Economic Empowerment of Women through Microcredit in South-west Region of Bangladesh

S. M. Reazul Alam[1], Fauzia Hamid[2], Apurba Roy[3]

[1]*(Economics Discipline, Khulna University, Bangladesh)*
[2]*(Professor, Economics Discipline, Khulna University, Bangladesh)*
[3]*(Economics Discipline, Khulna University, Bangladesh)*

Abstract: *This study tries to reveal the role of microcredit in enhancing women empowerment in south-west region of Bangladesh, especially in Batiaghata Upazila of Khulna District. The sample size is 80 which has been selected randomly, and, is comprising of equal number of microcredit taker and non-microcredit taker women of Batiaghata Upazila which has been selected randomly, engaged in poultry farming. Cumulative Empowerment Index (CEI) is constructed and multiple linear regression model is used to find out women empowerment status. By using CEI, the study has found that the microcredit taker women are economically more empowered than the non-microcredit taker women. By using multiple linear regression model, the study also finds that, contribution to household income, monthly investment, and new addition to asset ownership of the respondents have statistically significant effect on women empowerment. But status regarding microcredit taking gives statistically insignificant result. Above all, based on the empirical result, it can be concluded that status regarding microcredit has a positive effect on economic empowerment of women in the study area.*
Keywords: *Microcredit, Economic empowerment of women, Cumulative Empowerment Index*

I.   Introduction

Bangladesh is one of the high density populated countries in the world. At present about 31% of the total population live below the poverty line in the country, where, proportion of rural poor is higher than urban poor [1]. Women constitute almost half of the total population and more than 80% of them live in rural areas. In Bangladesh, women have lower socioeconomic and political status compared with their male counterpart. Besides, they have to face various socio-cultural and religious barriers to engage in income generating activities [2]. In addition, in Bangladesh, women hold a very weak position, both at household and society level; and, discrimination, and domestic violence against women are widespread [3].

The role of microfinance is remarkable in many gender and development related issues due to its direct relationship with both alleviation of poverty and empowerment of women [4]. Microcredit program is one kind of unique microfinance technique used to enhance income generating activities [3]. Theoretically, it is the extension of very small loans to impoverished borrowers who typically lack collateral and a verifiable credit history. It is designed not only to support entrepreneurship and alleviate poverty, but also in many cases to empower women and uplift entire community by extension [5]. Therefore, rise of the Microcredit Institution in the global context is identified as an important phenomenon which has implication for the development prospects of the poor.

Literally, empowerment means to make someone powerful; that is, facilitating the weak to attain strength, and enabling someone to confront injustice and oppression. It is a process of making the powerless to acquire and control over power through awareness and capacity building, participating in decision making, acquiring information, attaining confidence, etc. [4]. Empowerment of women is an essential precondition for alleviation of poverty and upholding of human rights, in particular at the individual level, as it helps to build a base for social change. Due to microcredit provision by the Grameen Bank, not only have the Bangladeshi women gained higher status in society, but also the economy of the country has benefited from inclusion of so many additional people and businesses. But, whether all these changes brought about by microcredit are changes for betterment, and whether improvement in the status of women's right can be attributed to the advancement of microcredit still remain a point of contention [6].

Microcredit service is considered a key development tool, particularly for women who are the target of most microcredit programs [7]. Not only female borrowers do have better repayment record but also return to their investment seem to better reach all the household members, especially in terms of improving children health and their school enrollment [8]. Improvement of women's self-esteem as well as her family status is also found to have been taken forward through microcredit [9][10].

Malhotra and Schuler (2005) conducted a work considering the most commonly used indicators for measuring women's empowerment. They found that the most universally used indicators are decision making power and access to resources [11]. Another study conducted by Malhotra et al. (2002) found that the degree of

decision-making power is generally measured by looking into women's decisions regarding financing, resource, allocation, spending, social and domestic matters, and child-related issues. Women's access to resources also indicates their empowerment. It is generally measured by considering women's access to and control over cash, household income and assets, unearned income, welfare receipts, household budget and participation in paid employment. The third frequently used indicator of empowerment is that of women's mobility and freedom of movement [12].

