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Impact of Microfinance on Women Empowerment in North-Western Region of Bangladesh- PRIME as a Case Study

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October 2015



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Abstract

In a country like Bangladesh, poverty alleviation is one of the prime concerns of any development plan, where equality and considerable equity needs to be ensured. Women embrace nearly half of the population of the country, but they, especially from the poverty stricken groups, are more vulnerable in terms of denial of fundamental human rights.

Microfinance, as a development program, primarily targets the poor female clients. From a development perspective, it could be expected that provision of financial resources and effective utilization of those resources can strengthen women's economic roles, shifting resources to their hand and gaining recognition for their roles. In due course, it is also anticipated that it would empower women and fade the traditional inequality.

This paper attempts to assess the effectiveness of one of the special microcredit program (PRIME) in promoting women's life living in the severe poverty stricken areas of rural Bangladesh. Taking into consideration the existing complex and conflicting results from the other studies, here indicators of women empowerment has been captured very carefully. Total 52 items have been gathered to address ten indicators, which are mobility, financial security, purchasing power, involvement in decision making, control over entire process of loan use, freedom from dominance within the family, political and legal awareness, and participation in public protest. In order to generate an aggregate index for women empowerment, a popular Item Response Theory (IRT) model namely, Rasch test for dichotomous responses has been pursued, which was previously undertaken by one revealing study done by Pitt, Khandker and Cartwright (2006). Results are steady with the view that there is a significant positive association between microcredit and women empowerment.

Keywords: Microfinance, Women Empowerment, Rasch Test, Bangladesh

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Impact of Microfinance on Women Empowerment in North-Western Region of Bangladesh- PRIME as a Case Study

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1. Introduction

The goal of any development project is to improve the condition of people's lives, and the outcomes needed to ensure fairness and considerable equity in the society, through a process of social transformation. However, it has been observed that socially determined disparity, conventional power relations between men and women, and mostly, dominant patriarchic nature of the society repeatedly discount women's rights and as a consequence affect their roles, quality and behavior within all levels, from the most personal to the highly public. Moreover, disparities in labor force participation, wage rates, along with, limited access to and control over resources, decision-making positions seriously limit women's economic opportunities. These disparities are more prevalent in the poverty stricken groups. A report from UNESCO (2005, page-1) claims that "if poverty is to be seen as a denial of human rights, it should be recognized that the women amongst the poor bear doubly from the denial of their human rights – first in terms of gender inequality, and second in terms of poverty". Thus, there remains a serious concern that whether the development programs fail the target of benefiting the society, i.e., promoting the status of men and women in the same way.

Among the various initiatives taken for sustainable development, microfinance activities have become a legitimate tool to fight against poverty. Microfinance, as a provision of financial services mainly targets the female clients, as rural women are considered to be more dependable in terms of higher propensity to save and repaying credit. Moreover, they are seen as hard working, easier to mobilize into groups, more honest and better credit risks. From the public policy perspective, this strategy could be justified as majority of poor are women and there is a strong need to integrate them into all development activities. As a consequence, it could be expected that successful implementation of microfinance program can boost up feminist efforts by strengthening women's economic roles, shifting economic resources to hand and gaining recognition for their roles at all levels. Moreover, access to productive resources and financial strength would weaken conventional social and gender roles and allow poor women to claim further change. Besides credit facilities, group based activities may create wisdom of unity and could enhance true empowerment of rural women.

To evaluate the association between women empowerment and participation in microcredit program, this paper examines the effect of a special program named, "Programmed Initiative for

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Monga Eradication" (PRIME) for the hardcore poor group. PRIME mainly incorporates two types of interventions, such as, year-round interventions and time specific seasonal intervention. The first one includes flexible microcredit, skill and capacity building and technical assistance support, vocational training and primary health care services while the second one includes emergency loan and cash for work. Under the program the primary health care service activities were initiated with a special focus on women and children in 2008 which includes preventive health care, de-worming, immunization, health referral services, nutrition, hygiene and sanitation, and primary health education.

PRIME has been evaluated periodically and the major findings of impact of the program have confirmed considerable improvements of the PRIME participant households. PRIME participant households fared better in terms of income, expenditure, asset accumulation and livestock than non-participant households. In this report too, the findings have been reinforced. Despite the success, findings reveal that among the families that have discontinued participation in MFI, the female headed households, families with fewer members and hence fewer earners, and families lacking adequate and sustained earning etc. usually drop out. The situation of women and households headed by women is vulnerable. Though, results reveal improved food security during the 'Monga' and normal times for those households that have continued their membership. The improvement also holds true for non-food expenditure among the participating households. Char families were more likely to be among the drop-out group as these areas offer little opportunity for sustained livelihoods, low infrastructural facilities, poor communication system, more exposed to natural disasters compared to villages on the mainland.

Almost all the members of PRIME program are women. In our socio-economic context under the primitive patriarchal dominance, women empowerment is a tough and time consuming process. Theoretically it is expected that after being members of micro finance organization, women gain some sort of authority over the power relations within household, economic security, decision making, mobility, the process of loan utilization and other indicators of empowerment. These are the dimensions of women empowerment. In Box-1, we formally define women empowerment. Though there is no explicit time frame contemplated for such a progress, research studies suggested that long term participation would comprise some positive change on the members or clients. Total seven years have passed after the program has been implemented and some of the beneficiaries are members of the program for five or more years, which could be considered as an adequate period for revealing impacts on the beneficiaries. Thus the basic objective is to evaluate the program to appraise its effectiveness in promoting women's lives in the severe poverty stricken area of rural Bangladesh. This study is expected to shed light on the above mentioned concern.

Box-1: Defining Women Empowerment

As a whole, empowerment is about all the people living in the society, involving individual change and collective action of both men and women. World Bank's Empowerment Sourcebook, (Narayan 2002) defines empowerment as "the expansion of freedom of choice and action to shape one's life". Kabeer (2001) defines empowerment as 'the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them'. So from the general understanding we can define empowerment for

the poverty stricken group as the growth of capabilities and economic resources so that they can take part in, influence, control and have power over institutions that affect their lives.

However, there is no fixed definition for women empowerment, as it has varied meaning in different socio-cultural, economic and political framework. Women were previously seen as wives and mothers involved in household activities but not directly in economic production. Basically they were responsible for works that were usually unpaid. And as a consequence, they were left out of public and paid spheres. But with the passage of time there was growing recognition that despite women's huge contribution to both productive and reproductive activities especially at household level, those remained invisible to policy makers and national accounts. Against this backdrop, the first world conference on women was held in Mexico City from June 19–2 July, 1975 and Bangladesh actively participated there. The conference was a part of a larger United Nations program which declared 1976-85 as 'Decade of Women' and included the drafting of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Since that year, March 8, has been celebrated as International Women's Day. As an approach to include women in development plans, Bangladesh government took some initiatives in its first five year plan (1973-78) and continued the flow in the next plans. During the UN decade for women (1975-85) the collected data clearly shed light on the poverty and weaknesses of women and their invisibility in the development process (FEMNET, 2004).

