

Does Microcredit Empower Urban Poor Women? Evidence from Slums in Dhaka City

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This paper examines the possible impact of the role of microcredit in enhancing empowerment for married women in urban slums of Bangladesh. Based on our primary survey data collection, we constructed the women empowerment index and tried to examine relationship between microcredit and women empowerment. Three indices of women empowerment have been constructed: economic empowerment, non-economic empowerment and overall empowerment. Simple correlation analysis revealed that frequency of microcredit and amount borrowed through microcredit have high correlation with economic empowerment. Regression analysis shows that microcredit has significant positive impact on women empowerment even after controlling for other relevant variables.

Keywords: Microcredit, empowerment, poor women

JEL Classification: G21, J16, R20

1. Introduction

Bangladesh has a fast growing economy and with its 164.7 million populations where urbanization is going on fast pace. About 10% of population resides in the extended Dhaka city. Although economy is enjoying rapid growth, and incidence of poverty is declining over time, a substantial portion of this population is still poverty-stricken. Moreover, women still have a very fragile position in Bangladesh households and in Bangladesh society at large. Inequities of women are prevalent and many women undergo domestic violence. According to UNESCO latest figure (2018), literacy rate for female (76.67%) still trails back from that of male (71.18%). In this situation, empowering women is crucial as a target in itself as method to reach significant gender equality. It can be expected that women's empowerment will also be an instrument in fighting poverty. Working women promote to national income of the country and maintain a continuous livelihood of the families and communities, throughout the world. As they face many socio- cultural, political and legal awareness barriers, economic, and non-economic barriers. Conventionally, women have been abused. They are seldom seen to be financially independent and usually they are more helpless members of society. About 70% of world's poor are women. Yet they have no entrance to credit and other financial services. As a result, microfinance often selects women. According to Sen's capability approach to development, empowerment is reflected in a person's capability set. Microfinance is an analytical tool to empower women from poor household.

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The 'capability' of a person relies on different factors, comprising of personal characteristics and social arrangements. Empowerment is the capacity to attain this capability and not just the choice to do so. Sen's perspective on women's empowerment is designated in his discussion on measurement of empowerment (Sen 1990). According to him, the cornerstone should be on certain universally valued functioning, which connect to the basic fundamentals of survival and well-being nevertheless of context. These incorporate proper nourishment, good health and shelter. If there organized gender differences in these very basic functioning achievements, they can be taken as documentation of inequalities in the underlying capabilities, rather than as distinction in preferences. Empowerment is also related to the activity of internal change and to the potential and right to make decisions. It composes of change, choice and power. It is a procedure of change by which individuals or groups with small or no power procure the caliber to model choices that influence their lives. The structures of power (i.e. who has it, what its sources are, and how it is employed) straightly work on the choices that women are able to construct in their lives. In the feminist pattern, empowerment exceeds economic betterment and well-being to strategic gender interests. Empowerment can exist at an individual level, where it is about having action, increased freedom, choice, self-confidence and self-esteem. It can also survive at a cumulative level that would involve cumulative group of women, and when possible men, for the foundation of questioning and altering the inferiority associated with gender. Personal and cumulative empowerment are fundamentally linked because without the latter, the former becomes limited (Sen 1990). Micro-credit indicates small loans for people who require money for self-employment projects that initiate income or for urgent family needs such as health problems, children's education, house repair, paying off daughter's dowry. It is designated to assist in the betterment of people's status of life by giving them a small loan for a temporary period of time. Micro-credit scheme supplies loans at very low interest and well-ordered guidance to low-income women to track unorthodox income-generating activities focused at upgrading their economic and social status. The agenda provided women with loans to develop their persisting economic venture or to start a new business. Such investments, was presumed would guide to social and gender equal opportunities in the country, and would upgrade the elimination of poverty, which would minimize deprivation among women. The microcredit program is a distinctive innovation of credit delivery technique to strengthen income generating activities. The program expands small loans to poor people for self-employment activities thus granting the borrowers to attain a superior quality of life. It is the most sensational antipoverty tool for the poorest, especially for women. It has been fairly well acknowledged that micro finance equalize consumption for the poor households. Finally, microfinance can help crack the harsh cycle of poverty, reduces the burden of the poor women and escorts to a rise in their income.

