



## **Does Microfinance Matter for Women Borrowers? Recent Findings from Bangladesh**

**Basharat Hossain<sup>1\*</sup> and Syed Naimul Wadood<sup>2</sup>**

<sup>1</sup>*Department of Business Administration, Economics, International Islamic University, Chittagong, Bangladesh.*

<sup>2</sup>*Department of Economics, University of Dhaka, Dhaka, Bangladesh.*

### **Authors' contributions**

*This work was carried out in collaboration between both authors. Author BH designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Author SNW managed the analyses of the study. Both authors read and approved the final manuscript.*

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### **ABSTRACT**

This paper examines the impact of microfinance on some selected women borrower respondents of Bangladesh, who have been selected through a systematic random survey process. This is a quantitative research based on primary and secondary data. The primary data was collected through a structured questionnaire on sixty women borrowers of the Dhaka City, Bangladesh. This paper finds that microfinance has a highly significant positive impact on the income of these women borrower respondents. Moreover, though microfinance encourages for savings and buying new asset but it has no significant impact on their asset building and savings. Overall, there has been a mixed outcome from this cross-sections data: microfinance has been found as a matter for women borrowers' income increasing aspects, whereas not much effective in increasing savings or building up of assets. Finally the paper recommends some steps to increase effectiveness of microfinance on the women borrowers, including expanding training facilities and lower interest rates particularly for women borrowers.

\*Corresponding author: E-mail: basharatdu@gmail.com;

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## 1. INTRODUCTION

Microfinance (synonymous to the term *microcredit*, with additions of other services, such as micro savings, micro health insurance, etc.), opened the new horizon of financing for the lower income people [1]. The microfinance institutions (MFIs) provide microloans to the people who are unable to manage collateral as per requirements of the regular banking system. The MFIs sanction micro loan without collateral for the lower income people [2].

However, since the birth of modern microfinance in 1976 by Professor Dr Mohammad Yunus [3], it has faced arguments that whether it had a positive or negative impact on its borrowers. Many researchers have found that microfinance had no impact on its borrowers while many researchers show a positive impact of microfinance on its borrowers. Besides, some researchers reveal some mixed impact of microfinance on its borrowers (for a detailed discussion [4]). However, almost all of the earlier studies on the women borrower covered the issues of women empowerment. Table 1 reveals the previous research findings on the effect of microfinance on the women borrowers.

Furthermore, according to the goal, the MFIs accommodate around 80-90 per cent members as women while the remaining are male members [5,6]. It is commonly believed that the women borrowers are always more attached to their family affairs, and this includes any loan taken on their name or on the name of their husbands. The MFIs have historically emphasized on the women borrowers to achieve their targeted outcomes, since sometimes, as it is argued; male members of the family misuse the microfinance funds [7].

The aim of this paper is to inspect the effect of microfinance loans on the women borrowers of Dhaka city, Bangladesh. The data were collected from sixty women borrowers of Dhaka North and South City Corporation through conducting a structured questionnaire. Currently, 705 MFIs are functioning in Bangladesh [8] of which 274 MFIs are working in the Dhaka division [9].

## 2. METHODOLOGY

The main objective of this paper is to inspect the effect of microfinance on the women borrowers of Bangladesh. This is a quantitative research that uses both the primary and secondary data. The primary data was collected through a structured questionnaire survey on some 60 women borrowers of Dhaka, the capital city of Bangladesh. The sample respondents were selected through a systematic random sampling method from both the Dhaka North and the Dhaka South City Corporations. The theoretical background was developed from different books, articles, newspaper, reports and websites. Moreover, the main sources of secondary data were the Bangladesh Microfinance Regulatory Authority (MRA), Credit & Development Forum (CDF) of Bangladesh web sites. The data were analyzed through stata version 13. *The main hypothesis has been that microfinance has a significant effect on the income generation, savings and asset building of the sixty women borrowers.* The details of model specification are given below:

This paper scrutinizes three separate regression models to detect the effect of microfinance fund on the determination of income, savings and asset building of women borrowers.