Economic empowerment of women in Bangladesh is a crucial factor for the development of the country. For this reason, both NGOs and GOs have taken different entrepreneurial program for development of rural poor women. They aim to do so through creating social awareness, improving education and health status, and alleviating poverty [13]. This is because, lack of, education, land ownership, proper knowledge and training create problems to become empowered due to weak ability to utilize the taken credit in rural areas of Bangladesh [14]. In investigating how microcredit empowers women in Bangladesh, Pitt et al. (2003) find that, women's participation in microcredit programs helps to increase women's empowerment by taking a greater role in household decision making, having greater access to financial and economic resources, having greater social network, and having greater freedom of mobility [15]. In addition, microcredit program participation has only a limited direct effect in increasing women's access to choose enhancing resources, but has a much stronger effect in increasing women's ability to exercise their right in intra-household processes. Consequently, program participation is able to increase women's welfare and possibility to reduce male bias in welfare outcomes, particularly in poor households [16].

Using a cumulative empowerment index (CEI) of six empowerment indicators, Parveen and Leonhäuser (2005) find that the majority of rural women in Bangladesh have a very low to moderate (82%) level of empowerment. Besides, multiple regression analysis shows that there are strong positive effects of formal and non-formal education, information media exposure and spatial mobility on women's CEI, while traditional socio-cultural norms have a strong negative effect [17].

As women are nearly half of the population in Bangladesh, they are crucial human resource of the country. They lack sufficient employment opportunity, power of taking decision, ownership of wealth, health facility and enough nutrition. The scenario is more acute in rural areas. The main goal of microcredit program is to alleviate poverty and provide better living to the poor people. Most of the clients of microcredit are women; who, through taking microcredit, engage in different sectors; which, thereby, lead them to change their economic condition. Many women are becoming self employed and providing extra income to their family by engaging in various income generating activities. This study, therefore, tries to find out the role of microcredit on economic empowerment of women in the south-west region of Bangladesh.

II.   Methodology

2.1 Study area selection and data collection
This study is both qualitative and quantitative research in nature. In order to accomplish the objective of the study, study area has been selected using multistage sampling technique. In the first stage, Khulna District has been selected from the south-west region of Bangladesh. Then, Batiaghata Upazila has been selected purposively from the nine upazilas of Khulna District. Batiaghata Upazila has seven unions. For the purpose of the study, Jalma Union has been randomly selected from these unions. Jalma Union has 31 villages; from these, Jharvanga and Chakrakhali have been randomly selected as the study area for this research work.

For conducting the research both primary and secondary data have been collected. Primary data for the study have been collected through field investigation and field survey; whereas, secondary data have been gathered from published documents such as journals, reports, thesis papers and other internet documents on micro credit related issues.

2.2 Sampling technique and data collection
Firstly, microcredit providing organizations, namely, ASA, Grameen Bank, Palli Daridro Bimocon Foundation (PDBF), and BRDB, which provide credit to the poultry farmers in the study area, have been selected for this study. Next, women engaged in poultry farming have been selected, which, comprise of both microcredit takers and non-takers. Then, random sampling technique has been applied to select the sample in the study area namely, Jharvanga and Chakrakhali villages. Here, population related to microcredit taking is 125; wherefrom, 40 respondents have been randomly selected. On the other hand, population related to non-microcredit taking is approximately 100; wherefrom, 40 respondents have been randomly selected. Thus, total sample size of the study is 80; the distribution of sample is being shown in Table 1.

Table No. 1: Sample size distribution

Name of village	Category of sample	Frequency
Jharvanga	Women taking micro credit	20
	Women not taking micro credit	20
Chakrakhali	Women taking micro credit	20
	Women not taking micro credit	20
	Total	80

Source: Researchers' compilation based on field survey (2014)

Data have been collected in various ways for study purpose. These are personal interview method, focus group discussion, and observation method. Interview method and FGD method have been used to collect various information and data from the women. For this reason, questionnaire has been prepared, pre-tested, and finalized after eliminating the errors encountered in the pre-testing stage. Observation method has been applied to conduct overall survey for obtaining some relevant and necessary data.