Microcredit in Bangladesh mostly extended in the rural areas. Consequently, there have been number of studies to assessing socio economic impact of microcredit in rural Bangladesh. Eventually, NGOs also extended microcredit among urban poor women with increasing urbanization. However, there is very limited study about impact of microcredit among urban poor. The present paper intends to fill out this gap by investigating the impact of microcredit to urban poor on women empowerment. In particular, the paper examines women's economic and non economic empowerment through microcredit program of ASA, BRAC, Manabik

Shahajya Shangstha, Grameen, Bahumukhi Shamabay Shamity, and Prashikha in the urban slums of Dhaka city.

Numerous studies have been previously conducted in the rural areas of Bangladesh to explore whether microcredit has any impact on women empowerment in the rural areas of Bangladesh. However, to the best of our knowledge there is no study assessing the impact of microcredit on the empowerment of urban poor woman. As the microcredit organizations are extending their activities in urban slumps, and the slum people have interaction with the urban people who are relatively more educated than rural people, it would be interesting to examine the external validity of previous studies on microcredit and woman empowerment conducted in rural areas. In these context, the paper particularly focuses on the women empowerment situation in the urban slums of Bangladesh after they have received microcredit. We consider empowerment at three different level: overall empowerment, economic empowerment, noneconomic empowerment. Specifically, the paper tests the following three Hypothesis:

- I. Microcredit empowers women in urban slums of Bangladesh.
- II. Microcredit enhances economic empowerment of s women in urban slums of Bangladesh.
- III. Microcredit enhances non-economic empowerment of women in urban slums of Bangladesh

The paper is organised as follows. Besides Section 1 dealing with Introduction, literature review is presented in Section 2. While Section 3 contains data and methods, Section 4 and provides empirical evidence. Section 6 presents conclusion.

2. Literature Review

According to (“Women empowerment through microcredit”: A case study of Dinajpur Bangladesh”), poverty and burden are connected together. Burden can be minimized through rise in income generating activities. In his study on assessing poverty and vulnerability Zaman (2009) studied 1072 respondents in his sample in Bangladesh. The proof on decreasing vulnerability was somewhat understandable .He found that the allocation of micro credit was a key instrument to reinforce crisis coping mechanism; expand income earning sources; increase assets and upgrade the status of women. Thirty six villages in Bangladesh demonstrated that membership in any microcredit institution is undoubtedly connected with women’s decision making role; their control over resources, mobility. How microcredit effect women empowerment? To answer this question many studies have been regulated in the developing countries. Most of these studies have been directed in the Bangladesh because this was the country where a microcredit scheme was first time launched by Grameen Bank in the late 1970s.The principal motive of this enterprise was to supply credit to poor people without collateral, ease poverty and releasing human creativity and attempt of the poor people (Chowdhury 2009; Hulme and Mosley 1996; Yunus 1999). Microcredit has manifested its potential to produce results. In contrast; these consequences are normally temporary and differ notably among borrowers. Traditionally, studies recommend that the poorest rarely gain from microcredit, while the middle class and upper poor gain the most. Women in certain face remarkable hurdle to attaining continued boost in income and upgrade their

status, and need interdependent backing in other areas, such as training, marketing, literacy, social mobilization, and other financial services (e.g., consumption loans, savings).

