

SOCIO-ECONOMIC IMPACTS OF MICROCREDIT ON RURAL AREAS IN BANGLADESH: AN ECONOMETRIC ANALYSIS

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ABSTRACT

Bangladesh is a pioneer and home of conceptualizing micro-credit program. It has undertaken a number of such programs to reduce poverty and bring about socio-economic changes in the rural community. Bangladesh is one of the populous countries of the world and a high percentage of the population suffers from abject poverty. Poor rural families of Bangladesh take microcredit from different non-government organizations (NGOs) for reducing poverty and increase the standard of their life. Microcredit makes some socio-economic changes on rural population including the reduction of income inequality, unemployment, consumption etc. Moreover, microcredits from the NGOs are spent on income generating activities and hence increase the income of rural population as well as making their saving habit. The microcredit has also positive impacts on health, education, nutrition, population growth, life expectancies and economic welfare of the poor rural family. This paper examines the socio-economic impacts of microcredit on rural family in four villages named Malonchi, Khoyershoti, Dipchor, and Monipur under Pabna Sadar, Pabna, Bangladesh.

KEY WORDS: Microcredit, socio-economic impacts, rural family, income inequality.

INTRODUCTION

Bangladesh is an over-populated agro-based developing country. Development of the socioeconomic condition of Bangladesh largely depends upon the development of its rural areas. In rural Bangladesh, women play a dominant but largely unrecognized role in agricultural and economic productivity. Women play a crucial role in domestic duties such as washing utensils, cleaning home compounds, livestock and poultry management and feeding as well as post-harvest activities, guest entertainment, decision-making, and technology adoption (Paul and Saadullah, 1991)

The masses of people from least development countries (LDCs) like Bangladesh suffer from malnutrition; they don't have ample food to eat. Again, uneven distribution of income and gender discrimination prevails throughout the country. The rural family takes microcredit from NGOs in order to increase their money income for the fulfillment of the basic needs like food, clothing, and shelter. They take microcredit from NGOs because the loan scheme of the banking sectors is profit motivated. Again, taking loan from the village money lenders involves high interest rate. In contrast, the microcredit program of the non-government organizations (NGO's) influences some economic and social indicators of the rural families positively. The rural women are enjoying the fruits of rapid growth of the economy.

During the last two decades microfinance has increasingly been in the spotlight of international development politics as well as public debate. On the one hand, it is widely held as one of the most effective tools in supporting development and its enormous potential has seen microfinance institutions mushroom in developing countries. On the other hand, microfinance came under fire in both academic circles and public debate. Its contribution to poverty reduction has been questioned and the potential risks for clients are increasingly a subject for discussion (Schicks, 2010; Schmidt, 2010).

Development enriches the lives of individuals by widening horizons of the choices and freedoms and at the same time by reducing their sense of isolation. Hence, the development strategy must be aimed at facilitating the transformation of society in identifying the potential catalysts and barriers to change. Micro-finance interventions are well-recognized world over as an effective tool for poverty alleviation and improving socioeconomic status of rural poor (Singh, 2005). Micro-credit is considered as one of the vital tools for poverty alleviation in Bangladesh (The Role of Micro-Credit in Poverty Alleviation, 2009).

The study conducts survey on Protidwhani Somaj Unnayan Sangstha (PSUS), a NGO that is working with microcredit in different villages under Pabna Sadar Upazilla, Pabna, Bangladesh since 2008. Most of PSUS's credit is given to group members without any additional support. The group member decides what activity she/he will engage in and then repays the loan from her income. The sector programs on the other hand provide some other services to group members in areas such as poultry, livestock, fisheries etc. These services include training, credit support, and access to better inputs such as improved varieties, logistical and marketing support where necessary. The largest amount of employment is in the agriculture sector which employs over 1900 persons. The total employment in all the sectors adds up to over 2000.

OBJECTIVES

The specific objectives of the study are:

- To examine the role of microcredit in raising income as well as savings, the link among microcredit, poverty alleviation and living standard.

METHODOLOGY

The principal method employed for this study was a field survey using a semi-structured interview schedule. The study uses survey data of 150 households of Pabna Sadar Upazilla under Pabna district in Bangladesh who has taken microcredit from Protidwhani Somaj Unnayan Sangstha. The data was collected from May to July in 2014.