2.3 Data analysis

After collecting, data has been sorted, filtered and placed in tabular form to present the same in an organized manner to make them more illustrative and explanatory. Statistical tools used for the study comprise of mean, index, regression, t-test and other calculations. Computer package like Microsoft office and statistical software such as SPSS v17, STATA v 12.1 have been used to analyze the data. Some of the approaches used for data processing and analyzing are hereby described.

2.3.1 Priority index (P.I)

The respondents are asked to prioritize the limitations of microcredit with five-point scale. The formula of P.I is given below:

$$P.I = \sum S_i f_i / n \quad [\text{where, } (0 \leq P.I \leq 1)]\text{--}(1)$$

Where, P.I = Priority index

S_i = Scale value of ith priority

f_i = Frequency of ith priority

n = Total number of observations

Table No. 2: Priority index (P.I)

Priority by type	Scale value of priority
1st priority	S=1.00
2nd priority	S=0.75
3rd priority	S=0.50
4th priority	S=0.25
5th priority	S=0.00

Source: Researchers' compilation

The limitations of microcredit used to construct priority index according to the responses of the sample are as follows, high interest rate, small loan size, unfavorable repayment system, problematic system of group dynamics, and lack of skill.

2.3.2 Cumulative empowerment index (CEI)

A cumulative empowerment index (CEI) is developed by adding the obtained scores regarding seven economic empowerment indicators. These indicators combine both quantitative and qualitative data to get a complete idea of women empowerment. The quantitative part corresponds to five categories e.g., 1 = very low and 5 = very high. Each indicator is assigned a quantitative rank from 1 to 5 according to the total score for each empowerment indicator received from its sub-indicators based on the field survey.

The qualitative dimension is formed to rank the key seven indicators from total scores assigned by some focus group participants where 7 represent 'very important' and 1 represents 'least important'. The rank order is made based on total scores attaining from ranking of the individual indicator in focus group. Maxwell (1996) followed this procedure to measure food insecurity by developing a cumulative food security index. Parveen and Leonhäuser (2005) also followed the same process to measure women empowerment by developing a cumulative empowerment index. The CEI for the purpose of present study is constructed based on the cumulative food security index of Maxwell (1996) and the cumulative empowerment index of Parveen and Leonhäuser (2005).

Table No. 3: Indicators of measuring economic empowerment of women

Indicators	Point Scale	Measurement unit	Indicators	Point Scale	Measurement unit
a. Contribution to household income	1	In the range 1-20%	**e. Access to resources**	1	Training at household level
	2	In the range 21-40%		2	Training at community level
	3	In the range 41-60%	iii. Training	3	Training from NGO
	4	In the range 61-80%		4	Training from two or more than two NGOs
	5	In the range 81-100%		5	Training from GO
b. Monthly savings	1	BDT 1-500	**e. Access to resources**	1	Using one tool
	2	BDT 501-1000		2	Using two tools
	3	BDT 1001-1500	iv. Production tools	3	Using three tools
	4	BDT 1501-2000		4	Using four tools
	5	BDT 2001-2500		5	Using five or more tools
c. Monthly investment	1	BDT 1-500	**e. Access to resources**	1	Selling of 1-20% of produced product
	2	BDT 501-1000		2	Selling of 21-40% of produced product
	3	BDT 1001-1500	v. Selling of produced products	3	Selling of 41-60% of produced product
	4	BDT 1501-2000		4	Selling of 61-80% of produced product
	5	BDT 1501-2000		5	Selling of 81-100% of produced product
d. New addition to asset ownership of the respondent	1	BDT 1-5000	**f. Capacity building to cope with household shocks**	1	Collecting money at high interest rate
	2	BDT 5001-10000		2	Collecting money at low interest rate
	3	BDT 10001-15000		3	Collecting money from relatives/neighbors/friends
	4	BDT 15001-20000		4	Collecting money from family members
	5	BDT 20001-25000		5	Collecting money by own finance
e. Access to resources i. Nutritious food	1	One meal a day	**g. Frequency of participation in socio economic activities**	1	No participation
	2	Two meals a day		2	Rare participation
	3	Three meals a day		3	Occasional participation
	4	Four meals a day		4	Sometimes participation
	5	Five meals a day		5	Frequent participation
e. Access to resources ii. Information	1	Production related information from 1 source			
	2	Production related information from 2 sources			
	3	Production related information from 3 sources			
	4	Production related information from 4 sources			
	5	Production related information from 5 sources			