In the context of Bangladesh, many studies have been conducted during the last two and half decades, micro-credit approach has been progressively integrated in the development discussion. Basically the credit is given to the women and the accepted notion is that women are assisted and empowered and are being granted for having a beneficial and effective role and thus it is the entrance of attaining right for themselves. Rahman et al. (2009) have supervised a study on impact of micro-credit programs on higher income borrowers in Bangladesh. The main target of the study was to assess the impact of micro-credit on various household outcomes, such as income and assets. The researchers have utilized primary data collected through a structured questionnaire from borrowers of two chief micro-credit institutions in Bangladesh such as the Grameen Bank and the BRAC. The outcome exhibited that the micro-credit programs were effectual in generating higher income and assets for borrowers in regular. On the other hand, the impact was not found to be invariable across income levels of borrowers. Higher income borrowers seem to be more fortunate in comparison to the middle and lower income borrowers. It was also found that some other components like age and education of the household head and his /her partners in the family were symbolic and made further impact of the household. Another study organized by Zaman (2001) on determining the impact of micro credit on poverty and vulnerability in Bangladesh. He stated that there is growing consent that moderator poor interest more from micro credit than those who are immensely poor in terms of contraction in poverty. The logic is that the destitute have less income sources, ill health and inadequacy of education hinder them to repay back the installment with high interest rate Hashemi, Schuler and Riley (1996) had examined the result of micro credit on various indicators of empowerment. They got that women's connection to credit was a powerful determinant of the degree of economic contributions noted by women. Micro credit was associated with a rise in the asset holdings in their own` names; of an increase in their act of purchasing power. They also found that micro credit was also connected with women's political and legal awareness. The borrowers have recorded unquestionably greater levels of mobility and political participation. Some members proclaimed increase involvement in major decision making. The empowerment was also allied with their enlarged contribution to family income. Suguna (2006) declared that economic empowerment is the basic condition of women development. The economic empowerment means terrific access to financial capital inside and outside the household. It is also tied with reducing accountability of poor women in crisis position like famine, food crisis, riots, death and accidents in the family. Economic empowerment provides women the potential to enjoy income and practice it at their own wisdom. The researcher has also lay emphasis on foundation of self help groups (SHGs) for women empowerment. As Johnston and Murdoch (2007) have planned a study to identify the result of micro-credit on household income in Indonesia. They considered household-level data from 1438 households in six provinces in Indonesia, an essential section for microfinance. They discovered that loans for small business were crucial, but poor income households in the survey utilized loan for household needs about 30 percent of the time. Outcomes demonstrated that the vital non-business activities in which they have wasted the loan were disbursing for school stipend, medical treatment, home repair or expansion, daily consumption needs, social and holiday budget.

3. Data and Method

Data for the research was collected through questionnaire survey from the several urban slums in Dhaka city. The questionnaire involves both quantitative and qualitative aspect composed of both open-ended and closed ended questionnaire. To gather some inside knowledge, the questionnaire also added some in-depth interview. Survey was conducted among 302 married women (212 borrowers with microcredit and 90 non-borrowers). In the context of families living in urban slum, married woman gives a better scope for studying empowerment, as many poor women migrate to urban areas after their marriage to accompany their husband. For convenience of survey, the questionnaire has been translated into Bangla for our convenience. The data have been accumulated from three different urban slum areas visit to Adabar, Mirpur, and Mohammadpur that covers both North and South slums of Dhaka City. Most of the borrowers received loan from ASA and BRAC. Few borrowers have received loan from Manabik and others. The study used mixtures of snow ball sampling method and convenient sampling. At the very beginning we have chosen some of the group leaders who have received loan from Asa, Brac, and Manabik of the following three areas. Then, based on the information given by the group leaders, we have identified the other respondents of the studied area who were mostly rickshaw pullers, vegetable sellers, tailors, cloth sellers, street vendors, and drivers living in a very poor condition in shanty in the slum. We also included some respondent who have not taken loan, but lives nearby the microcredit borrower under similar conditions in the slum. The survey was conducted during September to November, 2018. Simple statistical method such as univariate and bivariate descriptive statistics such as minimum, maximum, means, standard deviation, and correlation matrix were used to analyze primary data for this study. This study then uses two sample t-test and multiple regression technique to assess the impact of microcredit.

4. Empirical Evidence

4.1 Women Empowerment

Index Construction -The women empowerment index was divided into two categories. The categories are economic and non-economic empowerment index. Under economic empowerment index the subcategories are income status and wealth status. Under non-economic index we had several indicators like: decision making and voice indicators, control of resource indicator, political and legal awareness indicator and mobility indicator. Two separate indexes are constructed for economic and non-economic empowerment. Equal weights are assigned to economic and non-economic empowerment to construct overall empowerment index.

4.2 Tabular Analysis

Table 1: Descriptive Statistics, Women Empowerment

Variables	Obs	Mean	Std .Dev.	Min	Max
Women _Emp	302	51.408	29.87	0	90.588
Eco_Emp	302	44.76	29.371	0	91.176
Non_Eco Emp	302	58.055	33.434	0	95
Number of times borrowed	302	1.576	1.676	0	10
Amount borrowed	302	34387.42	54360.42	0	540000
Education	302	8.126	2.811	2	13
Employment	302	1.934	1.256	0	5
Share of Expenses	302	.573	.495	0	1