According to the permanent income hypothesis (PIH) of Milton Friedman [10], the income of an individual depends on his permanent income but not only current and transitory income. Permanent income can be defined as the expected long-term average income. It depends on the physical and non-physical assets. Symbolically,

$Y = Y_p + Y_t$ , where,  $Y_p$  = permanent income and  $Y_t$  = transitory income

Permanent income ( $Y_p$ ) comprises the long term income from job such as salary, pension and gratuity, investment earnings from capital. For instance, interest and dividend from securities. In contrast, transitory income refers to the temporary income such as bonuses for festival and special occasion, wages for overtime duty, wealth from inheritance, earnings from lottery, prizes, awards, etc.

## 2.1 The Determination of Average Monthly Income Model Equation

$Y=f(Y_p, Y_t)$ , In this model,

$Y$  = income

$Y_p$  denotes for the average monthly income, assets (land, business materials), monthly Savings, microfinance loan.  $Y_t$  represents the receipts of cash or goods from Charity and social safety net program

Again,

$Y= f(AV, S, C, SS, MFinv)$

Where,

$Y$  = Average monthly income  
 $AV$  = Asset Value  
 $S$  = Savings  
 $C$  = Charity.  
 $SS$  = Social safety net  
 $MFinv$  = Investment from Microfinance loan

## 2.2 The Savings Model

$S= f(Y, AV, C, SS, MFinv)$

Where,

$S$  = Savings  
 $Y$  = Average monthly income  
 $AV$  = Asset Value  
 $C$  = Charity.  
 $SS$  = Social safety net  
 $MFinv$  = Investment from Microfinance loan

## 2.3 The Asset Building Model

$AB = f(Y, S, C, SS, MFinv)$

Where,

$AB$  = Asset building (Asset Value)  
 $Y$  = Average monthly income  
 $S$  = Savings  
 $C$  = Charity.  
 $SS$  = Social safety net  
 $MFinv$  = Investment from Microfinance loan

## 2.4 Literature Review

The majority percent of microfinance member are women in the world. The field of microfinance was enriched by the several researches on the women borrowers.

Akhter et al. scrutinized the how does microcredit affect the women in rural Bangladesh. They conducted a study on the 324 women borrowers of four villages of Tangail district, and found that Microfinance has positive effect on women empowerment and microcredit encourage them to participate in decision making in the family [11]. Huque inspected the effect of microcredit on the empowerment of the women borrowers of Dhaka city regarding entrepreneurship, and found that microcredit fulfill their basic needs [12]. Islam discusses the issues of both men and women's empowerment, and microfinance on 109 respondents of Noakhali district in Bangladesh. He found that, microcredit empowered the women regarding skill development, strengthening the self confidence level and contribution in family's decision making [13]. Porter describes the influences of the gender of the borrowers in taking the decision of the allocation of resources for the expenditures [14]. Jinia inspect that whether the microcredit increase the power of women in the decision making of the family or not? She found that, microcredit has positive impact on the women empowerment regarding the power of decision making in the family [15]. Bhattacharjee illustrates the effect of Microcredit on the elimination of poverty of thirty five women borrowers of Sylhet city of Bangladesh. Her findings stated that, the women borrowers cannot realize the goals of microfinance and Microloans meets their emergency family expenditures and needs [16]. Banerjee examines the effect of microfinance on the borrowers of Hyderabad in India and did not find any impact of microfinance on the women empowerment [17]. Esty explains the issues that how the microfinance affect the living of women. She revealed clearly that, micro loans encourage the Household women to be educated and to start a small business, it make them social through the weekly meeting of MFIs [18]. Bie inspects the effects of microfinance on female borrowers of BRAC in Bangladesh regarding six issues: Financial control and decision making power, household decision and freedom of borrowing, domestic safety and violence, economic empowerment and rights of consumption, education and religious and Social

pressures [19]. Khandker et al. raises the debt issue of the borrower of microcredit in Bangladesh. They exposed that, 26% borrowers are over indebted in Bangladesh. A borrower is considered as over indebted if his borrowing amount is greater than the 40% of his total income or assets [20]. Nessa et al. examined the impact of microcredit on the empowerment of the Bangladeshi women borrowers regarding five issues. They disclosed that, microcredit significantly improve the power of women borrowers in economic, social and family issues [21]. Rahman discusses the role of microcredit to reduce poverty among the women borrowers of Bangladesh. She found that, microcredit positively contributes to increase the income, assets and consumption expenditures of the women borrowers. Besides, it empowered the women borrowers [22].

