

# The Impact of Microcredit on the Living Standard of Loan Takers: A Study in Naogaon District, Rajshahi

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**Abstract:** Microcredit is considered as an effective tool to improve the living standard of the poor. However, several empirical studies pointed out negative outcomes of microcredit as well. The primary objective of this study is therefore to investigate the impact of microcredit on the living standard of the loan receivers in terms of consumption expenditure. Raninagar and Kaliganj unions of Naogaon district, Rajshahi were chosen as the study areas for this study. Primary data was obtained through a structured questionnaire and was used for the quantitative analysis using the STATA software. In this study, 50 loan receivers from the two unions were selected as the sample size of the population. Ordinary Least Square (OLS) regression method is employed to examine the impact of microcredit on the monthly consumption expenditure of the loan receivers. Among the loan receivers, the study shows that 54% of them are female, the majority of them fall into 50 & over age group, and 28% of their education level is SSC. The econometric result of this study has found statistically significant impact of microcredit loan on the monthly consumption expenditure of the loan receivers ( $p=0.049$ ). In addition to this, saving and income of the loan receivers were also estimated as statistically significant. Based on the findings the study recommends micro finance institutions to increase the volume of the loans and offer saving services to the loan receivers in the study area. Further, the study recommends extended research to be carried out with a larger data set in the study area.

**Keywords:** Microcredit, loan takers, living standard, monthly expenditure.

## I. INTRODUCTION

Bangladesh's poverty situation requires a comprehensive response. People falling victims to poverty also suffers from circumstances like unemployment or insufficient income. (Gupta, 2015). However, these poor people who have poor credit ratings usually qualify for microcredit loans, which are modest, short-term loans. Microcredit has played an important role in alleviating poverty in Bangladesh by facilitating access to healthcare, clean water, good nutrition, effective education, social and cultural development, job opportunities, housing, clothing, and transportation. (Armendariz & Morduch, 2007). Since the late 1970s, when Muhammad Yunus founded Grameen Bank, Bangladesh has been at the forefront of the microfinance movement. Since then, microcredit has evolved into a method for Bangladesh's economic development that benefits low-income individuals. Today, Bangladesh is home to the largest microfinance operations in the world, and as such, it is home to a significant number of notable microfinance institutions, such as BRAC, the Association of Social Advancement (ASA), PROSHIKA, and TMSS. These

microfinance institutions have diverse organizational structures and methods of operation, but they all adhere to the same principle, ideology, and objective (United Nations, 2008). According to microcredit regulatory authority, there are 746 registered microfinance institutions operating in the country, with approximately 31 million active members living in or below the poverty line.

Small and medium-sized enterprises (SMEs) and local economies benefit greatly from easy access to these loans (Imai and Azam, 2012). Microcredit has helped people set up their businesses or get the education they need to switch careers (Hermes & Lensink, 2011). Through the use of microcredit, a society can get the resources it needs to create a more equitable and sustainable way of life. Microcredit is thus a tried-and-true strategy for alleviating poverty, with successful case studies in many parts of the world (Armendariz & Morduch, 2007). However, combined with the country's low productivity, Bangladesh still has a very high poverty rate specially in the northern regions. The impoverished are unable to borrow, invest in productive activities, or save because they commonly have access to money only in low denominations that cannot be processed by the conventional banking system. But this cycle of poverty can be broken by the effective implementation of microcredit, which in turn produces a positive feedback loop. The purpose of this study is to determine whether or not the impoverished in Northern Bangladesh actually do benefit from using microcredit loans to raise their level of living standard.

## II. LITERATURE REVIEW

While many studies have examined the effects of microfinance and microcredit on a variety of socioeconomic variables gleaned from household surveys, relatively few have analyzed the impact of microcredit programs on borrowers' ability to maintain or improve their standard of living as a result of the money they've been able to recoup through microcredit loans. A society is said to have high living standards if its members enjoy stable or unrestricted participation in the production system, free support in the systems of social joining, the freedom to adhere to a particular school of choice, and characteristics that are either comparable to or distinct from those held by the rest of the population. As a nation, Bangladesh has been the subject of numerous studies on the topic of improving the quality of life, but few of these studies have analyzed the contribution of microcredit efforts particularly in terms of the increase in household or