Table 2: Correlation Matrix

	Women_Emp	Eco_Emp	Non Eco_Emp	Number of times borrowed	Amount borrowed	Education	Employment	Share of expenses
Women_Emp	1							
Eco_Emp	0.9443	1						
Non Eco_Emp	0.9573	0.8707	1					
Number of times borrowed	0.4474	0.4763	0.3809	1				
Amount borrowed	0.1665	0.2809	0.1140	0.7429	1			
Education	0.3273	0.3106	0.3120	0.2955	0.0026	1		
Employment	0.6410	0.6333	0.5890	0.3117	0.1276	0.4719	1	
Share of Expenses	0.525	0.4762	0.5197	0.4293	0.1402	0.3535	0.4296	1

We can see from the above table that, from the above table that number of times borrowed with economic empowerment is significantly correlated with a correlation of (0.4763), compared to overall women empowerment (0.4474) and non-economic empowerment (0.3809). However, amount borrowed is less correlated with economic

empowerment with a correlation of (0.2089), compared to overall women empowerment (0.1665), and non-economic empowerment (0.1140). Thus, we can conclude that, number of times microcredit taken is significantly influenced by the overall women empowerment situation of female borrowers in the urban slums.

Table 3: T-Test of Women Empowerment, Economic Empowerment and Non-Economic Empowerment: Two-Sample Assuming Unequal Variances

	Women Empowerment Score	Economic Empowerment Score	Non-Economic Empowerment Score
Mean (with microcredit)	62.79	55.04	70.54
Mean (without microcredit)	24.58	20.52	28.63
Variance (with microcredit)	553.86	626.32	695.55
Variance (without microcredit)	667.68	586.48	884.99
T-stat	12.06	11.21	11.57
Df	155	173	151
Hypothesized Mean difference	0	0	0
Observations (with microcredit)	212	212	212
Observations (without microcredit)	90	90	90

In table above table, the t-test of mean differences shows a significant increase in overall women empowerment of microfinance borrowers compared to non-borrowers. We got 212 borrowers and 90 non-borrowers for the t-test. The mean increase of women empowerment for borrowers is estimated to be 62.79, whereas for the non-borrowers is 24.58. The t-value for the mean difference test is 12.06, which is significant at 95% confidence interval. This shows significant overall women empowerment increase for borrowers with respect to non-borrowers.

In addition, the t-test of mean differences shows a significant increase in economic empowerment of microfinance borrowers compared to non-borrowers. We got 212 borrowers and 90 non-borrowers for the t-test. The mean increase of economic empowerment for borrowers is estimated to be 55.04, whereas for the non-borrowers is 20.52. The t-value for the mean difference test is 11.21, which is significant at 95%

confidence interval. This shows significant economic empowerment increase for borrowers with respect to non-borrowers.

Moreover, the t-test of mean differences shows a significant increase in non-economic empowerment of microfinance borrowers compared to non-borrowers. We got 212 borrowers and 90 non-borrowers for the t-test. The mean increase of non-economic empowerment for borrowers is estimated to be 70.54, whereas for the non-borrowers is 28.63. The t value for the mean difference test is 11.57, which is significant at 95% confidence interval. This shows significant non-economic empowerment increase for borrowers with respect to non-borrowers. The survey data thus let us conclude that MF (microfinance), improves the non-economic empowerment situation of women in the urban slums.

The survey data thus let us conclude that MF (microfinance), improves both non-economic and economic empowerment situation of women in the urban slums. The results conform to the similar studies that are conducted in the context of rural areas.

5. Empirical Evidence on Microcredit and Women

Empowerment: Multiple Regression Analysis

Table 4: Determinants of Women Empowerment in Urban Slums. (Dependent Variable: Women Empowerment)

Independent Variables	Model (1)	Model (2)	Model (3)	Model (4)
Number of times borrowed	1.492 (1.41)	1.485 (1.345)	0.914 (0.849)	0.865 (0.72)
Lgmt=log(1+amount borrowed)	1.430*** (3.35)	1.933*** (4.55)	2.297*** (5.31)	3.079*** (7.38)
Education	-0.245 (-0.52)	0.0689 (0.146)	1.549*** (2.99)	2.123*** (4.39)
Employment	10.83*** (8.28)	11.35*** (8.76)		
Share of expenses	9.942*** (3.07)		13.97*** (3.73)	
Intercept	13.92*** (3.71)	12.37*** (3.30)	12.51*** (2.84)	10.19** (2.31)
Observations	302	302	302	302
R-squared	0.542	0.526	0.407	0.375

Note: Figures in parentheses indicate t-statistics.