Moreover, women are not just a single homogenous group with some fixed indicators. Unlike the other disempowered groups (racial/tribal minorities, different poverty stricken groups, Dalit etc.), women are a fundamental part of the society that overlap with all the groups living in all levels. Moreover, the interfamilial relations play a crucial role for creating women's disempowerment, implying that issues need to be addressed with a broader policy action at the community as well as at the family level.

According to African Women's Development and Communication Network, "Women's empowerment means developing their ability to collectively and individually take control over their own lives, identify their needs, set their own agendas and demand support from their communities and the state to see that their interests are responded to. In most cases the empowerment of women requires transformation of the division of labour and of society as well as changes in prevalent ideologies about the roles and responsibilities of men and women". The United Nations Population Information Network (POPIN) defines women's empowerment based on five components, which are: women's sense of self-worth, their right to have access to opportunities and resources, their right to have the power to control their own lives, both within and outside the home, their right to have and to determine choices and their ability to influence the direction of social changes to create a better social and economic order, nationally and internationally¹. Thus it is a slow and complex process to be identified and can be acknowledged by proxy terms, such as economic security, mobility, purchasing power, political activism, minor/major decision making, control over the entire process of loan use, awareness, freedom from domination and so on.

The paper is organized as follows. In section two, we have reviewed the literature on impact of microfinance on women empowerment. We have discussed the methodology in section three. The description of sources of data is followed in section four. Section five shows the socioeconomic characteristics of the comparable groups. The results found in the descriptive and econometric analysis are illustrated in section six. In section 6.1 impact of PRIME on women empowerment has been analyzed based on another evolution procedure to get a clearer picture. Among the program participants who are not empowered and whether empowerment score vary by participant status is shown in section 7 and 8 respectively. Final section is about discussion, summary of the results and policy implications.

¹ Rahman, S. Junankar, P. and Mallik, G. (2009), 'Factors influencing women's empowerment on microcredit borrowers: a case study in Bangladesh.' p.289

2. Literature Review

As the main target population for the microfinance sector is women, it could be recognized as an important instrument for women's empowerment, but evidences in the field are extremely polarized. One group of researchers has found it as a magic bullet in the pathway of development, whereas another group has identified it as an instrument of aggravating stress on women.

One of the pioneering works in this field was done by Hashemi et. al., (1996), who developed a methodological framework analyzing eight different dimensions of empowerment and found that microcredit leads to significant positive effects on most of the indicators. Evaluating two rural credit programs offered by Grameen Bank and Bangladesh Rural Advancement Committee (BRAC) in Bangladesh, it claimed that simple credit programs also empower women. Challenging the findings of Goetz and Sen Gupta (1996) given below, this study established that women, even those having limited or no control over their loans are more empowered compared to nonmembers. However, a criticism still remains in the study that women from the participant groups might be previously more empowered to join the group. This problem was tackled in a study by Pitt, Khandker and Cartwright (2006) and they also concluded with positive findings. It shows that women's credit has positive and significant effect on most of the indicators of empowerment like greater role in household decision making, greater access to financial and economic resources, having greater social networks, bargaining powers and having greater freedom of mobility. The study has also found that the gender of the loanee has influence on household decision making and the effect of male credit on women's empowerment is generally negative. Another study in Bangladesh by Rahman (2002) also illustrated that microcredit supported economic activities help women in strengthening their own position. She evaluated the impact of credit program offered by Grameen Bank on women's lives. The study found that female borrowers are in a better position in terms of employment and consumption as well as household decision making compared to non-borrowers and wives of male borrowers. Several studies acquiesce (Morduch 1998; Todd 1996) that poor agriculture-based household's access to the (microfinance) programs is associated with substantially lower variation in labour supply and consumption across seasons. Moreover, many borrowers were found to be using loans to purchase land rather than completing their projects; the positive effects of which would reveal strong impacts given more time.

Pakistan has started providing microfinance services since early 1980s. A study by Sulaiman et. al. (2012) has been carried out to assess the effectiveness of microfinance as a viable tool for women empowerment. However, the study has demonstrated a significant positive correlation between microfinance and women empowerment.

Alternatively, many scholars have raised questions about the true credibility of the microcredit programs in empowering women. Goetz and Gupta (1996) say, though poor women are the principal target group of typical income generating credit program, yet many women could not exert enough power within households to use their loan as well as to control their income. Credit received by most of the women is surrendered, to husbands or male relatives of the family.

Several studies have also queried whether microfinance is only focusing on lending and increasing the degree of further exploitation against women in the name of development. But positive results have also been found from Kabeer's² study. The study illustrates that the link between credit and reduced violence was made directly by a number of women. Karim (2008) says that she has examined how Bangladeshi rural women's honor and shame are instrumentally appropriated by microcredit NGOs in the furtherance of their capitalist interests.

Several studies have also claimed that due to dominant patriarchal social structure of Bangladesh, programs that provide credit with minimal training or other supplementary support services do not empower their female participants and may even worsen their situations (Ahmed, 1982; Hasan, 1985; Rahman, 1986; NijeraKori, 1990; Casper, 1994; Goetz and Sen Gupta, 1994). Analysing a number of existing empirical studies and findings, Ali and Hatta (2012) claimed that microfinance itself does not necessarily bring capacity building of poor women clients, rather the researchers have found evidences of increased workload on women due to additional responsibilities for being a microfinance client which imposes additional burden on them. Another researcher Linda Mayoux cautions that though microfinance has the credibility to significantly impact the lives of women by empowering them, it is doubtful and it 'is not an automatic consequence of women's access to savings and credit or group formation per se. In many cases benefits may be marginal and women may even be disempowered' (Mayoux 2005).

Microfinance sector has a long working experience not only in Bangladesh but also all over the world mostly in poor and developing countries. Another comparatively recent study by Gobezie (2010) has evaluated the impact of two microfinance models i.e., group guarantee lending and community managed loan funds on women empowerment of rural Ethiopia. The study has pointed that though microfinance can be a useful tool to increase economic contribution to the household, but for that the borrowers might be doing tradeoff between increased income and their time, health, general well-being.

Although time, health and general well-being have been noted as being compromised by Getaneh and Gobezie (2010), it would be worthwhile to verify from other sources how these same indicators are being optimized by poor women, to improve well-being of their households.