consumption spending. Peter (2002) suggested that microcredit can improve the consumption pattern of the loan receivers through increased provision of income and savings. While Islam (2009) looked at the credit and non-credit services of chosen NGOs to demonstrate their impact on general growth in the country, Imai and Azam (2012) employed propensity score matching to analyze impact on the income of the loan receiver. This is the setting in which, both Chowdhury et al. (2005) and Khandker (1998) looked at microcredit's effect on income for poverty reduction. Khandakar and Samad (2014) has found that the reduction in total poverty by as much as 9% in the last decade in Bangladesh was due to the intervention of the microcredit program. Khan and Rahman (2007) suggested that microcredit program can improve the living standard of the poor people if the programs also offer saving service to the loan receivers. Mazumder and Wencong (2013) were also of the opinion that the microcredit access significantly reduces the prevalence of poverty. According to Parveen and Chaudhury's (2009) research, micro-credit interventions led to economic independence for rural women. Similarly, microcredit has had a good effect on rural women, according to studies by Alam (2005). Increasing social right such as access to education was one way in which Uddin (2000) found microcredit to improve people's level of living condition. On the contrary, there was some discrepancy in the results recorded by Khan (2001). Moreover, Kiminori (2006) opined that the microcredit loan receivers may fall victim to credit cycle, traps, or collapse if there is a sudden movement in loan receivers' asset. By estimating microcredit as a tool for poverty reduction, Nissanke (2004) found that microcredit may impact poverty reduction negatively if not the donors target handed properly. Likewise, Khandker et al. (2013) has found evidence of over indebtedness among the microcredit loan receivers. Mamun et al. (2013) also concluded that how microcredit can efficiently be used in poverty reduction is still a contentious issue and therefore it is in need for more critical evaluation. According to Kabeer (1998), the microcredit loan receivers are sometimes compelled to borrow from other sources to repay the original loans. Thus, despite its far and wide acceptance as a tool to improve living standard and poverty reduction, microcredit has produced somewhat mixed results as evident by the literature. Secondly, there aren't sufficient studies that showed the impact of microcredit on the living standard in terms of consumption expenditure in Bangladesh. Finally, Naogaon district, a substantial part of Northern Bangladesh, is often overlooked when such analyses are considered. These are the literature gaps that this study has tried to address. Thus, this study is not only necessary but also timely. Because this study aims to establish whether or not NGOs' micro-credit programs have enhanced the living standard in the Naogaon district through increasing consumption expenditures. To find out if living standards have gotten better, this study has assessed whether the respondents' monthly consumption expenditure have changed since they got the loan.

#### *Statement Of the Problem*

As evident from literature review, there are some studies that found positive impact of microcredit but there are some studies

suggesting that the vulnerable condition of the poor worsens due to microcredit. So, whether or not access to microcredit actually improves the living condition of the disadvantaged people is still a relevant question. Additionally, people generally take microcredit loans for two purposes, either for different patterns of consumption activities like food, basic necessities, transport, festivals, marriage, treatment and medical care, or for productive activities like starting a small business, investing in agricultural initiatives, etc. Even though there is an extensive spectrum of studies conducted on self-employment, women empowerment and the condition of the living standard in terms of income, it is not clear how far microcredit programs are successful in increasing the consumption of loan takers. This study is purposively focused on the use of microcredit for consumption activities because it is firmly believed that living standard can be improved through increased and better consumption. Therefore, living standard for this study refers to the level of monthly consumption expenditure on food, education, festivals, transport, etc. Moreover, despite being recognized as a prime hub of mango harvest and rice production, Naogaon district is still associated with high prevalence of poverty and microcredit may go a long way to improve this condition. But there is insufficient evidence on how microcredit has actually impacted the living condition of the poor in this region. Consequently, this study has formulated the following research question as the research problem: How microcredit impacts the living standard of the loan receivers in the Naogaon district? The findings of this study will contribute over the issue on whether microcredit is positively affecting the living standard of the loan receivers by raising their consumption expenditure.

#### *Research Objectives*

The main objective of this study is to find out how microcredit impacted the living standard of the loan receivers. In context with the main objective, the specific objectives of this study were formulated as below:

- a) To assess the socio-demographic characteristics of the microcredit loan receivers in the study area.
- b) To estimate the impact of microcredit on the monthly consumption expenditure of the loan receivers in the study area.