*** p<0.01, ** p<0.05, * p<0.1

Model (1): The data fitted to the women empowerment function for the whole sample (302) show that about 54.2% of the observed variations in women empowerment are explained by differences in number of times borrowed, lgmt= log (1+ amount borrowed), education, employment, and share of expenses. We can see above in model (1) that lgmt =log (1+amount borrowed) is highly correlated with employment channel. It may happen to be that those women that employ the microcredit properly

in various income generating activities like cloth, tailoring, tea stall, betel nut business, cow, goat, poultry, Aarong milk, rickshaw, CNG, vegetable selling and for purchasing agricultural lands for leasing purpose and could repay back the installment in due time were given microcredit only and thereby those women got empowered as opposed to those women that invest the microcredit in non-income generating activities like to pay off the neighbors and relatives loan taken for paying off land's lease money, for paying of daughter's dowry, for sending son abroad, for mending houses and for investing in treatment of healthcare. Besides, $\text{lgmt} = \log(1 + \text{amount borrowed})$ and share of expenses is some way related to women empowerment which may tell us that women those were empowered from before were given microcredit.

We see that after controlling for share of expenses in Model (2), employment in Model (3), and both employment and share of expenses in Model (4) we see that the coefficient of education (2.123) and $\text{lgmt} = \log(1 + \text{amount borrowed})$ as measured by the coefficient (3.079) turned out to be more significant which means that these control variables were correlated with education and $\text{lgmt} = \log(1 + \text{amount borrowed})$ in having the effect on women empowerment.

Table 5: Regression Coefficients of the Economic Empowerment Function: Urban Slums, (Dependent Variable: Economic Empowerment)

Independent Variables	Model (1)	Model (2)	Model (3)	Model (4)
Number of times borrowed	3.289** (2.30)	3.285** (2.29)	2.687* (1.86)	2.648* (1.77)
$\text{Lgmt} = \log(1 + \text{amount borrowed})$	0.911* (1.92)	1.261*** (2.88)	1.816*** (3.88)	2.437*** (5.57)
Education	-0.500 (-1.01)	-0.282 (-0.57)	1.371*** (2.66)	1.827*** (3.60)
Employment	11.29*** (8.40)	11.65*** (8.64)		
Share of expenses	6.910* (1.93)		11.11*** (2.69)	
Intercept	11.17*** (3.12)	10.09*** (2.83)	9.698** (2.27)	7.852* (1.84)
Observations	302	302	302	302
R-squared	0.517	0.509	0.366	0.344

Note: Figures in parentheses indicate t-statistics. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
In order to get more sensitivity of the results, we have divided into economic and non-economic empowerment.

Model (1): The data fitted to the economic empowerment function for the whole sample (302) show that about 51.7% of the observed variations in economic empowerment are explained by differences in number of times borrowed, $\text{lgmt} = \log(1 + \text{amount borrowed})$, education, employment, and share of expenses. We can see above in Model (1) that number of times borrowed and $\text{lgmt} = \log(1 + \text{amount borrowed})$ is significantly correlated with employment mechanism. This means that variables in economic empowerment are some way related to microcredit and thus increases the chance of number of times borrowed and amount borrowed by borrowers. Moreover, share of expenses is in some way related with economic

empowerment. It may happen to be that women who are economically empowered from before were only given microcredit as opposed to women who are less or not economically empowered from before.

In contrast, we see that after controlling for share of expenses in Model (2), employment in Model (3) and both employment and share of expenses in Model (4), we observe that the number of times borrowed as measured by the coefficient (2.648), $\lgmt = \log(1 + \text{amount borrowed})$ as measured by the coefficient (2.437) and education as measured by the coefficient (1.827) has become more significant which conveys that these variables were some way or the other correlated with economic empowerment.