However, the earlier researches highlighted the women empowerment on the decision making in the family, consumption expenditures and poverty alleviation. On the other hand, this paper measures the impact of microfinance on the income, savings and asset building of the borrowers of the Dhaka city, Bangladesh. These issues were not covered in a single research paper of the previous studies.

### **3. PROFILE OF THE WOMEN BORROWERS-RESPONDENTS OF DHAKA CITY, BANGLADESH**

According to the age group, the largest portion of women borrowers (52 per cent) is under 30 years while 48 per cent are above 30. Moreover, 78.33 per cent of women were married followed by the unmarried (10 per cent), widow (8.33 per cent), divorced (1.67 per cent) and separated (1.67 per cent) respectively. Average size of the family member is 4.76 in a family. Around 65 per cent families have 2-5 members while the remaining 35 per cent families have 6-9 members respectively. Moreover, 35 per cent of the 60 women borrowers reside in the Dhaka North City Corporation while the remaining 65 per cent live in the Dhaka South City Corporation.

The educational qualification of the respondents is that the 46.67 per cent respondents have no education. 35 per cent borrowers have some level of primary education. 17 per cent have junior secondary education (Class 6 to Class 9)

and only 1.67 per cent has secondary education (Class 10).

Moreover, the occupational status of 45 per cent women are home maker, 28.33 per cent are House maids, followed by unemployed (10 per cent), small business (6.67 per cent), private service (3 per cent), garments workers (1.67 per cent), sewing (1.67 per cent) and begging (1.67 per cent) respectively.

Eleven MFIs provide loans among the 60 women borrowers. The distributions of borrowers by MFIs are as follows: ASA (20 per cent), DSK (16 per cent), BRAC (10 per cent), Shakti Foundation (11.67 per cent), Heed Bangla (3.67 per cent), IBBL (3.33 per cent), Sathi (8.33 per cent), Arban (6.67 per cent), Manobik (1.67 per cent), and CBO (1.67 per cent) respectively. Moreover, many borrowers take loans from two MFIs simultaneously. These are DSK and BRAC (5 per cent), Heed Bangla and ASA (1.67 per cent), Shakti and ASA (6.67 per cent), Arban and PSTC (1.67 per cent) respectively. The average interest rate of microcredit is 18 per cent. The minimum interest rate is 10 per cent and the maximum rate is 38 per cent respectively.

The following Table 2 discloses the starting year of the borrowing of the microcredit by the sixty women borrowers.

#### **3.1 Recognition and Criticism of Microfinance by the Women Borrowers**

The women borrowers recognized the contributions of MFIs to its borrowers. The women borrowers said that microcredit is useful for them though it has many negative sides. They stated that micro loan helped them to buy means of livelihood such as rickshaw, van, boat, etc. They also took loans to repair their houses, and sometimes they used to spend the microloans for consumption and health care. They also pursued education for their children through educational institutions of MFIs. The MFIs also arranged for water and sanitation facilities for the women borrowers. Nari Moitri- an NGO organized awareness programs conducted by its employees for women borrowers. DSK (Dustho Shastha Kendro)-a renowned MFI provided charity for its women borrowers and the average value of this donation was BDT 10,000.

**Table 1. Impact of microfinance on the women borrowers (existing research findings)**

Serial No	Source	Topics of the Study	Area of the Study	Findings
1.	Akhter et al (2018)	women empowerment: decision making in the family	Tangail district	Positive Impact
2.	Huque (2017)	women empowerment : entrepreneurship and Basic needs	Dhaka city	Positive Impact
3.	Islam (2016)	women empowerment : skill development, strengthening the self confidence level and contribution in family's decision making	Noakhali district	Positive Impact
4.	Porter (2016)	women empowerment : Decision in the allocation of resources for the expenditures	-	Positive Impact
5.	Jinia (2016)	women empowerment	-	Positive Impact
6.	Bhattacharjee (2016)	women empowerment	Sylhet	No Impact but fulfil the basic needs
7.	Banerjee (2015)	women empowerment	Hyderabad, India	No Impact
8.	Esty (2014)	women empowerment: Education, small business	Bangladesh	Positive Impact
9.	Khandker et al (2013)	Debt of the Borrowers	Bangladesh	Over Indebted
10.	Nessa et al (2012)	women empowerment:	Bangladesh	Positive Impact
11.	Rahman (2007)	income, assets and consumption expenditures	Bangladesh	Positive Impact