To return to the argument of loss of time, health and well-being, Rahman argues that apart from total earnings, the income and profitability of the activities in which women are involved is likely to enhance the position of these women, their consciousness and aspirations. The benefits from their own toil, that is, by having a say in decision making, by way of control on spending of the money, by enjoying improved family's consumption, etc. women may be considered better off having access to microcredit. Whether they are merely being exploited by new opportunities of income and employment and maneuvered by the inimical structural forces into surrendering their time, health and energy, is yet to be proved. The opportunities that are actively being sought by poor women, belie their being compromised. This vigorous seeking by women, of

² Kabeer, N. (2001) 'Conflicts Over Credit: Re-evaluating the Empowerment Potential of Loans to Women in Rural Bangladesh.' p.72

IGA- exerting tested positive impacts on needy women, have been systematically studied and documented in the last few decades by Rahman and others (Rahman, 1986; Rahman, 2002; Rahman et.al., 2008; FAO/BIDS; Osmani and Khalily 2011). Rahman (2002) further documents that it is the consciousness and aspirations which require to be modified leading to empowerment of women. She also documents that the first initiatives and those who could be called seasoned borrowers, belong mostly to the older age group among women. Older women tend to be married and are more likely to be free from norms of purdah, often associated with a traditional timid and bashful conduct.

At the outset it might be pertinent to observe that findings on early impact and second generation impacts of microcredit may vary, as pointed out by Goetz and Gupta (1996). At the same time, there is also a strong argument that unless the duration of program participation is of considerable length, say for at least two to three years, impacts, especially the beneficial impacts are difficult to perceive.

When assessing empowerment of women, one would have to take into cognizance, the more formidable task of gauging the extent of emancipation women have undergone, in the process. The process of empowerment may take time, but with the change there would be a gradual but certain realization of self-worth and expected potentials that exist. While we may calculate, in monetary terms, the benefits and losses of making credit accessible to women, it is not easy to calculate the indirect empowering traits that permeate the consciousness of women and determine their actions towards pragmatic and positive improvements in family welfare. The problem of using merely quantitative indicators, for assessing women's empowerment, is that it may not yield the desired outcomes as these are not sensitive, nor in-depth in nature to define the distinctive engendered household relationships. For purposes of setting the gender relationships within households and understanding the contextual underpinnings, it would be more pertinent to use in-depth qualitative methods as well as appropriate quantitative analysis.

The broadening of opportunities and incorporating various aspects of choice simultaneously with infusion of resources, capacity to negotiate and ability to sustain the welfare of the home, would be the prime focus of a project like PRIME. Measurements of empowerment must be sensitive to and cognizant of women's inherent changes when provided with resources, productive skills and awareness raising training including education for themselves as well as their children. The rights of women begin from the home where she is able to participate in minor and major decisions of the family. Besides, once taken as an equal or even a more resourceful member, this status could also ensure her proper justice within the confines of the home as well as outside, which is the larger threshold, encompassing the community. This, in turn, is expected to infuse new life into households, thence the community and the nation and thereby create a more positive base for a democratic state.

Women's empowerment could be gleaned from qualitative study of their responses to focused questions aimed specifically to shed light on such subjective aspects, as for eg., How much more decisive, psychologically emboldened, have they become in their outlook on decisions and actions, especially those pertaining to family well-being, or alternatively, their own opinion and understanding about their state of emancipation, as a result of an intervention for IGA

(Income Generating Activity), vis-à-vis their earlier state or even compared to men. Alternatively, queries on impact of credit access and women's empowerment and decision-making role at the community level could also be gleaned.

The balance of intra-household power structure shifts to some extent, as a natural corollary to the changed circumstances, when the docile, less-assertive hands receive credit. Although it might well be resolved by a transfer of income between hands and absorption within the common household resource pool, nonetheless, the woman within the household has been instrumental in accessing the loan, which improves her image. She has also been identified from outside, as representing that household, as a pseudo household head to whom resources are bound to follow for as long as she is willing to participate. Islam notes that findings reveal the situation of female loanee who passed the entire loan to their husband to be better than the wives of male loanee in terms of meals taken, the number and value of clothing purchased and also in terms of medical expenses. Thus, even such passive loans improve the situation of a woman in the family. Moreover, with regard to contraceptive use, it is found that in most other groups, the practice of the shifting use of family planning method among the husband and the wife is predominant. Apart from contraceptive use, GB loan to female members initiate a basic change in the lives of these women, a change which is considered only as a long-term process in the society. This change consists of the active participation in economic activity to a much larger extent than usually done by men (Rahman, 2000).

The question of self-worth is a facet of the individual, and of women in Bangladesh, that needs to be probed in the context of credit accessibility for more than three decades. Assessments of own self-worth is intermittent and context specific, but nonetheless sporadically continuous throughout the woman's life cycle. The Expert Group on "Empowerment of Women Throughout the Life Cycle as a Transformative Strategy for Poverty Eradication", (26-29 Nov. 2001, New Delhi, India), identified two overriding issues that had to be resolved in the present scenario, and these were, (i) Poverty in a Globalizing World at different stages of women's life cycle, and (ii) Transformative Strategies of Empowerment through Institutional and policy change at micro, meso and macro levels and within a right's perspective;

The above mentioned dual focus is intrinsically linked and was expected to produce recommendations directed towards key sectors that formulate and influence policy (like governments, the UN System, inter-government and regional bodies and civil society). There are explicit constraints and compulsive forces which underlie the dual focus referred to. They are: "Women's empowerment being a Protean Concept with many meanings. Hence it is a compulsion to clarify the notion of Women's Empowerment focusing on it's transformative status. It is essential to identify the key elements and principles of empowerment strategy that would ensure that women of all ages have equal access to entitlements and capabilities that would enable them to overcome poverty in a sustainable way. Thus a right's based strategy is needed for women's emancipation and approach to eradicating poverty".

To ensure a right's based strategy for women, regardless of age, to have equal access to entitlements and capabilities by strategizing a transformative and regenerative system, there emerged a grassroots institution, i.e. the microcredit in Bangladesh. If, as Islam says, the

distributive justice approach to development implicitly assumes that welfare for the women would follow automatically from the household, by subsuming the latter as a unit of converging interest, it fails on two counts. Firstly, women's human capital is not optimally developed and secondly, women do not automatically reap the benefits from development. Thus, it becomes imperative to recognize female integration in the development process as a distinct issue, focused primarily on women, so that they may also partake of the improvements, for example, as in microcredit. R I Rahman's findings reiterate the positive impacts of the improvements in women's welfare levels as an outcome of access to credit, which is clearly linked to their enhanced role in household decision-making. This is corroborated by Pitt and Khandker (1998). Goetz and Sen Gupta (1994), however, document that women give up their loans to men. Women, in their opinion, are passive rather than active participants, surrendering their loans to men in exchange for the right to have more to spend for themselves and for their children's clothing and health. This dilemma is not an overwhelming one that would sabotage the empowering traits of women, as has already been discussed above.

