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Role of Microfinance in Reducing Income Inequality: A Case Study of Nadia District in West Bengal

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Abstract
Although there has been sharp decline in the poverty, still about 270 million people (21.9%) of the country live below the poverty line. There has been highly unequal distribution of income between the rich and the poor. Under this backdrop, microfinance has been considered as poverty alleviation. The objective of this study is to measure the income inequality among the SHG and non-SHG households in the study area. Ranaghat-II block under Nadia district of West Bengal has been selected for the purpose of the study. The study is mainly based on both primary data collected from a field survey. Taking 40 respondents from SHGs and 40 women from non-SHGs altogether 80 samples have been considered to conduct the present study. In conclusion, it can be said that micro has been able to reduce the inequalities in the distribution of household income of the SHG members.

Keywords: Microfinance, Poverty, Inequality, Self-help group, Gini-coefficient, Lorenz curve

Introduction
The major problem of our country is the problem of poverty and unemployment. The Government of India through its organized process of economic planning has given high priority towards eradication of poverty and reduction in inequality. No doubt the country has made a significance achievement in agriculture, industries and service sector; also there has been improvement on ranges of indicators relating to human development index viz., life expectancy, nutrition infant mortality, and dropout in basic education and so on. Contrary to these, India is far from what it could be. Although there has been sharp decline in the poverty in term of head count, still about 270 million people (21.9%) of the country live below the poverty line. There has been highly unequal distribution of income between the rich and the poor. The policy of removing inequality in income distribution though announced from the beginning of five year plans in India but nothing is done in reality. Therefore, there must be a tool, which will reap the benefits of developmental efforts to the poor, so that the poor will come out of poverty to lead a better, healthy and meaningful life.
Under this backdrop, microfinance has been emerged as a poverty alleviation tool which has brought hope and light in the lives of poor people in rural India. In Bangladesh this movement started in 70s. Md. Yunus, Noble laureate is the pioneer of this movement. The movement over the years has proved that poor are bankable.

Concept of Microfinance
Microfinance, banking to the poor, is a global phenomenon introduced by Dr. Muhammad Yunus of Bangladesh in the 1970's. Before Yunus, it was assumed that poor people were unbankable since they were only capable of taking out small loans, and had no collateral. But Dr. Yunus with the help of Grameen Bank in Bangladesh proved that poor are indeed responsible enough to manage credit and repay loans. Since then microfinance institutions have sprung up all over the world and reached millions of poor people. The term "microfinance" means lending of extremely small amounts of capital to poor entrepreneurs in order to create a mechanism to alleviate poverty. The essential features of the approach are to provide financial services through the groups of individuals. The Task Force on Supportive Policy and Regulatory Framework for Micro Finance has defined Micro Finance as

"the provision of thrift, credit and other financial services to the poor in rural, semi-urban and urban areas to help raise their income levels and improve their living standards" (NABARD, 1999).

Objectives of the Study

1. To measure the income inequality among the SHG and non-SHG households in the study area.
2. To examine how far such a programme has succeeded in reducing inequality among the rural poor women in the district.

Hypotheses

$\boldsymbol{H_1}$:The distribution of household income is more unequal for non-SHG households as compared to SHG households.

$\boldsymbol{H_2}$: The inequality in income distribution is reduced among the SHG households.

Methodology

Ranaghat-II block under Nadia district of West Bengal has been selected for the purpose of the study. The study is mainly based on both primary data collected from a field survey during 2016-17. From the study block 80 women respondents have been selected. Taking 40 respondents from SHGs and 40 women from non-SHGs altogether 80 samples have been considered to conduct the present study. Only simple statistical tools like percentage, frequency distribution, Lorenz curve have been used for the analysis of the data.

Results and Discussion

Distribution of Household Income

The following Table shows the distribution of monthly household income of the respondents. The monthly household income is classified into five categories, viz., below Rs. 2000, Rs.2000- 2500, Rs.2500-3000, Rs.3000-3500, and above Rs. 3500. From the table it is found that after joining the microfinance programme, the number of households whose income below Rs. 2000 reduces from fifteen households to seven households. On the other hand, the number of households whose income is above Rs. 3500, increases from one household to eight households.