Table 6: Regression Coefficients of the Non-Economic Empowerment Function: Urban Slums, (Dependent Variable: Non- Economic Empowerment)

Independent Variables	Model (1)	Model (2)	Model (3)	Model (4)
Number of times borrowed	-0.306 (-0.28)	-0.314 (-0.27)	-0.859 (-0.80)	-0.918 (-0.73)
$\lgmt = \log(1 + \text{amount borrowed})$	1.948*** (4.10)	2.606*** (5.32)	2.779*** (5.72)	3.721*** (8.00)
Education	0.00961 (0.01)	0.420 (0.71)	1.728*** (2.78)	2.420*** (3.94)
Employment	10.37*** (6.64)	11.05*** (7.28)		
Share of Expenses	12.97*** (3.33)		16.83*** (4.01)	
Intercept	16.68*** (3.42)	14.65*** (2.97)	15.33*** (2.85)	12.53** (2.31)
Observations	302	302	302	302
R-squared	0.479	0.458	0.381	0.343

Note: Figures in parentheses indicate t-statistics. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Model: (1) The data fitted to the non- economic empowerment function for the whole sample (302) show that about 47.9% of the observed variations in non-economic empowerment are explained by differences in number of times borrowed, $\lgmt = \log(1 + \text{amount borrowed})$, education, employment, and share of expenses.

We can notice above in Model (1) that $\lgmt = \log(1 + \text{amount borrowed})$ and share of expenses is in some way related, but it may happen to be that women who were non-economically empowered from before were given microcredit. Besides, also through the employment channel we can distinguish significant effect on $\lgmt = \log(1 + \text{amount borrowed})$ which reveals that those women that utilize the borrowed amount properly have more decision making and voice power compared to less non-economically or not non-economically empowered women that could not avail microcredit. Thus, they have less decision making and voice power.

However, after controlling for the effect of share of expenses in Model (2), employment in Model (3) and both employment and share of expenses in Model (4), we observe that variables such as $\lgmt = \log(1 + \text{amount borrowed})$ as measured by

the coefficient (3.721) and education as measured by the coefficient (2.420) became more notable which in turn gives us the message that these variables were significantly correlated with non-economic empowerment.

6. Conclusion

The findings show that microcredit had positive impacts on women empowerment living in urban slums. The results, thus, extends the positive impact microcredit that was previously established in case of rural areas. The empowerment includes both economic and non economic aspect such as voice over decision making, ownership of resources, freedom of mobility, political and legal empowerment etc. Such empowerment is quite important in social transformation with development and encouraging woman's participation in economic development. Since, microcredit has positive impacts on women empowerment, the policies may be taken to reduce the rate of interest for microcredit borrowers, and relax the collateral policy.

The evidence of the impact of microcredit on women empowerment may be interpreted with some caution as there could be problem of endogeneity. While microcredit may work to empower poor women, there is also a high chance that woman who is already little more empowered have a high chance of access to micro credit. However, as microcredit provided in the last few years has been correlated with the present empowerment situation, the problem of reverse causality would be quite small.

The scope of the study was very limited that focused on empowerment effect of microcredit only. However, it is now well known that micro finance providers (called also loan-sharks) economically exploit the women-borrowers who are illiterate, less educated and aware of the implications of extremely high interest rates. Slum women may be relatively less interested in microfinance than their counterparts in rural areas who are in dark about the impact of high interest rates on their indebtedness. Further studies may be conducted to examine comparative picture of this issue in rural areas and urban slums.

References

- Bashar, T. & Rashid, S. (2014). Urban Microfinance and urban poverty in Bangladesh. *Journal of the Asia Pacific Economy*, 17, 164-165.
- Chowdhury. J., (2009), *The Role of Micro-Credit in Alleviation of Poverty: A Study of the Grameen Bank in Bangladesh*, A publication of University of Dhaka, 13, 45-52
- Hashemi, S.M. Schuler, S.R. and Riley, A. P. (1996), Rural Credit Programs and Women's Empowerment in Bangladesh, *World Development* 24 (4)
- Hulme, D., and Mosley P., (1996), *Finance against Poverty*. Routledge Int. Publishing Company, 34, 87-91
- Johnston, D, and Jonathan, M., (2007), *Microcredit VS Micro saving: Evidence from Indonesia*, New York: New York University, 23, 546-54
- Morduch, J., (2000), The Microfinance Schism, *World Development*, 28(4), 617-29