Source: Researchers' compilation

Based on the above indicators, economic empowerment of women has been measured by constructing cumulative empowerment index (CEI) as given below.

Table No. 4: Cumulative empowerment index (CEI)

Indicators	Quantitative rank	Qualitative rank *	CEI range (28-140)
Contribution to household income	1 to 5	7	(1-5) ×7= 7-35
Monthly savings	1 to 5	6	(1-5) ×6= 6-30
Monthly investment	1 to 5	5	(1-5) ×5= 5-25
New addition to asset ownership of the respondent	1 to 5	4	(1-5) ×4= 4-20
Access to resources	1 to 5	3	(1-5) ×3= 3-15
Capacity building to cope with household shocks	1 to 5	2	(1-5) ×2= 2-10
Participation in socio economic activities	1 to 5	1	(1-5) ×1= 1-5

Source: Researchers' compilation based on field survey (2014)

* Rank order was made based on total scores attained from ranking of the respondents. From this study, the scores came out as 7 = 546, 6 = 474, 5 = 388, 4 = 295, 3 = 260, 2 = 185, 1 = 92.

CEI thus calculated varies from 28 to 140; in which 28 denotes the lowest level of empowerment and 140 denotes the highest level of empowerment. The CEI range is further divided into five categories and labeled as very low empowerment (28-50), low empowerment (51-72), medium empowerment (73-94), high empowerment (95-117) and very high empowerment (118-140) for better understanding the level of empowerment possessed by the respondents.

2.3.3 Regression analysis
A multiple linear regression model has been used to estimate the effect of independent variables on dependent variable (women empowerment or CEI). Here, we have considered four explanatory variables, viz., contribution to household income, monthly saving, monthly investment, new addition to asset ownership, and a dummy variable to estimate the effect of microcredit taking on women empowerment.

$$CEI = \beta_0 + \beta_1 Inc + \beta_2 Sav + \beta_3 Inv + \beta_4 Asst + \beta_5 D + \mu_i \text{---(2)}$$

Where,
CEI = Cumulative Empowerment Index
Inc = Contribution to household income (in percentage)
Sav = Monthly saving (in BDT)
Inv = Monthly investment (in BDT)
Asst = New addition to asset ownership of the respondents (in BDT)
D = Dummy variable (microcredit taker = 1 and non-microcredit taker = 0)
β_0 = Intercept term
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Regression co-efficient
μ = Stochastic disturbance term

III.   Results and Discussion

3.1 Descriptive statistics

This section discusses present status of the two categories (microcredit take and non-microcredit taker) of respondents through using some socioeconomic variables namely, monthly consumption expenditure, monthly savings, monthly investment and status of asset ownership, etc.

Table No. 5: Summary statistics

Variables	Status of microcredit	Obs.	Mean	Std. dev.	Min	Max	Mean difference	t-value
Monthly consumption expenditure	Microcredit taker	40	14300.00	3039.90	8000.00	20000.00	-212.50	-0.344
	Microcredit non-taker	40	14512.50	2448.15	10000.00	20000.00		
Monthly savings	Microcredit taker	40	1397.50	521.57	500.00	2500.00	280.00*	2.86
	Microcredit non-taker	40	1117.50	333.31	500.00	2000.00		
Monthly investment	Microcredit taker	40	1167.50	413.48	500.00	2500.00	227.50*	2.78
	Microcredit non-taker	40	940.00	309.71	500.00	2000.00		
Asset ownership status	Microcredit taker	40	13875.00	5316.58	5000.00	25000.00	3250.00*	3.20
	Microcredit non-taker	40	10625.00	3585.49	5000.00	18000.00		

