Linkage between Microfinance participation and securing Employment through MGNREGP

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LINKAGE BETWEEN MICROFINANCE PARTICIPATION AND SECURING EMPLOYMENT THROUGH MGNREGP

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Abstract

In this paper the relationship is assessed between participation in microfinance program under SGSY scheme through forming Self-Help Group and getting employment through Mahatma Gandhi National Rural Employment Guarantee Program (MGNREGP). Using Tobit Model with endogenous covariate method it is established that participation in microfinance program operating through joint liability credit contract help the rural households mainly the women to generate more social capital than the non-participant households which ultimately help them to get more information about different developmental program like MGNREGP initiated by the government. Hence, it came out from our investigation that microfinance participant member households get more number of man-days of employment through MGNREGP than the non-member households. It is also established from our investigation that households with higher average monthly income and less dependency ratio are less prone to demand job under MGNREGP.

Key words: Mahatma Gandhi National Rural Employment Guarantee Program, Microfinance, Self-Help Group, Social Capital.

JEL Classifications: C24, D83, G21, J21, P25.

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1. Introduction:

The National Rural Employment Guarantee Act (NREGA, 2005) which in October, 2009 renamed as Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGP) is a significant social policy initiative particularly for the rural people in India. It is instituted by an Act of the Parliament and treats employment as a right which contains provisions such as minimum wages, worksite facilities and mandatory participation of female workers. This programme is based on Keynesian concept of direct job creation by the government in an economy where we see the presence of unemployment and underemployment particularly in the rural sector. Its main objective is to provide enhancement of livelihood security of the households in rural areas of the country by providing at least 100 man-days of guaranteed wage employment at government decided wage rate to every household in unskilled manual work. Proper awareness of the local people about different aspects is necessary for proper implementation of this scheme. Shankar *et.al.* (2011) observed that a large majority of participant households did not properly know that they would receive additional wage if work was provided at a distance more than 5 km. or they are entitled to unemployment awareness if they were not provided with work within 15 days. So here we hypothesize that the rural households will be more prone to join under MGNREGP if the household possess more information about different scheduled components of the program. The work under MGNREGP is measured in terms of number of full man days of getting employment under this scheme in particular accounting years. But the question is how the information about the program can be reached to the targeted level of rural people. Information about other people, about what they are doing and the potential to influence their

behavior, each represents different facet of social capital. So we can claim generation of Social Capital among the rural households may help them to get more detail information about this employment program.

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 co-operation for mutual benefits. Coleman (1988) has explained social capital as an asset which is generated among the people on group level which will help them to improve their knowledge in different aspects of life through interacting among the group members or with fellow villagers. It is actually close contract with friends, colleagues and fellow community members using which she can receive opportunities to use her physical as well as human capital. It can also be generated through interacting with organization like NGO or local panchayet or any development officer. Social capital of an individual is a non-material enhancement of asset which can help her to get more information about different development programs taken by the government. World Bank in 2009 have also considered social capital as one of the vital resources to bring out the desirable outcomes for any development program. Like physical or human capital, social capital needs maintenance. Social bonds have to be periodically renewed and reconfirmed. Joint liability microfinance system through forming Self-Help Group is a way through which social capital not only can be generated but also can be maintained.

The joint liability micro-finance system is based on peer monitoring which actually plays the role of collateral during the disbursement of credit from the group. So in any Self-Help Group (SHG) we see the presence of trust among the group members: which entails a willingness to

take risks in a social context based on the 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. Membership size is a crucial factor for generating social capital among the group members. Relatively small size permits closer ties among members and reduce costs of information within the group. 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 rural communities particularly among the married women before group formation. It is also established that participation of a rural married woman in microfinance program through forming self-help group helps her to improve their intra-household decision making power (Kundu, 2011). This enhancement of empowerment helps her to come out from the narrow corner of the house and participate in different gram shabhas organized by local panchayet. More and more interaction of the SHG members with fellow group members as well as local panchayet members help them to get much more information about different welfare programs organized by local panchayet. MGNREP is such a welfare program taken by Government of India through local Panchayet which can help the rural people to get non-farm employment in their locality. In our research investigation we consider the microfinance program under Swarnajayanti Gram Swarojgar Yojona (SGSY), which has initiated by the Central Government as a poverty alleviation program with the help of local panchayat and District Rural Development Agency (DRDA). DRDA initiates and sustains the process of social mobilization for formation, development and strengthening of Self-Help Groups (SHG)s through facilitators which means the microfinance program is operating

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through joint liability credit contract. Generally a group consists of 10-15 members. It was directed by the government of India that the groups will be formed by taking members mainly from the households who belongs to Below Poverty Level (BPL) category. The members of the SHG under this microfinance program are almost homogeneous in nature and they belong to almost same socio-economic background (Kundu, 2008).