Source: compiled by the Author

**Table 2. The starting year of the microcredit by the 60 women borrowers**

Year	No of Borrowers	Percent
2000	4	6.67
2002	1	1.67
2005	1	1.67
2007	3	5.00
2008	1	1.67
2009	1	1.67
2010	14	23.33
2011	2	3.33
2012	4	6.67
2013	11	18.33
2014	16	26.67
2015	2	3.33

They also expressed their gratitude to the MFIs, because MFIs do provide micro loans to them at a lower annual interest rate (though it was still very high rate) while regular banks do not sanction loans for them. Before becoming the member of MFIs, they took loans from the neighbors and the local money lenders at a daily interest rate, which was actually associated with much higher interest payments.

The women borrowers also criticized the MFIs on some other issues they complained that the loan interest rate of MFIs was higher than the interest rates offered by the regular commercial banks. Moreover, the banks charge loan interest rate on a yearly basis (365 days) while the MFIs charge annual interest rate for 44-46 weeks (308-322 days). Moreover, the MFIs do not allow adequate time for investment return to materialize. The loan repayment typically starts just in the following week of receiving the loan. They also complained that MFIs do not disclose the saving interest rates to the women borrowers.

Besides, the MFIs do not provide adequate non-financial services such as training, healthcare services. Finally, they expressed their disappointment that the MFIs did not provide loans to the extreme poor.

#### 4. EMPIRICAL ANALYSIS OF REGRESSION AND DISCUSSION OF THE RESULTS

The regression results illustrate that microfinance has a statistically significant impact on the

income at 1 per cent level of significance. But it has no significant impact on asset building and savings of the 60 women borrowers. Tables 4-6 show this scenario. Besides, Table 3 highlighted the mean value of the income, savings, asset value, microcredit amount, charity and social safety net.

The microfinance has a positive impact on the income of the sixty women borrowers of Dhaka city at the 1 per cent level significance (Table 4). The amount of microfinance loan varies from a minimum of BDT 5,000 to a maximum of BDT 70,000. Moreover, 29 per cent borrower received BDT 20,000 as loan followed by 17 per cent received BDT 30,000 as microloans. The average size of the microcredit is BDT 25,650 among the women borrowers.

The sixty women borrowers use the microcredit for the investment in the business (49 per cent), buying a rickshaw (14 per cent), buying a house

(6 per cent), house repairing (7 per cent), training financed by MFIs (2 per cent), buying a rickshaw van (6 per cent), and buying a boat (4 per cent) respectively.

Moreover, the average size of income is BDT 13800. The income of women borrowers increases due to the microloans. Currently, only 1 per cent family lives below the poverty line.

The Mean value of the Asset of the women borrowers is BDT 27666.67 and total asset value varies from BDT 5,000 to BDT 120,000. The most common form of assets is home appliances including television, radio, kitchen materials, livelihood means such as rickshaw, van, boat and land in the village. The Table 5 shows that income has significant impact on the asset buildings of 60 women borrowers but microfinance has no significant impact on the asset building of its women borrowers.

**Table 3. Income, asset and other statistics of the women borrowers (BDT)**

Variables	Mean	Std. Dev	Min	Max
Average Income Per month	13,800	6267.48	7,000	35,000
Savings Per Month	240.33	99.779	80	500
Value of Asset	27,666.67	24,741.15	5,000	120,000
Charity Received	1,308.33	3,834.60	0	14,000
Social Safety Net (from government)	416.67	3227.486	0	25,000
Microfinance Loan	25,650	14,808.18	5,000	70,000

**Table 4. Impact of microfinance on the income of the women borrowers**

Variable	Regression Co-efficient	P>  t
<b>Dependent Variable: Income per month</b>		
<b>Independent Variables:</b>		
Constant	7102.82 (2.80)	0.007
Savings per month (savpm)	4.29 (0.57)	0.572
Value of Asset (Valueofasset)	.0977762***(3.19)	0.002
Charity	.0527979 (0.27)	0.790
Social safety net	.1542662 (0.66)	.511
Microfinance Loan (mfloan)	.1102667***(2.17)	0.007
No. of respondent	60	
R <sup>2</sup>	0.2342	
Adjusted R <sup>2</sup>	0.1633	