Source: Researchers' compilation based on field survey (2014)
[Note: * = significant at 1% level, Obs. = Observation, Std. dev. = Standard Deviation, Min = Minimum, Max = Maximum]

From the above Table 5, it is evident that mean monthly consumption expenditure of the microcredit takers is BDT 14300 with a standard deviation of 3039.90. On the other hand, average monthly consumption expenditure of the non-microcredit takers is BDT 14512.50 with a standard deviation of 2448.15. Mean difference among the two groups in terms of monthly expenditure is negative and it is not statistically significant. In case of, monthly saving, microcredit takers enjoy larger mean saving than the non-microcredit takers. In the above Table 5, we see that mean difference of monthly saving among the two groups is BDT 280. The estimated t-value is 2.86, which indicates that the mean difference is statistically significant at 1% level. Besides, we observe that mean monthly investment and asset ownership of microcredit takers are more than non-microcredit takers in the study area, and the differences between the two groups in these respects are statistically significant at 1% level.

3.2 Ranking of limitations of microcredit with priority index (P.I)

There are some limitations of microcredit as indicated by the recipients. These limitations are identified on the basis of construction of priority index.

Table No. 6: Ranking of limitations of microcredit with priority index (P.I)

Identified problems	1st Priority (S=1.0)	2nd Priority (S=0.75)	3rd Priority (S=0.50)	4th Priority (S=0.25)	5th Priority (S=0.00)	∑fi	P.I	Rank order
	f1	f2	f3	f4	f5			
High interest rate	31	2	2	3	2	40	0.86	1
Small loan size	6	28	4	1	1	40	0.73	2

Unfavorable repayment system	2	8	26	4	0	40	0.55	3
Problematic system of group dynamics	1	2	5	23	9	40	0.27	4
Lack of skill	0	0	3	9	28	40	0.09	5

Source: Researchers' compilation based on field survey (2014)

From the above Table 6, it is evident that, high interest rate is ranked as the most acute limitation of microcredit. Next one is small loan size which is ranked 2. Unfavorable repayment system is ranked 3. Problematic system of group dynamics and lack of skill are two other major limitations which are identified by the respondents. These two problems are ranked 4 and 5 respectively.

3.3 Measurement of economic empowerment of women
The economic empowerment of women in the study area is measured by the Cumulative Empowerment Index (CEI) constructed with seven indicators, such as, contribution to household income, monthly savings, monthly investment, new addition to asset ownership of the respondents, access to resource, capacity building to cope with household shocks, and participation in socio economic activities.

3.3.1 Extent of women empowerment
The distribution of total respondents (both taking microcredit and not taking microcredit) - on the basis of CEI is represented in Table 7 and descriptive statistics regarding this result are shown in Table 8.

From the Table 7, we see among 40 microcredit taking women, 2.5% possess very low level of empowerment, whereas, 5% possesses very high level of empowerment. About 20% women have low empowerment, 47.5% women enjoy medium empowerment and 25% have high empowerment. The results also show that, about 22.5% of women possess very low to low level of empowerment and 70% of the women enjoy medium empowerment and its below categories. Moreover, 30% have high to very high level of empowerment.

Table No. 7: Distribution of sample on the basis of CEI

Category	Score	Microcredit taker		Microcredit non-taker		Total respondents	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Very low empowerment	28-50	1	2.5	4	10	5	6.25
Low empowerment	51-72	8	20	18	45	26	32.50
Medium empowerment	73-94	19	47.5	15	37.5	34	42.50
High empowerment	95-117	10	25	3	7.5	13	16.25
Very high empowerment	118-140	2	5	-	-	2	2.5
Total		**40**	**100**	**40**	**100**	**80**	**100**

Source: Researchers' compilation based on field survey (2014)

On the other hand, from the same Table 7, we see that, among 40 non-microcredit taking women, 10% possess very low level of empowerment; whereas, no one possesses very high level of empowerment. About 45% women have low empowerment, 37.5% women enjoy medium empowerment and 7.5% have high empowerment. The results also show that, about 55% women enjoy very low to low level of empowerment and 92.5% of the respondents possess medium empowerment and its below categories.