The basic research objective of this paper is to investigate whether microfinance participation under SGSY scheme help the rural households to get comparatively more number of man-days of employment under MGNREGP through generating Social Capital than the non-participants. The paper is segregated in to different sections. In Section-2 we give a brief overview of literature. In Section-3 we shall discuss about the sample design and methodology used to investigate the above mentioned research problem. In Section-4 we shall mention the results of the main econometric exercise and in Section-5 we want to give the economic interpretation of the results and then we draw concluding observations of our paper.

Section-2 : Overview of Literatures.

Udry(1994) had shown that the information flows and close-knit relationship with in traditional society could overcome information asymmetries in credit market. Bardhan *et.al*.(2008) examined the relationship between political participation and its relation to local governance. They found that allocation of benefits across villages by local government displayed bias against poor and low-caste groups. These biases were larger in villages with more unequal land ownership and lower participation rate in the village meeting. Actually information always plays an important role for proper public service delivery. Pandey *et.al.* (2008) had observed that community based information campaigns in India were shown to

have improved school presence at least in the short run. Kundu (2011) had proved that two public policies SGSY and NREGS can jointly bring happiness among the rural participants.

Mayoux (2001) first observed that due to multidimensional aspects microfinance program under the joint liability system is effective enough to generate social capital among the rural women in the under developed countries. Actually microfinance helps building social capital to enhance degree of information sharing, democratic participation, collective decision making and sustainable development. Sustainable development requires combination of natural capital, physical capital and human capital. Microfinance program makes use of existing social capital in the society and link that to physical capital for faster economic growth. Microfinance participation helps in bringing wide political participation stronger interventions in decision making process and more bargaining position for poor women. Oksan (2008) had shown how microfinance participation can contribute to the political awareness and social activism through the process of development of social capital. Basangekar (2010) established that microfinance program implementation has created a social capital which has an empowering effect on SHG members. Shankar, Gaiha and Jha (2011) had shown that information can enhance the ability of the rural people particularly the acutely poor to get benefit from the scheme. They had shown that mainly the non-poor get the benefit of NREGA due to getting better information about the program than the acutely poor who had hardly attend public meetings and were not connected to social network properly. According to them social network as well as access to information increased the likelihood of participation of the affluent but decreased the likelihood of participation by the non-affluent and the poor. Again there should be a strong link between participation in microfinance through forming SHG and generation of social capital among the group members. So we can

claim that social connectivity can be enhanced through the participation of microfinance program under SGSY scheme which is to be operated with the help of local government like District Rural Development Agency (DRDA) run by the local panchayet. But no one has properly investigated to identify whether there is any link between two public policies initiated by Indian government to alleviate poverty?

Section-3: Sample Design and Methodology:

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, (an economically backward district of West Bengal) as sample blocks and panchayets all of which are economically backward. From each panchayet, we have randomly chosen one village. Then we have to identify the Self-Help Groups under SGSY scheme in those sample villages which have formed between April to July 2007 because that time period is here considered as base line period (identified as t_1^{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 under SGSY scheme became 232. During the time of finalizing sample belongs to control group we have chosen the married village women from almost identical socio-economic background who had not yet joined in any SHG even at the end line time period i.e. at September-December 2009 (indicated as t_2^{th} time period) from the same villages under same blocks. So total time span in our investigation is two and half years (from April-July, 2007 to September-December, 2009)

Total sample size of the respondents belongs to control group after scrutinizing their responses became 156. Actually the end line survey was designed to cover the same respondents both members and non-members who had been covered in the baseline. So we have longitudinal data of two periods of each respondent both belongs to treatment group as well as control group. Comparison between the baseline and end-line data revealed possible changes in getting job through MGNEGP of both the participants as well as non-participant households.

