selection bias and we should present the estimates from the treatment selection model instead.

The estimated values of the parameters are expressed in Table-1 when the outcome variable is Δ SCAPITAL

Table-1

Name of the variables	Two Step Treatment Effect Model ³ Eq.(3)	First Differenced Equation Eq.(1)
Δ NREGS	.0011 (.00022)*	.0011802(.00022) *
SGSY	1.1146 (0.9733)	2.087 (0.3405)*
Constant	1.7689 (.590215) *	1.2368 (.316411)*
$\hat{\lambda}$.6822 (.638)	
\bar{R}^2		0.29

*=> Significant at 1% level.

³ The parameter estimates of Equation (2) is mentioned in Appendix-2

So $\hat{\lambda}$ is statistically insignificant i.e. we fail to reject $H_0: \rho = 0$ and with this $\hat{\gamma}_2$ also in Equation (3) which establishes the fact that there is no evidence of sample selection problem in our investigation and we can solely depend Equation(1) to get the result of the impact study. The result establishes the fact that the enhancement of social capital is more among the participants of microfinance under SGSY scheme if we compare them with the non participants within the concerned time period. The result also establishes that getting more number of man days of work under NREGS also help the rural women to enhance their social capital.

Conclusions: A SHG is formed on the basis of trust and reliance on each other. Hence group activity through forming SHG enhances social capital among microfinance participants. In any SHG we have observed the presence of trust among the group members: which entails a willingness to take risks in a social context based on a sense of confidence that others will respond as expected and will act in mutually supportive way. We also see the presence of reciprocity among the group members when each group member acts as a benefit of other group members. Social norms are also followed here when attitude of each member is co-operative with other group members. Ultimately we observe that the enhancement of social capital is more among the SHG members under SGSY scheme if we compare them with the non-participants

Appendix-1

Method of Calculating Social Capital Index (asked either to the member or married non-member women respondent both for 'baseline' and 'end line' period)⁴

Name of the Variable	Points
1. Decision on purchase of daily food items	Respondent-2, Both-1, Husband-0
2. Interaction with co-group members/neighbors outside the meeting	Frequent-2, Normal-1, Nominal - 0
3. Your trust on co-group member/neighbor	High-2, Normal-1, Not Impressive-0
4. Are you supportive with your co-group members if she fails to repay her loan with in stipulated time period?	Yes-1, No-0
5. Awareness on child education, vaccination and other family health related matters through interacting with your co-group members or other fellow village women	Good-2, Nominal -1, Nil-0
6. Can she participate in different gram sabhas according to her will?	Yes-2, No-0
7. Interaction with SHG members or other villagers help you to get information about different financial and family matters	Good-2, Normal-1, Nil-0
8. Can you go outside without taking permission from her husband	Always-2, Sometimes-1, Never-0
9. Can you cast your	Yes-2, No-0

⁴ When the score is different for co-group member and neighbor then the average score is considered.

vote according to your will?	
10. Can you protect yourself against domestic violence?	Yes-1, No-0
11. Decision on Family Planning	Respondent-2, Both-1, Husband-0

Appendix-2:

SGSY

$$= 1.43 - .035*AGE - .2137ERORNOT - .000014VASSET_{t1} + .076DRATIO_{t1} - .00094*NREGS_{t1} + e_1$$

References:

Feigenberg.B., Erica Field and Rohini Pande (2009): '*Building Social Capital Through Microfinance*' MIT Working Paper Series.

Ito Sanae (2003): '*Microfinance and Social Capital: Does Social Capital Help Create Good Practice?*' Development in Practice, Vol-13, No.4, August.

'Ledgerwood .J. (1999): '*Microfinance Handbook: An Institutional and Financial Perspective*', Washington DC: World Bank, 322-332.

Maclean Kate (2010): '*Capitalizing on Women's Social Capital? Women- Targeted Microfinance in Bolivia*' Development and Change, 41(3), 495-515.

Mayoux Linda (2001): '*Tackling the Down Side: Social Capital, Women's Empowerment and Microfinance in Cameroon*', Development and Change, Vol.32, 435-464.