We use Statistical Package for Social Sciences (SPSS) to analyze the impact of microcredit on consumption, income and savings of the rural families. OLS method is used to obtain the desired result. We also use different statistical tools like t-statistic, significance level, adjusted R^2 and Durbin- Watson (d-statistic) to find out the impact of microcredit on the economic variables like consumption, income and savings and the values we got is statistically significant.

RESULTS AND DISCUSSION

We found that rural households who take microcredit from NGO's enjoy higher living standards. This happens due to increment of the family income. According to the Keynes' psychological law of consumption, consumption increases due to increase in income (K.K.Dewett). But consumption increases in less proportion to income. The remaining part of the increased income goes to savings. That is, the rural families who are taking micro-credit are enjoying economic sufficiency. They are now sending their children to school. Moreover, they are conscious about health; their children are not suffering from malnutrition. The field survey of the study revealed that marginal propensity to consume (MPC) is 0.52 i.e. the households are consuming additionally tk. 0.52 out of increment in tk. 1 in their income. In other words, marginal propensity to save (MPS) is tk. 0.48 i.e. they are saving tk. 0.48 out of the increment in tk. 1 in their income.

We did the following test:

t-statistic: Let $\hat{\beta}$ be an estimator of parameter β in some statistical model. Then a t -statistic for this parameter is any quantity of the form

$$t_{\hat{\beta}} = \frac{\hat{\beta} - \beta_0}{s.e.(\hat{\beta})}$$

where β_0 is a non-random, known constant, and $s.e.(\hat{\beta})$ is the standard error of the estimator $\hat{\beta}$. By default, statistical packages report t -statistic with $\beta_0 = 0$ (these t -statistics are used to test the significance of corresponding regressor). However, when t -statistic is needed to test the hypothesis of the form $H_0: \beta = \beta_0$, then a non-zero β_0 may be used.

If $\hat{\beta}$ is an ordinary least squares estimator in the classical linear regression model, and if the true value of parameter β is equal to β_0 , then the sampling distribution of the t -statistic is the Student's t -distribution with $(n-k)$ degrees of freedom, where n is the number of observations, and k is the number of regressors (including the intercept).

In the majority of models the estimator $\hat{\beta}$ is consistent for β and distributed asymptotically normally. If the true value of parameter β is equal to β_0 and the quantity $s.e.(\hat{\beta})$ correctly estimates the asymptotic variance of this estimator, then the t -statistic will have asymptotically the standard normal distribution.

Adjusted R² : The formula is:

$$R_{adj}^2 = 1 - \left[\frac{(1-R^2)(n-1)}{n-k-1} \right]$$

where:

N is the number of points in data sample

K is the number of independent regressors, i.e. the number of variables in a model, excluding the constant

If you already know R² then it's a fairly simple formula to work. However, if you do not already have R² then you have to calculate this value. There are many statistical packages that can calculate adjusted r.

d-statistic:

The test statistic is

$$d = \frac{\sum_{i=2}^n (e_i - e_{i-1})^2}{\sum_{i=1}^n e_i^2}$$

where $e_i = y_i - \hat{y}_i$ and y_i and \hat{y}_i are, respectively, the observed and predicted values of the response variable for individual i. d becomes smaller as the serial correlations increase. Upper and lower critical values, d_U and d_L have been tabulated for different values of k (the number of explanatory variables) and n.

- If $d < d_L$ reject $H_0 : \rho = 0$
- If $d > d_U$ do not reject $H_0 : \rho = 0$
- If $d_L < d < d_U$ test is inconclusive.

Table 1 Test value of different statistic

Name of test	Result	Comments
t-statistic	3.38	Statistically significant
Adjusted R ²	0.73	Statistically significant
d-statistic	2.15	Statistically significant

The value of t-statistic (3.38), adjusted R² (0.73), d–statistic (2.15) all are statistically significant. There are some subjective factors like motive of foresight, motive of improvement, motive of calculation, motive of pride, motive of business that induce people to save for the future. The economic sufficiency of the women acts as the catalyst to women empowerment.