Both positive and negative evaluations of microcredit have used households as a unit, where gender inequality is a pervasive phenomenon. Within the household the collaboration, disagreement and conflict that arise, impinge significantly upon the development of the female member and consequently her right to establish her autonomy and independence. The interdependence, of members within the household, created by microcredit creates the platform for intra-household negotiation by targeting women who then grasp it as a tool for furthering their rights to reap the benefits of development. Verily credit, it is often pointed out, offers a plethora of welfare gains for the low-income households where the women increase their home based livelihood functions and also utilize it for improving health, nutrition and education of the household members (Rahman et al., 2008; FAO/BIDS; Goetz and Gupta, 1996). It also establishes these women as independent producers and resource mobilizers for the household. This enhances women's self-confidence and improves their image as critical providers and managers of household chores, elevating their status considerably. Of special significance is that the impact of group based credit programs on poor households usher in more benefits when targeted exclusively towards the women compared to men (Pitt and Khandker, 1998).

Table 1: Past Evidences on Impact of Microfinance Program on Women Empowerment

Author (s)	Source	Impact Variable (main proxy indicators of women's empowerment outcome)	Effect (positive/negative)
Hashemi et. al. (1996)	World Development	Decision making, mobility, public domain, asset holding, reduction in domestic violence	Significant positive effect
Goetz and Sen Gupta (1996)	World Development	Control over loan use, repayment, marketing	A significant percentage of women's loans controlled by male relatives
Kabeer (2000)	World Development	Mobility, social status, self-worth, perceived economic contribution, decision making, assets, education, reduced domestic violence	Considerable positive findings in some indicators

Author (s)	Source	Impact Variable (main proxy indicators of women's empowerment outcome)	Effect (positive/negative)
Rahman (2002)	BIDS	Meals taken, family planning, decision making power, consciousness, aspirations	Significant positive effect
Pitt et. al. (2006)	Economic Development and Cultural Change	Role in household decision making, access to financial and economic resources, social networks, bargaining powers and freedom of mobility	Significant positive impact
Osmani, L. N. K. (2007)	Journal of International Development	Women's Bargaining power (current land ownership of women, value of current non-land assets, if left alone how well she can support herself)	Significant positive effect
Isahaque Ali and Zulkarnain A. Hatta (2012)	Asian Social Work and Policy Review	Qualitative analysis	Minimalist microfinance cannot effectively empower women
Sulaiman et. al. (2012)	African Journal of Business Management	Proportion of women share in total assets, jobs and higher education	Significant positive effect

Source: Author's creation

3. Research Methods

Measuring Women Empowerment as a Latent Variable

Women's empowerment is theoretically multifaceted and methodologically challenging to compute and evaluate. It is such an attribute, which is not directly observable but can be measured indirectly through its effects on observable indicators. Except undertaking any arbitrary approach, we adopt the Item Response Theory (IRT) approach which would provide statistical model for the relationship between item responses and the latent variable, here women empowerment indicators.

The IRT, also called latent trait theory is one of the modern test theories. The focal points of Conventional approach i.e., Classical Test Theory are mainly on internal consistency, test-retest reliability, various forms of validity, and normative data and standardization. Modern test theory or Item Response Theory, is that inherent within item response and focuses on how specific test items function in assessing constructs. The name item response theory is due to the focus of the theory on the item, as opposed to the test-level focus of classical test theory. IRT makes it possible to scale test items for difficulty, to design parallel forms of tests, and to provide for adaptive computerized testing (DeMars, 2010). Item analysis provides a way of measuring the quality of questions - seeing how appropriate they were for the respondents and how well they measured their ability/trait. It also provides a way of re-using items over and over again in different tests with prior knowledge of how they are going to perform; creating a population of questions with known properties (Andrew Ainsworth, Cal State Northridge).

This strategy was formerly undertaken by one revealing study done by Pitt, Khandker and

Cartwright (2006) to construct an unobserved empowerment scores from observed cursors. This means that for each dichotomous variable, we presume that there is an underlying continuous variable, which ranges from $-\infty$ to $+\infty$.

The Rasch test³ is a popular IRT model for dichotomous responses, where the total latent trait score reflects a person's standing on a variable. In this one parameter logistic model, the probability of a positive or correct response to a given assessment item by person n is modeled as a function of an item parameter, δ_i representing item difficulty and a person parameter, β_n representing the person's magnitude of the latent trait. The probability of the outcome $x_{in}=1$ is given by,

$$\Pr(x_{in} = 1|\beta_n) = \frac{e^{\beta_n - \delta_i}}{1 + e^{\beta_n - \delta_i}}$$

Thus the probability of a correct response increases with the person parameter for a given item and decreases with the item difficulty for a given person. The log-odds of a positive or correct response by a person to one item, conditional on a correct or positive response to two or more items is equal to the difference between the item locations. The latent trait or ability score for each person has been generated through application of Conditional Maximum Likelihood (CML) estimation. While for dichotomous responses we have used IRT method and for estimating the combined empowerment score used continuous factor analysis which is drawn by considering all the ten indicators drawn by IRT approach.

We have tried to address all the possible dimensions of changes. The queries are broadly categorized as mentioned above. Regression models are constructed to assess the influence of independent variables on the women empowerment indicators. However, the determinants of the measures of empowerment has been estimated by undertaking an ordinary least square (OLS) estimation adjusting for household characteristics like—years of schooling, age, economic status, occupation, distance from market, distance from road, household demographic status and geographic variation.

The estimation of the cross sectional data has been performed as follows—

$$Y_{iu} = \alpha + \gamma_{iu}Pd + \mu_{iu}Pd^2 + \beta_{iu}X_{iu} + \varepsilon_i$$

Where, Y is the outcome variable which stands for women's mobility, economic security, purchasing power, decision making, not dominant by family, political and legal awareness, social awareness and speaking in public, contribution to income and efficiency, and composite empowerment score for individual ' i ' in upazila ' u '. ' Pd ' stands for the membership duration of PRIME program; X is the vector of household characteristics—which stands for, education level, age, occupation, geographic division. Some of the household characteristics like, female household head, having multiple earning source, primary occupation agriculture or non-agriculture or wage earner are explanatory variables taking binary values of 0-1. γ_{iu} , μ_{iu} , β_{iu} ,

³ <http://www.stata-journal.com/sjpdf.html?articlenum=st0129>

θ_{iu} , β_{iu} are statistics to be estimated. ε_i is random error term that varies among individuals. The outcome variables are measured separately and findings are presented as in “Evaluation of women empowerment” part for key variables.