Table.1: Level of Household Income (Income in Rs. per month)

Level of Income	SHG- Household		Non-SHG Household
	Pre-SHG	Post-SHG	
Below 2000	15(37.5)	7(17.5)	18(45.0)
2000-2500	10(25.0)	8(20.0)	9(22.5)
2500-3000	8(20.0)	10(25.0)	6(15.0)
3000-3500	6(15.0)	7(17.5)	6(15.0)
3500 & above	1(2.5)	8(20.0)	1(2.5)
Total	**40(100)**	**40(100)**	**40(100)**

Source: Field survey, 2016-17

Impact of Microfinance on Income Inequality

Income inequality has been measured with the help of household income distribution. The Lorenz curve and Gini coefficient methods have been used to find out the impact of microfinance programme on the distribution of household income. The Lorenz curve is a graphical representation of the proportionality of a distribution. Here, it has been used for the analysis of income inequality. In the Lorenz curve graph, a straight line representing same income for every person is called the line of perfect equality. The difference between the line of perfect equality and the Lorenz curve shows the inequality in the income distribution. The Gini coefficient is a measure of statistical dispersion. The Gini coefficient is the quantitative measurement of income inequality from the Lorenz curve. It is the ratio of the area that lies between the line of equality and the Lorenz curve over the total area under the line of equality. The Gini coefficient can range from 0 to 1. A low Gini coefficient indicates a more equal distribution, with 0 corresponding to perfect equality, while higher Gini coefficients indicate more unequal distribution, with 1 corresponding to perfect inequality. The results for these methods, i.e., Lorenz curve and Gini coefficient are discussed below:

Distribution of Income and Calculation of Gini coefficient

Following tables show the distribution of income of the respondents' households. Tables 2, 3 and 4 show the distribution of income of the SHG households in their pre- and post SHG period and the non- SHG households. From these three Tables, we get three Lorenz curves for the SHG households in their pre- and post-SHG period and the non-SHG households. We also get the three values of Gini-coefficient from the above three Tables. The calculated values of Gini-coefficient are 0.47, 0.14 and 0.51 for the SHG households in their pre- and post-SHG period and non-SHG households respectively.

Table.2: Before SHG Gini Coefficient

X	F	% of X	% of F	% of X / % of F	Cum of % of F	Cum of % of X	FX	XF
1750	15	12.73	37.5	0.34	0	0	0	0
2250	10	16.36	25	0.65	37.5	12.73	1090.90	795.454
2750	8	20	20	1	62.5	29.09	3068.182	2400
3250	6	23.64	15	1.58	82.5	49.09	6000	4786.364
3750	1	27.27	2.5	10.91	97.5	72.73	9750	7272.727
13750	40	100	100		100	100	19909.09	15254.55
Gini Coefficient= (FX-XF)/10000=0.47								

Source: Own calculation from field survey data, 2016-17

Note: X= Mid Value of Household Income and F= No. of Households.

Table.3: After SHG Gini Coefficient

X	F	% of X	% of F	% of X / % of F	Cum of % of F	Cum of % of X	FX	XF
1750	7	12.73	17.5	0.73	0	0	0	0
2250	8	16.36	20	0.80	17.5	12.73	509.0909	477.2727
2750	10	20	25	0.82	37.5	29.09	1840.909	1818.182
3250	7	23.64	17.5	1.35	62.5	49.09	4545.455	3927.273
3750	8	27.27	20	1.36	80	72.73	8000	7272.727
13750	40	100	100		100	100	14895.45	13495.45
Gini Coefficient= (FX-XF)/10000=0.14								

Source: Own calculation from field survey data, 2016-17
Note: X= Mid Value of Household Income and F= No. of Households.