Note. Value in parenthesis is t-values and \*\*\* indicate the 1percent level of statistical significance

**Table 5. Impact of microfinance on the building of the assets of the women borrowers**

Variable	Regression Co-efficient	P>  t
<b>Dependent variable: Value of asset (Valueofasset)</b>		
<b>Independent Variables:</b>		
Constant	235.3392 (6.38)	
Income per month (avgincpm)	1.625445*** (3.19)	0.002
Savings per month	.0653224 (0.00)	0.998
Charity	.6698008 (0.85)	0.598
Social safety net	-.8478881 (0.89)	0.679
Microfinance Loan (mfloan)	-.0624825 (0.29)	0.516
No. of respondent	60	
R <sup>2</sup>	0.1831	
Adjusted R <sup>2</sup>	0.1074	

*Value in parenthesis is t-values and \*\*\* indicate the 1percent level of statistical significance*

**Table 6. Impact of microfinance on the savings of the women borrowers**

Variable	Regression Co-efficient	P>  t
<b>Dependent variable: Savings per month</b>		
<b>Independent Variables:</b>		
constant	235.3392 (6.38)	
Income per month (avgincpm)	.0013903(.57)	0.572
Value of asset (Valueofasset)	1.27(0.00)	0.998
Charity	.0018782 (0.53)	0.598
Social Safety Net	-.0017506 (0.42)	0.679
Microfinance Loan (mfloan)	-.000622 (0.65)	0.516
No. of respondent	60	
R <sup>2</sup>	0.02	
Adjusted R <sup>2</sup>	0.07	

*Value in parenthesis is t-values and \*\*\* indicate the 1percent level of statistical significance*

The women borrowers had no savings until the membership of microfinance institutions. The average size of the savings is BDT 240.33 per month. The minimum and maximum savings amount is BDT 80 and BDT 500 respectively. The Table 6 shows that microfinance had no significant impact on the savings of its borrowers.

## 5. CONCLUSION AND RECOMMENDATIONS

This article scrutinizes the effect of microfinance on the income generation, savings and asset building of the sixty women borrowers of Bangladesh. The key findings of this study are: the microfinance has statistically significant effect on the income generation of the sixty women borrowers at 1 per cent level of significance. Though microfinance encourage for savings and buying new asset but it has no significant effect on the asset building and savings of the sixty

women borrowers of Dhaka city, Bangladesh. Finally, this paper recommends the following steps to increase the effectiveness of microfinance on its women borrowers.

- i. MFIs should arrange education and training program for the women borrowers for purpose of using the micro loan
- ii. Instead of cash money loan, MFIs may transfer the goods or means of livelihood to the women borrowers. Such as sewing machine, candle making machine. It may increase the effectiveness of microfinance. Because, the borrowers spend the micro loans for consumption instead of investment.
- iii. The MFIs should reduce the loan interest rate for the women borrowers because they cannot participate in all kinds of investment opportunities in the market as compared to the male borrowers.

- iv. Since the MFIs provides microcredit and development program, the MFIs should provide women and maternity health care program for the women borrowers.
- v. To increase the effective of microfinance, women empowerment is the most important factor for the women borrowers. So the MFIs should organize more awareness programs for the women borrowers on women's rights, property rights, power of decision making, legal issues, etc.
- vi. The MFIs should train the women borrowers to produce the handicraft.
- vii. Some of the MFIs disclose the loan interest rate but do not disclose the saving interest rates to their borrowers. All the MFIs should declare the saving interest rates as well.

### 5.1 Consistency With the Earlier Research Findings

The findings of this study are consistent with the earlier research findings. This study finds that microfinance has significant positive effect on its women borrowers. This finding is consistent with the findings of Rabbani [23]. Besides, microfinance induces the buying of new asset but regression equation finds no significant effect on the asset building of the women borrowers of Bangladesh. This finding is also consistent with the result of Rahman [22]. Moreover, though microfinance encourages the savings but regression analysis did not find any effect of microfinance on the savings of the women borrowers. This findings is also supports the findings of Nasrin et al. [24] and Latif A [25].

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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