However, Table 7 exhibits the comparative study of the economic empowerment of women on the basis of CEI analysis. It has been seen that microcredit taker women are enjoying more empowerment than those who do not take microcredit. Among the first group, 2.5% possess very low empowerment; whereas, about 10% of women belonging to the second group enjoy the same. About 20% of microcredit taking women have low empowerment; on the other hand, this figure is 45% for those who fall under non-microcredit taker. Besides, 47.5% women taking microcredit enjoy medium empowerment status, whereas, 37.5% of non-microcredit taking women possess the same status. In addition, high empowerment status is enjoyed by 25% of microcredit taking women and only 7.5% of the non-microcredit taking women belong to that category. Finally, about 5% of the women possess very high empowerment status, which level of employment status is enjoyed by none in the latter group.

Table No. 8: Descriptive statistics of total respondents on the basis of CEI

Variable	Status of microcredit	Obs.	Mean	Std. dev.	Min	Max	Mean difference	t-value
Mean CEI	Microcredit taker	40	87.10	18.08	47	124	15.85[*]	4.20
	Microcredit non-taker	40	71.25	15.55	44	105		

Source: Researchers' compilation based on field survey (2014)

The above Table 8 shows that in case of microcredit taker, mean CEI score is 87.10, the standard deviation is 18.08. On the other hand, for microcredit non-taker, mean CEI score is 71.25 with a standard deviation of 15.55. The maximum CEI score is 124 and the minimum is 44 for all respondents. The estimated t-value is 4.20, stating that mean difference among the two groups is statistically significant at 1% level. Therefore, it is clear that, on an average the credit-taker women enjoy higher level of employment in comparison to non-taker women.

3.3.2 Regression results
In this section, results of the multiple regression models have been presented to examine the effects of four key explanatory variables on CEI as proxy of economic empowerment of women in the study area. The estimated results have been described in the table below.

Table No. 9: Determinants of women empowerment in the study area

Variables	Symbol	Parameters	Coefficients	Standard error	t-ratios
Constant	-	β_0	10.37	2.169	4.78[*]
Contribution to household income	Inc	β_1	0.56	0.042	13.36[*]
Monthly saving	Sav	β_2	0.011	0.002	5.39[*]
Monthly investment	Inv	β_3	0.012	0.002	5.07[*]
Asset ownership	Asst	β_4	0.0009	0.0001	6.68[*]
Status regarding microcredit taking	D	B_5	0.70	1.116	0.63
R-squared = 0.94, Number of observation = 80, Mean VIF = 2.42					

Source: Researchers' compilation based on field survey (2014)
[Note: * = significant at 1% level]

The estimated regression result shown in Table 9 hold up the proposition that, economic empowerment of women depends on the aforesaid variables. The model finds that by using CEI as dependent variable in regression analysis, the explanatory variables are highly significant. Findings show that with 1 unit increase in contribution to household expenditure, monthly saving, monthly investment, and new addition to asset ownership of the respondents, value of CEI correspondingly changes 0.56 units, 0.011 units, 0.012 units, and 0.0009 units positively. Moreover, the R^2 value is 0.94 that means the explanatory variables can explain 94 percent of the variation of the explained variable. Here, the estimated result of microcredit status shows positive impact on CEI although this is not found to be statistically significant. Estimated values of standard error of this model are also very low. Finally, there exists low multicollinearity among the explanatory variables as the mean variance inflation factor (VIF) is only 1.51.