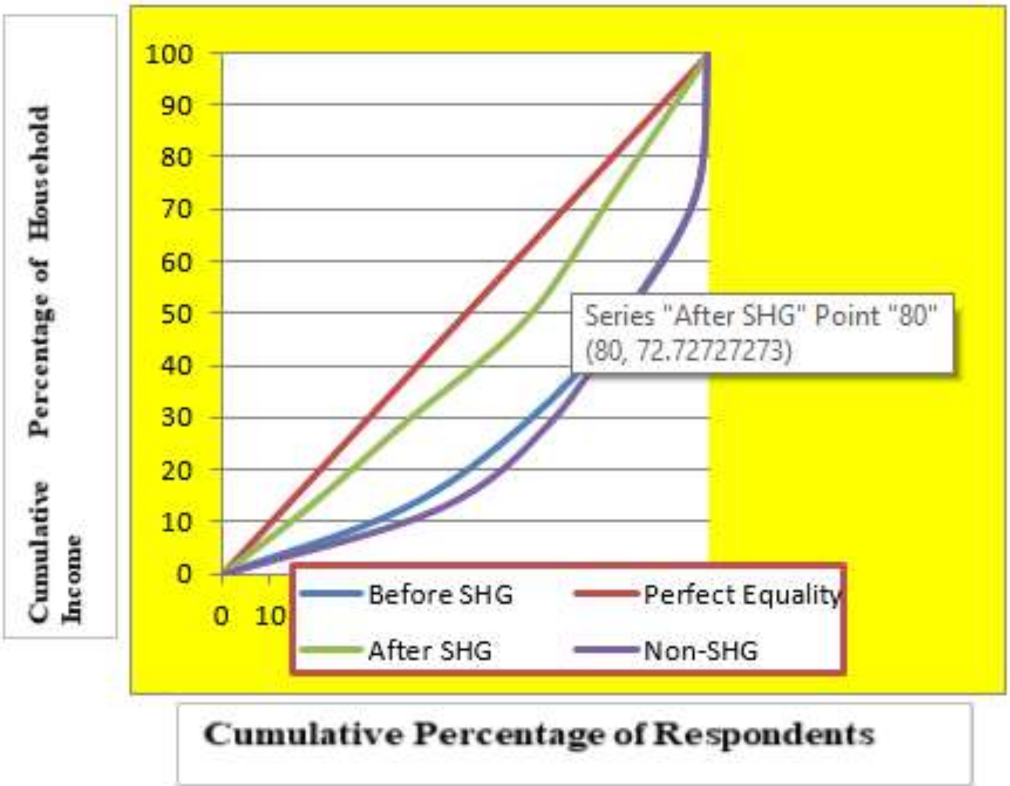
Table.4: Non- SHG Gini Coefficient

X	F	% of X	% of F	% of X / % of F	Cum of % of F	Cum of % of X	FX	XF
1750	18	12.73	45	0.28	0	0	0	0
2250	9	16.36	22.5	0.73	45	12.73	1309.09	859.0909
2750	6	20	15	1.33	67.5	29.09	3313.63	2400
3250	6	23.64	15	1.58	82.5	49.09	6000	4786.364
3750	1	27.27	2.5	10.91	97.5	72.73	9750	7272.727
13750	40	100	100		100	100	20372.7	15318.18
Gini Coefficient= (FX-XF)/10000=0.51								

Source: Own calculation from field survey data, 2016-17
Note: X= Mid Value of Household Income and F= No. of Households.

Three Lorenz curves are shown in figure 1. From the three Lorenz curves and the values of Gini coefficient it is very clear that the distribution of household income is more unequal for non-SHG households as compared to SHG households. The reduction in value of Gini coefficient in post-SHG situation represents that the inequality in income distribution is reduced among the SHG households after joining the microfinance programme.

Fig.1: Lorenz Curve



Conclusion

Micro finance (MF) in the form of SHG-Bank linkage model has been able to inspire hope in the lives of thousands of rural poor, especially poor women and enable them to contribute to their families' wellbeing through creation of self-employment and income generation. The analysis of primary data showed that microfinance programme has increased the income of the programme participants and has been able to reduce the inequalities in the distribution of household income of the SHG members.

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