Another type of cross sectional regression models have also been constructed to assess the influence of independent variables, —participation in PRIME (dummy variable), years of schooling, age, economic status, occupation, distance from market, distance from road, household demographic status and geographic variation on the women empowerment indicators. The estimation of the cross sectional data has been performed as follows—

$$Y_{iu} = \alpha + \gamma_{iu}PP + \beta_{iu}X_{iu} + \varepsilon_i$$

Where, Y is the outcome variable which stands for women's mobility, economic security, purchasing power, decision making, not dominant by family, political and legal awareness, social awareness and speaking in public, contribution to income and efficiency, and composite empowerment score for individual 'i' in upazila 'u'. 'PP' stands for the participation in PRIME program; X is the vector of household characteristics—which stands for, education level, age, occupation, geographic division. Some of the household characteristics like, female household head, having multiple earning source, primary occupation agriculture or non-agriculture or wage earner are explanatory variables taking binary values of 0-1. γ_{iu} , β_{iu} are statistics to be estimated. ε_i is random error term that varies among individuals.

4. Data

PRIME was introduced for broadening of opportunities and incorporating various aspects of choice simultaneously with infusion of resources, capacity to negotiate and ability to sustain the welfare of the home in the rural area in Bangladesh. Therefore, in order to recognize the opportunities to support women's active participation at all levels and to critically analyze the impact of microcredit (here, PRIME) program on them, a household level survey has been conducted based on a detailed module encompassing total 52 queries regarding women empowerment.

Impact of PRIME on women empowerment will be evaluated using the cross-sectional data for the year 2012 comparing between 'Never participants' and 'PRIME participants'. A sub-set of the complete data set is used. This includes 2715 respondents, of which 65 percent were PRIME participating households and 35 percent were never participants.

Respondents of the PRIME participant households are female members of the households, mainly female loanee or female household head, and for the never member households, wife of male household head or female household head. In some cases, in the absence of the member, daughter or mother responded. Widowed, separated or unmarried female adults (15 percent of the sample) if member of MFI or acting as household head were also included in the study and 85 percent were married.

To capture the effect of PRIME program on women empowerment, a wide range of questions

was administered covering information on 10-dimension of women empowerment. They are (1) Mobility, (2) Economic Security, (3) Purchasing Power, (4) Involvement in Major Household Decisions, (5) Involvement in Family Planning Issues, (6) Overall Control Over Loan Use, (7) Participation in Household Income and Efficiency, (8) Freedom From Domination Within Household (9) Leadership and Political Awareness, and (10) Social Awareness and Speaking in Public.

5. Socio-Economic Characteristic of the Comparable Respondent Groups

Socio-economic characteristics, economic development, infrastructural facilities and cultural factors have strong influence on the activities of any household. Respondents of the control group i.e., women from those household who have never participated in any sort of microfinance program were selected, to reflect an equivalent socio-economic group like the respondents of the PRIME participant households.

Both the groups (participant and never member) are similar in terms of family size, tube-well water for drinking etc. They also exhibit quite similar characteristics in terms of years of schooling of the respondents and access to safe drinking water. Though, the treatment group is to some extent better off in terms of the total annual income, household head having multiple earning source, percentage of household using sanitary latrine, access to electricity, having cell phone and having electronic media. Treatment group is also in a slightly better position in terms of distance from markets and roads (Table 2).

Table 2: Characteristics of 5-year PRIME Members and Control group

Sl. No.	Socio economic status (Avg. values)	Never member (0 years)	PRIME member (5 years)
1	Age of MFI membership	0	5
2	Age of respondent	43	37
3	Years of schooling of the respondent	.97	1.42
4	Family Size	4	4
5	Total annual income earned by the household	50254	72475
6	Total land owned by the household	10.26	14.45
7	% of HH head have multiple earning source	32.20	58.09
8	% of HH head's primary occupation is wage earning	50.07	46.32
9	% of HH have electricity access	12.22	17.67
10	% of HH use sanitary latrine	57.92	75.74
11	% of HH use tube-well water for drinking	100	100
12	% of HH have access to electronic media (TV)	1.28	7.35
13	% of HH have cell phone	31.77	56.62
14	Distance from small market place	1.71	1.29
15	Distance from big market place	4.09	3.37
16	Distance from nearest pucca road	1.61	1.13

6. Analysis of Women Empowerment

The findings in the earlier studies were diverse and ranged from extreme positive to extreme negative assertions. However, our descriptive analysis shows that participation in the PRIME increases women's right to access resources, opportunities and better treatment. The following section portrays the proportion of responses of women across groups. The answers are consolidated into ten indicators.

a) Mobility: We evaluated mobility of women using five items. Respondents were asked about a set of places (market, health centers, bank/MFI, outside village) and their frequency of usual movement to those places. Mean latent score on mobility for the PRIME continuing five-year participants was significantly different from that of 'never participants' (Table 3). This suggests that, PRIME participants have overall higher mobility. In all the five items, the PRIME participants have higher mobility. The mean difference is significant for four out of five items and those are 'usually go to health center', 'usually go to bank/MFI' and 'usually go outside the village' and 'frequency of movement'. These are quite expected because member-borrowers are required to go to bank once at least at the time of getting the loan amount. Our econometric results show that duration of memberships and age of the member explains positively the mobility of the participants (Table 12). One would expect collinearity between these two explanatory variables, but there was no presence of the collinearity as the variables were significant and had the same signs. The results suggest that older persons have more mobility.

Table 3: Descriptive Statistics: Mobility Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5years PRIME Member (%)	Proportion Test
1	Usually go to market	35	38	Not significant
2	Usually go to health center	94	98	significant at 10% level
3	Usually go to bank/MFI	13	97	significant at 1% level
4	Usually go to outside the village (except parent's place)	90	97	significant at 1% level
5	Usually went to the above places more than 20 times in last year	37	52	significant at 5% level
	Latent score (avg.) for Mobility	3.15	4.62	significant at 1% level

b) Financial Security: The respondents were asked about a set of questions that reflected upon their income and asset status, hence their individual economic security. Overall, as the significant latent score of the five items shows, PRIME participants have higher financial and economic security (Table 4). Although there was no statistical difference between the participant and control groups on ownership of assets and authority to spend own income, the PRIME participants have higher authority on spending own savings and coping with emergency situation. The important gain for the PRIME participants was the ability to husband's money

retained with her. It may be reciprocal behavior for the spouse as his wife allowed him to use her loan amount.

Table 4: Economic Security Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5years PRIME Member (%)	Proportion Test
1	Having ownership of any house/ homestead land/any productive asset (part or full)	13	9	Not significant
2	Have the authority to spend own income (in part or full) without husband's/other family member's permission	36	32	Not significant
3	Have the authority to spend own savings independently	22	64	significant at 1% level
4	Can manage emergency money (by borrowing/selling assets/ from savings) if needed	80	88	significant at 5% level
5	Can spend the money kept by her husband with her	78	86	significant at 10% level
	Latent score (avg.) for Economic Security	1.92	2.55	significant at 1% level

Older members, defined in terms of age and duration of the members of PRIME have greater authority to spend their own savings as well as spending money of the spouses (Table 12). Similarly, occupations have also contributed positively and as such denote authority to spend.

c) Purchasing Power: The indicator, ability to make purchases engross queries related to the regular purchases of any household, for example, items for daily food preparation, toiletries, items for children, utensils, clothing for self and for family members etc. In most of the items (except one) women from PRIME participant households reported higher autonomy compared to the women from never member households (Table 5). But the mean difference except for two items were statistically insignificant. This suggests that in general women possess the ability to purchase household utensils and clothes of the family members. These are more family specific, rather spouse specific purchases that benefit the members of the family.