In our investigation we have to find out the factors which can influence a rural household to demand as well as get more jobs through MGNEGP between the experimental time periods and to do that we have to consider the following linear equation:

$$ANREGA_i = \alpha_0 + \alpha_1 VASSET_{t1} + \alpha_2 MINCOME_{it1} + \alpha_3 DRATIO_{it1} + \alpha_4 \overline{SCAPITAL_i} + \alpha_5 EDULEVEL_i + u_i \dots (1)$$

In the above equation $ANREGA_i$ is average number of full man-days the ith household (either belongs to treatment group or belongs to control group) get job annually under MGNREGP between the t_1^{th} time period and t_2^{th} time period. Initially we have asked each respondent about total number of full man-days that respondent household has got job under NREGA between April-July 2007 to March 2008, April-2008 to March 2009 and from April 2009 to September-December 2009. Adding that, we have divided it by 2.5 to get ANREGA.

$VASSET_{t1}$ mainly includes the value of land owned by the ith household in the t_1^{th} time period. The value of land is expressed here as the then market value. Landlessness is often treated as an important indicator of poverty. In West Bengal most of the farmers are marginal in nature. Same picture is also observed in South 24 Pargana District where most of the farmers cultivate paddy in the rainy season mainly for self-consumption. If the land is fertile

and at least few minor irrigation facilities are there then the farmer household will obviously concentrate to cultivate different horticultural products. So it is possible that the ownership of fertile land with good market value can discourage the rural household to get job under MGNREGP because they have alternative sources of income. There are few differences in the value of land per bigha in Patharpratima block if we compare that with Mandirbazar block. Again the same block the value of land differs because of its fertility. The market value per bigha of land is more if it is more fertile. During the time of field investigation it was observed that the value of land in the sample villages of Patharpratima Block was around Rs.45000 per bigha i.e. one third of acre in base line period in our investigation but that price had increased up to Rs.55,000 to Rs.60,000 per bigha in the end line period. In the sample villages of Mandir Bazar block that prices were around Rs.50,000 per bigha in the base line period and Rs.60,000 to Rs.70,000 per bigha during the end line period.

Apart from land, $VASSET_{t1}$ also accommodates the then market value of the shop if the respondent owns, the market value of ornaments and even consumer durables like cycles. Actually $VASSET_{t1}$ is the aggregate of the market values of different types of assets owned by the respondent households which they can sell in their distress and higher value of it indicates economic solvency of the respondent household in the baseline period.

$MINCOME_{it1}$ indicates the average monthly income of the sample household in the t_1^{th} period considering the previous one year as reference year. We have also checked the correlation coefficient of $VASSET_{t1}$ and $MINCOME_{t1}$ and the value of it is 0.10. So we can rule out the possibility of Multi-co linearity in the above equation.

In MICOME we accommodate average monthly earnings from land and average (total) monthly wage income of the earning member(s) of the household both from farm and

nonfarm sector. This has to be considered because most of the sample households in our investigation are either landless or marginal farmer (who owns not more than 2.5 acres of land) and for livelihood they have to depend on multiple occupations. Though in India the poverty line is expressed in terms of Adult Equivalent Monthly Per-capita Consumption expenditure (MPCE), but it is difficult for a rural decision maker to calculate MPCE whereas she has almost clear idea about the average monthly income of the household she belongs. Hence, during the time of demanding job under MGNREGP, we consider MINCOME of the respondent household at the base line period as an explanatory control variable.

$DRATIO_{it1}$ indicates the dependency ratio of the ith household in the t_1^{th} period where,

$$DRatio_i = \left[\frac{\text{Total Adult Equivalent Family Member of the } i^{th} \text{ household}}{\text{Total Adult Equivalent Earning Member of the } i^{th} \text{ household}} \right]$$

Dependency ratio is calculated on the basis of Adult Equivalent Scale. Following Townsend (1994) to get adult equivalent family members we have considered 1 for any adult member (both male and female), 0.25 for any member of that household up to six years of age and 0.5 for any member of the household between six and fourteen years of age and 0.75 between fourteen and eighteen years of age.

Higher dependency ratio indicates comparatively less number of earning members of the household. It can be expected that a rural household with larger dependency ratio may become more prone to demand job under MGNREGP.

EDULEVEL indicates the education level of the head of the family of the respondent household which is expressed here in terms of number of years of schooling. If (s)he is more educated then it is expected that (s)he should be much more aware about different

governmental development programmes like MGNREGP. All the above explanatory variables here treated as control variables.