IV.   Concluding Remarks
Empirical research and discussion of the results hold up the proposition that women empowerment depends on the aforementioned variables. The women who take microcredit and who do not take microcredit contribute to their household income. But, the microcredit taker women had greater control over resources than non-microcredit taking women. Moreover, microcredit taking women enjoy relatively higher level of economic empowerment than those of non-microcredit takers. The results obtained by calculating cumulative empowerment index indicate that microcredit taking women have more flexibility in terms of taking decision on household consumption, investment, saving, earning money, access to assets and resources, participation in socioeconomic activities, etc., as compared with women who do not receive microcredit. Regression results suggest that contribution to household income, monthly saving, monthly investment, and new addition to asset ownership have positive and statistically significant influence on economic empowerment in the study area. So, based on the empirical result, it can be concluded that microcredit taking has a positive effect on economic empowerment of women.

References

[1]. BBS, Bangladesh economic review 2014 (Dhaka, Bangladesh: Ministry of Finance, Government of the People's Republic of Bangladesh, 2013).

[2]. M.M. Rahman, K.S. Kabir, and M.A. Al Helal, Women's Economic Empowerment through Micro-credit program: A Case of Thengamara Mohila Sabuj Sangha (TMSS) in Rural Bangladesh, Journal of Business and Technology (Dhaka), 8(1-2), 2014, 41-62.

[3]. A.M. Zoynul, and M. Fahmida, Women Empowerment Through Micro Credit: A Case Study of Dinajpur, Bangladesh, Studies in Business and Economics, 8 (2), 2013, 5-19.

[4]. D. Jain, and B. Jain, Does Microfinance Empower Rural Women? -a Empirical Study in Udaipur District, Rajasthan, Journal of Arts, Science and Commerce, 3(2), 2012, 76-89.

[5]. Wikipedia, Microcredit [online], accessed from, http://en.wikipedia.org/wiki/Microcredit on January 18, 2015.

[6]. L. Loro, Women's Empowerment as a Result of Microcredit Loans in Bangladesh? Bangladesh Development Research Center, BDRC, 2013.

[7]. Guérin, Women and money: Lessons from Senegal, Development and Change, 37(3), 2006, 549-570.

[8]. M. Sharma, and M. Zeller, Repayment performance in group-based credit programs in Bangladesh: An empirical analysis, World development, 25(10), 1997, 1731-1742.

[9]. R., Amin, M., St Pierre, A. Ahmed,and R. Haq, Integration of an essential services package (ESP) in child and reproductive health and family planning with a micro-credit program for poor women: experience from a pilot project in rural Bangladesh, World Development, 29(9), 2001, 1611-1621.

[10]. R.D. Panjaitan-Drioadisuryo, and K. Cloud, Gender, self-employment and microcredit programs An Indonesian case study, The Quarterly Review of Economics and Finance, 39(5), 1999, 769-779.

[11]. Malhotra, and S.R. Schuler, Women's empowerment as a variable in international development, Measuring empowerment: Cross-disciplinary perspectives, 2005, 71-88.

[12]. Malhotra, S. Schuler, and C. Brender, Measuring women's empowerment as a variable in international development, Washington DC: International Center for Research on Women and JSI Research and Training Institute, 2002.

[13]. M. Shamsuddoha, and T. Nasir, Micro Credit Program of Selected NGOs: An Empirical Study on Rural Poor Women, International Journal of Education Research & Technology, 2(1), 2011, 49-56.

[14]. D. Kumar, A. Hossain, and M.C. Gope, Role of Micro Credit Program in Empowering Rural Women in Bangladesh: A Study on Grameen Bank Bangladesh Limited, Asian Business Review, 3(6), 2013, 114-120.

[15]. M.M. Pitt, J. Cartwright, and S.R. Khandker, Does micro-credit empower women? Evidence from Bangladesh, World Bank, Development Research Group, Rural Development. 2003.

[16]. S. Mahmud. Actually, how empowering is microcredit? Development and Change, 34(4), 2003, 577-605.

[17]. S. Parveen, and I.U. Leonhäuser, Empowerment of rural women in Bangladesh: a household level analysis, 72, 2005.