Table 5: Purchasing Power Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5 years PRIME Member (%)	Proportion Test
1	Usually purchases small items for daily food preparation (cooking oil, spices, salt, rice, fish, meat)	45	39	Not significant
2	Usually purchases toiletries or cosmetics (hair oil/soap/bangles/ hair band) for own use	60	64	Not significant
3	Usually purchases ice creams, sweets, candies or cookies for her children/family	68	76	significant at 5% level

Sl. no.	Variables	If Never Member (control group) (%)	If 5 years PRIME Member (%)	Proportion Test
4	Usually purchases utensils, pots, pans for the household	65	74	significant at 10% level
5	Usually purchases clothing for her children/family	41	47	Not significant
6	Usually purchases buy saris/ clothing for herself	42	46	Not significant
	Latent score (avg.) for Purchasing Power	1.67	1.87	Not significant

Although our descriptive results did not show any significant difference in purchase decisions, the econometric estimates show that female headed households and age of the members positively explain purchase decisions of the PRIME members (Table 12). Similarly, it holds for the household head whose occupation is self-employment.

d) Participation in Major Investment Decisions: The queries regarding decision making involved whether women of those households participated in the decision making process for repair or construction of house, land purchase or sell, education or matrimony of children, livestock purchase or sell etc. In all the issues, a considerable proportion of women from the PRIME participant households reported some sort of involvement (discussing with other family members or alone), which is higher than the never member group. Though the difference of the consolidated score of the indicator has not turned out to be significant (Table 6). These results also hold in our econometric results with the exception that female headed households are more likely to make the major investment decisions on their own. (Table 12)

Table 6: Decision Making Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5 years PRIME Member (%)	Proportion Test
1	Participated in deciding of repair/construction of houses	85	87	Not Significant
2	Participated in deciding about purchase/sell of livestock/fowl	87	88	Not Significant
3	Participated in deciding about land related matters (purchase/sell/giving or taking lease etc.)	85	88	Not Significant
4	Participated in deciding about education/marriage of her children's	92	94	Not Significant
	Latent score (avg.) for Decision Making	3.84	3.92	Not Significant

e) Involvement in Family Planning Issues: This indicator drawn in questions to appraise women's control over family planning issues. On average more than 80 percent of the women respondents from both the groups reported that they did have some kind of influence or control over the issues related to birth control methods, family planning issues or number of children to

be taken. The difference of the latent scores among the two groups was not statistically significant. It was quite expected, as there is no element of family planning awareness building program under the PRIME.

f) Control Over the Overall Loan Use or Manage: It has been quite evident from the previous studies that the micro finance participants were involved in the process of loan use by their spouses. In this study also, we have found that spouse borrowers were involved in the total loan use process. It is expected as the borrower women assume the liability of repayment of installments and loan. The difference of the overall latent score for the loan use among the two groups was statistically significant (Table 7). Overwhelming majority (95 percent members) of the women-borrowers reported participation in the loan use process, and only 5 percent reported no control.

The econometric results show that female headed households are involved more in loan use process. Members living in remote villages from the MFIs are less likely to be involved in the process. Higher membership duration in PRIME program also poses higher control over loan manage compared to the never member group, though the result is not significant (Table 12).

Table 7: Control Over the Overall Loan Use/Manage Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5 years PRIME Member (%)	Proportion Test
1	Participated in deciding about loan funded (MFI for members & bank/informal for non-members) economic activities (inside homestead)	82	88	Not significant
2	Participated in deciding about loan(MFI for members & bank/ informal for non-members) funded economic activities (outside homestead)	77	78	Not significant
3	Participated in deciding about marketing of loan (MFI for members & bank/informal for non-members) funded enterprise products	76	77	Not significant
4	Participated in keeping accounting record of the income (using loan amount)	81	85	Not significant
5	Have control over the entire process of loan use	83	95	significant at 5% level
6	Participated in deciding about borrowing money from informal sources	76	74	Not significant
	Latent score (avg.) for Control over the overall loan use/ manage	2.97	3.35	significant at 10% level

g) Participation in Income Generating and Training Activities: Efficient participation of women in generating household income can improve food security, nutrition, health and overall family welfare. This can also be considered as an important proxy variable clarifying impact of microcredit program on women empowerment. Moreover, participation in any training program offered by MFIs or other organizations adds extra advantage of efficiency of the household, which may contribute to family's income earning activities and also raise women's self-esteem. PRIME as a credit plus program offers various training packages for its clients. In our study, 33% respondents who are PRIME members reported having some sort of training, which proportion is negligible (only 2%) for the never members. 88% women from PRIME participant and 85% from never member group reported that they have participation in the income generating activities (IGA) of the household (Table 8).

In the econometric analysis, female headed households and the family whose head is engaged in either self-employment or wage employment do participate in income generating and training activities. This is also an indication of greater mobility of PRIME participants. Membership duration in PRIME does not positively explain higher participation in income generating activities, though the results are not significant. Older PRIME members are likely to participate in income generating and training activities. (Table 12)

Table 8: Participation in Household Income/Efficiency Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5 years PRIME Member (%)	Proportion Test
1	Participated in the income generating/financial activities of the household	85	88	significant at 5% level
2	Participated in any training program (offered by MFI for members & others for non-members)	2	33	significant at 1% level
	Latent score (avg.) for Participation in household income/efficiency	2.22	2.62	Significant at 5% level

h) Freedom from Domination within Household: This indicator is crucial for women's ability to make choices and capacity to gain self esteem. A majority (100 percent from PRIME participant and 97 percent from never member group) of women from both the groups reported that they were never forced to give money or jewelry to their husband (Table 9). But a small percentage (around 15 percent) of the respondents, both PRIME participants and never participants, reported that they were prevented from working outside home. Similarly, a minority (4% from both groups) of them said they were forced by their husbands or family members to borrow money. Insignificant results were also supported by econometric analysis (Table 12). But we found that the households living in remote areas are less likely to enjoy freedom from domination at the household level.