$\overline{\text{SCAPITAL}_\iota}$ indicates $= \frac{\text{SCAPITAL}_{it_1} + \text{SCAPITAL}_{it_2}}{2}$ i.e. the mean value of social capital index of the ith individual of the base line period and the 'end line' period. The method of calculating the Index is mentioned in the Appendix. This is the most important explanatory variable in our investigation. As the time gap between the base line period and the end line period is two and half years, it was quite difficult for the investigator to calculate social capital index of each individual in each year. So we have taken the value of the index of each respondent household only for the baseline period and for the end line period and then consider the mean value of the index as an explanatory variable in our investigation. Kundu (2012) have shown that the enhancement of the value of Social Capital Index is more among the SGSY participants than the non-participants. So it is expected that the mean value of the Social Capita Index is more among the SGSY participants than the non-participants and this higher mean value may help the member households to get more number of full man-days of employment through MGNREGP. In equation (1) we consider $\overline{\text{SCAPITAL}_\iota}$ as endogenous explanatory variable which is correlated with u_i and the instrument of $\overline{\text{SCAPITAL}_\iota}$ which is not correlated with u_i is SGSY as an instrumental variable. If a female member of the respondent household has joined microfinance programme under SGSY scheme in the baseline period through forming SHG and became member up to end line period then SGSY = 1 otherwise it is considered as 0.

So we have the following equation.

$$\overline{\text{SCAPITAL}_\iota} = \beta_0 + \beta_1 \text{SGSY} + \varepsilon_i \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots (2)$$

The Regression result is $\overline{\text{SCAPITAL}_\iota} = 1.88^* + 2.51^* \text{SGSY} + \varepsilon_i$

$$(.245) \quad (.339)$$

Here $\overline{R^2} = 0.28$ and $* \Rightarrow$ Significant at 1% level.

The statistical significance of $\widehat{\beta_1}$ establishes the fact that SGSY participation has a strong positive influence on the change of the value of her social capital index. So we can consider SGSY as an instrumental variable of $\overline{\text{SCAPITAL}_1}$ and it is considered as uncorrelated with u_i.

Now from our sample observations we observe that for some individual households both belong to treatment group as well as control group $\text{ANREGA}_i = 0$. It came out from our field survey that out of 388 sample households, 140 households mainly belong to control group who did not get any employment through this scheme. Again out of 140 households, 133 households did not apply for job card even at the end-line period. Ignorance and lack of interest about the programme are the major causes behind that. This mainly happens of the sample households belong to control group. So in some cases the value of the explained variable in our regression is censored. If we assume that the disturbance term u_i is normally distributed then we can apply Tobit regression in equation (1) considering $\overline{\text{SCAPITAL}_1}$ as endogenous explanatory variable where SGSY is treated as instrumental variable of $\overline{\text{SCAPITAL}_1}$

Section-4: Results

Before showing the regression result of Equation (1) we first mention the summary statistics of few important explanatory as well as explained variables all of which are given in Table-1.

Table-1 : Summary Statistics of the Explanatory Variables and Explained Variables

Name of the Variable	SGSY Members			Non SGSY Members		
	Mean	Median	S.D.	Mean	Median	S.D.
$NREGA_{t1}$ (just before the base line period)	.061	0	2.86	.053	0	3.29
$NREGA_{t2}$ (within the experimental period)	22.31	20	19.23	16.21	15	12.26
$VASSET_{t1}$(Rs.)	43773.19	0	73519.78	65263.123	50000	1357.88
$MINCOME_{t1}$(Rs.)	1717.61	1804.35	691.57	1935.26	1700	1328.52
$SCAPITAL_{t1}$	5.75	6	3.92	6.23	7	2.87
$SCAPITAL_{t2}$	10.42	10	3.65	8.04	8	2.70

Source: Calculated on the basis of data collected from field survey

From Table-1 it is clear that just before the baseline period (considering previous one year as reference year) very few rural households got job under MGNREGP in both the sample blocks. Lack of availability of fund to initiate the programme was the major cause of it. But within the experimental time period the SGSY member households got more number of full man-days job under MGNREGP on an average if we compare that to non member households. The expansion of MGNREGP among the households in the sample villages is not satisfactory. Low programme coverage among the needy rural households is the major reason behind low value of ANREGA.