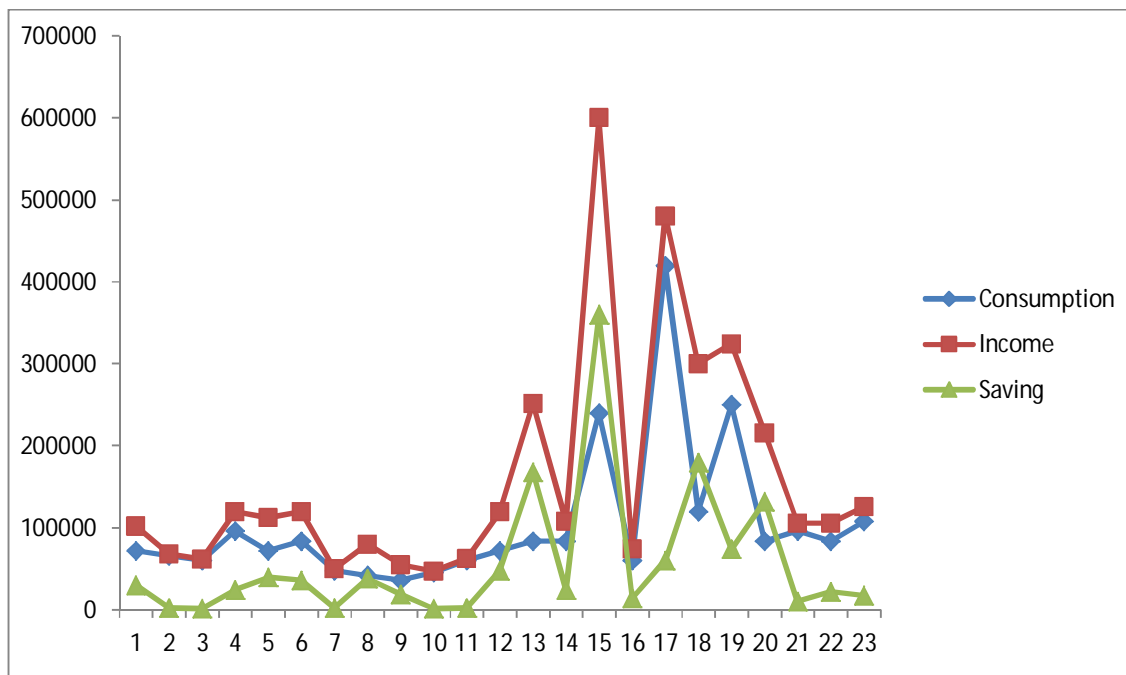


Figure 1 Income, consumption, and saving pattern of the respondents

The microcredit program of the NGO's influences the economic indicators positively and so far the social indicators. The women of Bangladesh are not confined to home but participating in social activities like club committee, school committee, cultural program etc. The decision of the women is prioritized both in household level and community level, i.e. mobility of the women is increased tremendously. The women have a role on the decision of family planning, educating their children. They are also conscious about the values and norms of the society.

All the people (those who have taken micro-credit) attested to the fact that the interest rates are high. Furthermore, they are now enjoying the fruits of economic growth. The rural people are now very conscious about health, education of their children, family planning etc. Moreover, the women have now control over their voice, control over social activities and above all control over their rights. All these happen because of economic self-sufficiency of the rural people. Inefficiency of microcredit is resulted due to improper utilization and improper supervision. If the proper supervision is ensured, the women can be brought under small entrepreneurs. Our analysis shows that about 20% of the households take microcredit and they are given a small credit.

It is sometimes seen from the field survey that the credit taken from the NGO's is misused by their husbands like gambling and addicting to alcohol.

CONCLUTIONS AND RECOMMENDATIONS

The study investigated the socio-economic impacts of micro-credit on rural areas of Bangladesh. The conclusion is that access to credit increased rural people's participation in economic activities, increased income levels from expanded business, enables them to buy and own property and assets thus improving their general status.

The study shows that access to micro-credit has improved the status of rural people both at family level and in society as a whole. At the family level, the study showed an improvement in household income and standard of living of the family. The social level, there was a rise in the confidence level of clients, and positive outlook in terms of aspiring to future leadership positions.

This study recommends the NGO's to supervise the activities of the given micro-credit to women properly. This study also suggesting the access providing agencies to provide a relatively larger amount of credit to rural people so that they can fulfill their desired expectation with the taken credit and the government, policy makers and stakeholders should peg the interest rate to be reasonable for clients.

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