### III. DATA AND METHODOLOGY

This study is essentially quantitative in nature as it requires numerical data to achieve the objectives. Primary data was collected from the microcredit loan takers in Raninagar and Kaliganj unions of Naogaon district. At first, two institutions operating in the unions namely BRAC and ASA were contacted and relevant information regarding the microcredit loan receivers were obtained from them. More than 100 loan receivers were listed in both NGOs. However, due to the budget and time constraint, those who were involved with microcredit finance for more than two years were chosen as the respondents for this study. The total number of these respondents was 64. By using the information obtained from the NGOs, the researchers went to the residences of these 64 microcredit loan

takers and face to face interviews were conducted with the help of a questionnaire. Among these, 6 questionnaires were deemed ineligible for analysis due to the incomplete information. Hence, final population size was determined to be 58 for the study. Out of these 58 loan receivers, 50 were chosen as the sample for this study. The sample size was determined by using the online sample survey calculator known as the "Survey System" considering a 5% error at a 95% confidence level and then a table of 50 random numbers were produced by using the online random number table generator known as "Stat Trek" and ensuring that these numbers were randomly selected from within the range of 1 to 58 without any duplication.

After the completion of data collection, the data were numerically coded and analyzed with the help of STATA software. Descriptive statistics was used to assess the demographic characteristics of the respondents.

Ordinary least square (OLS) regression is used to evaluate the impact of microcredit loan on the living standards of microcredit loan takers in terms of monthly expenditure. However, in light of prior studies, it has been established that microcredit loan is not the only relevant element, but there are other factors as well that affect living quality (Mahmood et al., 2016). Taking into account the time and budget limitations that were present during the course of this study, the formula can be expressed as follows:  $E_i = f(X_i)$

Where,  $E_i$  is average monthly expenditure of microcredit loan takers which is continuous variable and  $X_i$  is a set of socio-economic factors that affect expenditure of loan takers such as total savings, amount of microcredit loan, family size and average monthly income. On the basis of the above factors, the final regression model was composed as given below:

$$Y_i = \beta_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + u$$

Where

$Y_i$  = average monthly expenditure

$X_2$  = amount of microcredit loan

$X_3$  = total savings

$X_4$  = average monthly income

$X_5$  = family size

The above equation is estimated by OLS regression method using STATA software. The dependent variable of this study is average monthly expenditure which is obtained by summing up the annual expenditure on food, education, transport, festival, treatment & other factors and then estimating the average monthly amount of the total expenditure.

#### IV. RESULTS AND ANALYSIS

Table 1 shows that females made up 54% of responders while males made up 46%. Most of those who answered were female, suggesting that women are exceptionally represented among microfinance beneficiaries. This is so even though the respondents are selected at random and no attempt has been made to account for the respondents' gender. Microfinance institutions (MFIs) in Bangladesh should prioritize women as borrowers because of the strong correlation between gender

inequality and poverty, weak economic growth, bad governance, and low living standards. In terms of age, 18% of respondents were younger than 20 years. Approximately 18% were in the twenties, 14% were in 31-40, 24% were in their 41-50, and 26% were in their fifties and beyond. The respondents were categorized based on their level of education because this variable may influence their management of daily life, as well as their management of the household and the business. The survey found that 16%, or eight people, are illiterate. Despite this, 16% of respondents have finished grades 6-10, 28% have undergone SSC degree, and 16% have completed HSC and higher educational degrees. The data showed that 38 percent of respondents had at least two people in their family, indicating that they did not yet have children, 32 percent had three to five people in their family, and 30 percent had more than six people in their family. The effort was made to ascertain each respondent's family size because it is commonly accepted that households with more members will have greater monetary concerns.