It is also observed that the mean value of Social Capital index among the respondents belongs to SHG members under SGSY scheme is more than the nonmembers in the end line period.

Now the regression result of the Tobit model with endogenous covariate mentioned in Eq.(1) is shown in the Table-2.

Table-2: Regression result of Tobit Model with Endogenous Covariate:

Name of the Explanatory Variable	Values of the Marginal Coefficients
VASSET	.0011 (.00078)
MINCOME	-.3500* (.1010)
DRATIO	253.18** (111.78)
$\overline{SCAPITAL}_i$	450.391* (68.861)
EDULEVEL	-60.283** (27.892)

Source: Regressed on the basis of data collected from field survey

Number of observations = 388, Uncensored observation = 248 and Left censored observation with $ANREGA_i = 0$ is 140. The value of Wald $\chi^2(5) = 57.38*$ which establishes goodness of fit of the above model and can conclude that the covariates used in the regression model are appropriate. The value of the Wald test of exogeneity of the instrumental variable gives (alpha =0): $\chi^2(1) = 22.19*$ which establishes the presence of endogeneity in at least one covariate in our model. So the point estimates of the Tobit model with endogenous covariate are consistent

Here *=> Significant at 1% level and **=> Significant at 5% level.

Section-5: Discussions:

It came out from field investigation that the regularity of the SHG members to attain meetings of gram shabhas and interaction with local panchayet office has improved within the experimental time period. Enhancement of empowerment due to participation in microfinance programme is one of the major causes behind that. Actually different development programmes initiated by the government is generally circulated at public meeting like gram shabha. Regular attendance of such meeting implies the presence of network externalities which enhances social capital among the microfinance participants more than the nonparticipants. We know that there is a strong positive correlation between social capital and social empowerment. The social empowerment help the SHG members to enhance their

knowledge about different government programme like MGNREGP due to which they can demand more job under the scheme from local panchayet because they can now meet and interact more with government officials and know the procedure of demanding job through MGNREGP. As there is no excess demand in getting job under MGNREGP in the sample villages in both the blocks, we can say that enhancement of social capital due to participation in microfinance programme under SGSY scheme help the SHG member households to get job in terms of more number of days through MGNREGP than the non-participant households.

It is proved that the household with more average monthly income in the base line period is less interested to demand job under MGNREGP which proves that comparatively economically solvent households are less prone to demand job under MGNREGP.

It is also proved that a household with larger the dependency ratio is more prone to demand job under MGNREGP. Larger dependency ratio of a household reflects poverty of that household when poverty line is calculated in terms of adult equivalence monthly per-capita consumption expenditure

More educated the respondent, less will be her interest to enroll herself and her other family members to get job under MGNREGP.

But ownership of land or any other asset (which is represented as $VASSET_{t1}$), does not play any significant role during the time of taking decision about demanding job under MGNREGP. This also establishes the presence of economic homogeneity in terms of the value of assets owned between the member households belong to treatment group and control group in the base line period.

Conclusions:

Most of the rural workers in India are unskilled and have little employment opportunities particularly in their own locality. MGNREGP is important for them because it can provide employment opportunity for those workers in their own village. Now to get proper information about this public policy, social capital always plays an important role. More social capital can be generated among the villagers through participating microfinance program under SGSY scheme and this enhancement of social capital help the member rural households to get more information about this public policy as well as more number of days of job through MGNREGP than the non-participant of SGSY households.

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)[1]

Name of the Variable	Points
. Interaction with co-group members/neighbors outside the meeting	Frequent-2, Normal-1 , Nominal - 0
. Your trust on co-group member/neighbor	High-2, Normal-1, Not Impressive-0
. Are you supportive with your co-group members if she fails to repay her loan with in stipulated time period?	Always -2, It Depends – 1, No-0
. 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
. Can she participate in different gram sabhas according to her will?	Always-4, Not so often – 2 , No-0
. Interaction with SHG members or other villagers help you to get information about different financial and family matters	Good-2 , Normal-1, Nil-0
. Can you go outside without taking permission from her husband	Always-2, Sometimes-1, Never-0
. Can you cast your vote according to your will?	Yes-2, No-0
. Decision on Family Planning	Respondent-2, Both-1, Husband-0

The method of calculating Social Capital Index is constructed by the author himself.

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