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- Rahman, S., Rafiq, R. B., and Momen, MA., (2009), Impact of Micro-Credit Programs on Higher Income borrowers: Evidence from Bangladesh, *International Business & Economics Research Journal*, 8(2), 119-24
- Roy, C., Chatterjee, S. & Gupta, D.S. (2018). Women Empowerment Index: Construction of a Tool to Measure Rural Empowerment Level in India. *International Journal of Management*, 7, 199-202
- Saguna, B., (2006), *Empowerment of Rural Women through Self Help Groups*. Discovery Publishing House, New Delhi, pp.35-45
- Sen, A.K., (1990), Gender and co-operative conflict. in I. Tinker (Eds.), *Persistent inequalities*, Oxford University Press.
- Yunus, M., (1999), *Banker to the Poor*, The Autobiography of Mohammad Yunus, Founder of the Grameen Bank, London, Aurun Press Ltd., 76-82
- Zaman, H., (2009), *Assessing the poverty and vulnerability impact of micro-credit in Bangladesh: A Case study of BRAC*, Washington, D.C., The World Bank, 345-56

Appendix:

Details of Women Empowerment Construction

Income Status

The respondent was presented with a list of choices ranging from 0 taka to above 30,000 taka and was asked into which category she fall into out of the following choices. She was given one point for the range 0 taka-3,000 taka and an additional point as she crossed each of the income bars. She had been given no point if she did not earn her own living (hypothetical range: 1 to 8)

Wealth Status

Property Ownership

Similarly, the respondents were asked if they had house, land, shop, CNG and rickshaw in their own name. Three points were given if the respondent had house in their own name, two point five points were given for owning land, two points for shop, one point five point for CNG and one point for rickshaw. The respondent was given no point if she did not have any sort of property in her own name (hypothetical range: 1 to 3)

Jewelry Ownership

Moreover, respondents were questioned if they possess all jewelry, some jewelry or none that were given by their parents during marriage. One point was asserted if the respondent had all of the jewelry, zero point five for owning some of the jewelry, and zero was given if she had none of the jewelry with her(hypothetical range: 0 to 1)

Decision Making and Voice Indicator

Woman's decision given priority in front of husband

The respondent was presented with a list of choices like: all time, often times, sometimes, not at all. Four points was given if her decisions were all time prioritized, three points for often times, and two points for sometimes. She had been provided no point if her decision were not at all prioritized (hypothetical range: 0 to 4)

Importance of decision given in case of sending children to school

The respondent was provided with options such as yes and no. One point was given if her decision was given importance and zero point was given if her decision was not given importance at all (hypothetical range: 0 to 1)

Having voice in becoming microcredit member/NGO member/joining a local party

In the same way, respondent was asked if she had her own voice or not. One point was given if she had her own voice and zero point was given for having no voice (hypothetical range: 0 to 1)

Watching television or listening to radio without consulting her husband

The respondent was asked yes or no. One point was given if she could watch television or listen to radio without consulting her husband and zero point was given is she could not do it(hypothetical range: 0 to 1)

Having more participatory power in various household decisions

The respondent was asked that whether she should have or not have more participatory power in various household decisions. One point was provided if she thought that she should not have more participatory power and zero point was provided that if she thought that she should have it(hypothetical range: 0 to 1)

Voice for campaigning for a political member/got into protest: a man beating his wife, a man divorcing or abandoning his wife

The respondent was presented with two choices of yes and no. The respondent was given two point is if she had her own voice and zero point if she did not had her own voice (hypothetical range: 0 to 2)

Husband's allowance for studying further after marriage

The respondent was asked yes or no. Two points was given if her husband allowed her and zero point was given if her husband did not allow her at all (hypothetical range: 0 to 2)

Control of resource indicator

Money with you that you can spend as you wish

The respondent was demonstrated with choices of yes and no. Four point was given if she had the money with her that she can spend as she wish and zero point was given if she did not possess the money with her(hypothetical range: 0 to 4)

Political and Legal Awareness Indicator

Registering marriage in the Quazi office

The respondent was asked if she had registered or not for marriage in the Quazi office. The respondent was given one if she had registered and zero if she did not register for marriage (hypothetical range: 0 to 1)

Knowing significance of marriage registration

The respondent was questioned with following options of yes and no. The respondent was given one point if she knew the significance and zero point if she did not knew the significance (hypothetical range: 0 to 1)

Mobility indicator

Restriction given by husband in going to parents/relatives/friends house

The respondent was asked if she was given or not given restriction. The respondent was given two points if she was all times and often given restriction, and zero point if she was sometimes and not at all given restriction (hypothetical range : 0 to 2)