Variables	Category	Frequency	Percentage (%)
Gender	Male	23	46.00
	Female	27	54.00
	Total	50	100
Age	<20	9	18.00
	21-30	9	18.00
	31-40	7	14.00
	41-50	12	24.00
	50+	13	26.00
	Total	50	100
Education	Illiterate	8	16.00
	Primary	12	24.00
	Secondary	8	16.00
	SSC	14	28.00
	HSC and Over	8	16.00
	Total	50	100
Family Size	2	19	38.00
	3-5	16	32.00
	6+	15	30.00
	Total	50	100

Descriptive analysis of dependent and explanatory variables is presented in Table 2. The results of descriptive analysis show that the lowest and highest average monthly expenditure of borrowers are Tk. 1056 and Tk. 8538 and mean value of average monthly expenditure is Tk. 3943.04 while lowest and highest average monthly income are Tk.1468 and Tk. 14834 respectively and mean value of average monthly income is Tk. 7722.56. The loan amount distribution of highest, lowest and mean value among the borrowers is Tk. 54841, Tk 8793.00 and Tk. 4525.06 in yearly while minimum, maximum and mean

value of total savings or cumulative savings of loan takers are Tk. 867, Tk. 8597 and 4525.06 respectively. Moreover, the minimum, maximum and mean frequency of family size are also shown in the table.

Variable	N	Minimum	Maximum	Mean	Std. Deviation
<b>Dependent Variable</b>					
average monthly expenditure	50	1056	8538	3943.04	2055.865
<b>Explanatory Variable</b>					
amount of microcredit loan	50	8793	54842	29949.9	14592.92
total savings	50	867	8597	4525.06	2417.826
average monthly income	50	1468	14834	7722.56	3912.526
family size	50	2	8	3.86	1.948416

The results of OLS Regression for assessing microcredit impact on average monthly expenditure equation have been showed in Table 3 that observes about 22 percent of variations in the dependent variable is explained by the variation in independent variables integrated in case of the equation that is seen by the value of  $R^2$  ( $R^2 = 0.2242$ ).

Variables	Coefficient	Std. Err.	t-Ratio	Probability
amount of microcredit loan	227.075**	112.1284	2.03	0.049
total savings	167.734**	81.1505	2.07	0.045
average monthly income	8.6798*	4.4185	1.96	0.056
family size	-0.0729	0.8197	-0.09	0.929
Number of obs =50; F (4, 45) = 3.25; Prob > F = 0.0200; R-squared = 0.2242; Adj R-squared = 0.1552				
Note: **Significant at 5% and *Significant at 10%				

According to the findings, the coefficient (227.075) of the variable amount of microcredit loan is positive and statistically significant of level at 5 percent with average monthly expenditure of loan receivers. Thus, it can be explained that microcredit increases consumption expenditure significantly, that is, as amount of microcredit loan increases by 1000 taka, the monthly consumption expenditure increases on average by 227.075 taka. This increase in monthly consumption expenditure can be used to increase the expenditure on agriculture, food, transport, festivals, medical care, etc. Since increasing expenditure on these factors positively affects the living condition of a human being, so it can be said that microcredit loan has positive impact on the living standard of the loan receivers in the study area.

In economics, savings is defined as income minus consumption, hence it is also an essential aspect. The total saving coefficient is 167.734, which is positive and statistically significant when compared to average monthly expenditure. These savings might assist individuals in becoming financially stable as well as providing an emergency safety net. New house, unexpected income loss, debt payments, schooling, counseling, and so on. The variable monthly average income is likewise significant at the 10% significance level. In contrast, family size coefficients are not significant with the dependent variable.

## V. CONCLUDING REMARKS

Improving the living standard of the poor is a major challenge for all developing countries. In Bangladesh, microcredit program has been employed for a long time as an instrument to improve the living standard of the poor. Though mostly successful, microcredit also produced negative outcomes. This study has been conducted in two unions in the Naogaon district and has found significant positive impact of microcredit on the living standard of the loan receivers, that is, the loan receivers were able to increase their consumption expenditure due to their access to microcredit. In addition to microcredit, saving and income were also found as significant factors that positively affect consumption expenditure.

## VI. RECOMMENDATIONS

Within the findings and conclusion, this study can suggest several recommendations such as following:

1. Since microcredit significantly impacts living standard, this study therefore recommends that the institutions engaged in microfinance should increase the volume of microcredit loans.
2. Since saving is a significant factor of living standard, intuitions should also offer saving services to increase the saving habit of the loan receivers.
3. NGOs can initiate training programs for the loan receivers so that they can increase their earnings and further improve their living standard.
4. Further research on consumption expenditure as a measurement tool for living standard with a larger data set is highly recommended.

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