Table 9: Domination Within Household Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5 years PRIME Member (%)	Proportion Test
1	Prevented from going to meeting or group meeting	12	12	Not significant
2	Forced to give money/jewelry to their husband against their will	3	0	significant at 10% level
3	Prevented from visiting their natal home	7.47	6.62	Not significant
4	Prevented from working outside home	15	15	Not significant
5	Forced to borrow money	4	4	Not significant
	Latent score (avg.) for Freedom from domination within household	3.37	3.33	Not significant

i) Leadership/Political Awareness: Although overwhelming majority (over 95 percent) of both the groups reported to have cast votes in the last election, their voting decisions were not free of any influence of their spouses. More than 48% from never member group and 41% from PRIME participant group reported that their spouses convinced them to vote for specific candidate. This is contrary to what was originally perceived that women are more empowered through their participation in micro finance (Table 10). Insignificant difference in the leadership behavior of both PRIME participants and 'never participants' could be the spill-over effect of 'micro finance' participants. It can also be the outcome of overall environment of area. The insignificant differences are also enforced in our econometric analysis. Female-headed households are less likely to be involved in political process. (Table 12)

Table 10: Leadership and Political Awareness Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5 years PRIME Member (%)	Proportion Test
1	Cast her vote in the last election	96	95	Not significant
2	Cast her vote in the last election without her husband telling her who to vote	52	59	Not significant
3	Campaigned for any political candidate	4	9	Significant at 1% level
4	Have you ever contested in any member election	0	0	Not significant
5	Latent score (avg.) for Leadership & Political Awareness	4.64	5.17	Not significant

j) Social Awareness and Speaking in Public: Some queries were posed to the respondents to get a glimpse of their responsiveness against any oppressive activities practiced in the society. Women endure more suppression due to conventional patriarchal norms in the everyday life. Dowry, early marriage, wife beating, unfair wages, rape are still prevalent, mostly in the poverty stricken group. A very major percentage (around ninety three percent) of the

households in both the groups thought giving or receiving dowry was bad (Table 11). The PRIME participants were more aware about the legal process of divorce. Similarly, they engage in protest against any incidence of violence against women within the society or any issue confronting their children. The PRIME participants are more socially engaged because of their platform of weekly group meeting. Although 'never participants' are not organized group, they are also aware of social issues. It may be spill-over effect of the social engagement of the PRIME participants. Our econometric results show that duration of membership and age are the positive determinants of higher pace of engagement of the PRIME participants in social issues and violence against women (Table 12). Overall latent score of engagement in social issues was significantly different.

Table 11: Social Awareness and Speaking in Public Across Treatment and Control Groups

Sl. no.	Variables	If Never Member (control group) (%)	If 5 years PRIME Member (%)	Proportion Test
1	Don't think giving/taking dowry is bad	7	8	Not significant
2	Knows the legal process of divorce	13	29	significant at 1% level
3	Protested any incidence of violence within the society (like wife beating/unfair wages/man abandoning his wife)	30	35	Not significant
4	Usually participates in the discussions about social issues (like, child marriage/ rape/eve-teasing/education for all/family planning)	18	25	significant at 10% level
5	Usually participates in the discussions about social issues in the group meetings (for non-member any meeting)	13	26	significant at 1% level
6	Latent score (avg.) for Social awareness and speaking in public	2.43	2.92	significant at 1% level

Table 12: Effects of PRIME Membership Duration on Ten Women Empowerment Indicators

Sl. no.	Determinants	Mobility	Economic Security	Ability to make purchases	Social awareness & speaking in public	Freedom from domination within household	Control over the overall loan use/ manage	Involvement in major household decisions	Involvement in family planning issues	Participation in household income/ efficiency	Leadership/ Political awareness	Combined empowerment score
1	PRIME membership duration	.40***	.20***	.08	.16**	.03	.12	.06	.01	-.13	.03	.33***
2	PRIME membership duration square	-.04***	-.02***	-.004	-.02**	-.01	-.04	-.006	.004	.04	.003	-.03*
3	Female headed household	.92***	1.60***	2.02***	.17*	.10*	.89***	.36***	-.39**	.53***	-1.53***	2.00***
4	Age of the respondent	.04***	.04***	.05***	.02**	.02	.04	.01	.03***	.04*	.03	.07***
5	Age of the respondent square	-.0005***	-.0004***	-.001***	-.0003***	-.0001	-.0006**	-.0001	-.001***	-.0004*	-.0002	-.002***
6	Years of schooling of the respondent	-.001	-.01	.01	.02***	-.003	.004	-.0001	.02*	-.02	.02	.007
7	HH head's primary occupation is self-employment in agriculture	-.09	.30*	-.04	.14	-.16	.31	-.12	.26*	.12	.07	.12
8	HH head's primary occupation is self-employment in non-agriculture	.26*	.45***	.58**	.12	-.06	-.22	-.13	.47***	.51**	.24	.58***
9	HH head's primary occupation is wage earning	.10	.30**	.37	.02	-.03	-.23	-.09	.51**	.44**	.52*	.35*
10	HH head have multiple earning source	.02	.30*	-.06	.23***	-.09*	.07	.06	-.08*	.02	.02	.13*
11	Distance from nearest pucca-road	-.01	.0004	.07	.08***	-.05**	-.14*	-.04	.02	.02	-.02	.02
12	Distance from small market place	-.004	.01	-.02	-.02	.03*	.05	-.05	.001	.08	-.06	-.001
13	Distance from big market place	.02	-.02	.02	.004	-.01	.01	-.003	.02	-.03	-.09	-.01
14	Distance from nearest MF branch	-.03*	-.04*	-.05*	-.06**	.01	.04	-.002	-.03	-.01	.17**	-.06*

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.10. Model adjusted for age, education, household demographic status, geographic division, income, occupation, distance from market & road, and, upazilas. (Regression analysis has also been done without the variables-- years of schooling and different occupational characteristics of the households and results remain the same as shown in the above table. So we have considered the variables as explanatory variables.)

6.1 Evaluation of Women Empowerment across PRIME Participant and Never Participant

To get a better understanding another cross sectional regression analysis has been done, where a dummy variable, i.e., participation in PRIME vs never member has been included. Results show that compared to the women from non participant group, PRIME participant households are significantly in a better position in terms of most of the indicators, namely mobility, economic security, purchasing power, social awareness and speaking in public and control over the loan use/manage. Participation in the program also positively and significantly affects the composite empowerment indicator that covers all the queries asked to the respondents. The magnitudes of the estimators are shown in the following table (Table 13). Though the mean difference of one indicator (e.g., purchasing power) among the five years PRIME participant group and control group are not significant but the results of the econometric analysis are showing significant positive association of participation in PRIME program. This is because the marginal effect of program participation on the latent score is significantly positive. It is evident that wider social and economic impact can occur through not only participation in economic activities but also through participation in social and political processes. In this study, program participation doesn't have any improvement on two indicators i.e., political awareness, involvement in family planning issues, though the results are not significant. This may be the due to the spillover effect of the PRIME participant. It can also be the outcome of overall environment of the area. The female headed (mainly widow, separated) households positively explain mobility, economic security, purchasing power, involvement in household decision making, freedom from domination. The probable reason for this may be, in the absence of male members in the family, they usually do most of the tasks (e.g., economic activities, purchasing goods etc.) by themselves. Age of the respondent is more likely to have positive impact on mobility, economic security, participation in income generating and training activities, social awareness, freedom from domination, control over loan and involvement in family planning issues.

Table 13: Effects of Participation in PRIME on Ten Women Empowerment Indicators

Sl. no.	Determinants	Mobility	Economic Security	Ability to make purchases	Social awareness & speaking in public	Freedom from domination within household	Control over the overall loan use/ manage	Involvement in major household decisions	Involvement in family planning issues	Participation in household income/ efficiency	Leadership/ Political awareness	Combined empowerment score
1	PRIME membership duration	0.71***	0.34***	0.18*	0.24***	0.04	0.25**	0.09	-0.03	0.09	0.005	0.63***
2	Female headed household	0.90***	1.60***	2.00***	0.17**	0.11*	0.88***	0.35***	-0.39***	0.52***	-1.55***	1.98***
3	Age of the respondent	0.05***	0.05***	0.05***	0.03**	0.02*	0.05*	0.01	0.034**	0.04**	0.03	0.08***
4	Age of the respondent square	-0.0011***	-0.0004**	-0.001*	-0.0003**	-0.0001	-0.0011**	-0.0002	-0.001***	-0.0004**	-0.0003	-0.001***
5	Years of schooling of the respondent	-0.001	-0.006	0.01	0.03**	-0.003	0.005	0.00004	0.02*	-0.02	0.02	0.01
6	HH head's primary occupation is self-employment in agriculture	-0.10	0.30**	0.04	0.13	-0.16*	-0.32	-0.12	0.27*	0.12	0.07	0.12
7	HH head's primary occupation is self-employment in non-agriculture	0.25**	0.45***	0.58***	0.12	-0.07	-0.21	-0.14	0.48***	0.51***	0.25	0.57***
8	HH head's primary occupation is wage earning	0.10	0.30***	0.37**	0.02	-0.03	-0.23	-0.09	0.52***	0.45***	0.53*	0.35**
9	HH head have multiple earning source	0.04	0.11*	-0.05	0.22***	-0.08**	0.09	0.07	-0.08	0.04	0.03	0.15*
10	Distance from nearest pucca-road	0.003	0.001	0.07*	0.08**	-0.05**	-0.14**	-0.04	0.02	0.02	-0.03	0.03
11	Distance from small market place	-0.007	0.01	-0.02	-0.03	0.03*	0.05	-0.06*	0.002	0.09**	-0.05	-0.004
12	Distance from big market place	0.02	-0.02	0.02	0.004	-0.01	0.012	-0.004	0.02	-0.03	-0.09*	0.001
13	Distance from nearest MFI branch	-0.03	-0.05**	-0.06*	-0.06**	0.02	0.05	-0.002	-0.04*	-0.004	0.18***	-0.06**

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.10. Model adjusted for age, education, household demographic status, geographic division, income, occupation, distance from market & road, and, upazilas. (Regression analysis has also been done without the variables-- years of schooling and different occupational characteristics of the households and results remain the same as shown in the above table. So we have considered the variables as explanatory variables.

7. Socio-economic Status across Empowerment Scores

Among the program participant households it is crucial to check who are still at the lowest level and who are showing improvement in terms of latent empowerment score. In order to validate we have classified the respondents into three categories with respect to their obtained scores (ie, bottom 33%, middle 33% and top 33%). There are not much systematic differences in all the socio-economic characteristics that we considered in understanding the determinants of variation in women empowerment of PRIME members. From the descriptive statistics as reported in, we clearly observe that more empowered PRIME participants have higher duration of memberships; they are relatively older, and have less years of schooling (Table 14). Although they have fewer years of schooling, they are relatively less engaged in wage employment. The most important factor that may have influenced higher level of women empowerment is access to different infrastructure. These households live near the pucca road and have better access to market.

Table 14: Determinants of Average Scores of Overall Empowerment

Sl. no.	Socio economic status (Avg. values)	Overall Empowerment Score		
		Bottom 33%	Middle 33%	Top 33%
1	Age of MFI membership	1.17	1.43	1.72
2	Age of respondent	38	38	41
3	Years of schooling of the respondent	1.37	1.29	1.22
4	Family Size	4	4	4
5	Total annual income	63307	59611	61103
6	Total land owned by the household	12	10	10
7	% of HH with multiple earning sources	38	44	36
8	% of HH head with wage earning	52	50	46
9	% of HH have electricity access	16.34	17.81	14.36
10	% of HH use sanitary latrine	62.36	63.94	65.19
11	% of HH use tube-well drinking water	99.78	100	99.89
12	% of HH having access to TV	2.32	3.32	3.43
13	% of HH having cell phone	43.93	46.24	40.11
14	Distance from small market place	.44km	.46km	.40km
15	Distance from big market place	3.76km	3.75km	3.37km
16	Distance from nearest pucca road	1.36km	1.05km	.98km

8. Does Empowerment Score Vary By Participation Status?

So far the analysis has been limited to comparison among two groups i.e., PRIME participants and never member groups to find out the impact of PRIME program. But there are two types of participants into the PRIME participant groups, i.e., PRIME Credit Plus (PCP) and PRIME Credit Only groups. Households belong to PCP group means, some of the households get various income generating training or technical assistance along with microcredit under PRIME

program and PCO stands for receiving only microcredit. Therefore, it is important to shed light on the comparative analysis of those groups.

Our econometric results illustrate that PRIME Credit Plus program participants are in a better position compared to credit only group (Table 15). The coefficients of six among the ten indicators have higher significant positive change for being participants in PRIME credit plus program.

Table 15: Effects of Participation in PRIME Credit Plus and PRIME Credit Only Program on Ten Women Empowerment Indicators

Determinants	PRIME Credit Plus (dummy)	PRIME Credit Only (dummy)	Female headed household
Mobility	.99***	.65***	.94***
Economic Security	.50***	.28***	1.61***
Ability to make purchases	.29**	.17*	2***
Social awareness & speaking in public	.22***	.24**	.15*
Freedom from domination within household	.11*	.003	.11*
Control over the overall loan use/manage	.35**	.19	.89***
Involvement in major household decisions	.10	.07	.39***
Involvement in family planning issues	-.02	-.05	.36**
Participation in household income generating and training activities	.49***	-.06	.57***
Leadership/ Political awareness	-.05	.006	-1.4*
Combined empowerment score	.93***	.54***	2***

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.10. Model adjusted for age, education, household demographic status, geographic division, income, occupation, distance from market & road, and, upazilas.

The combined empowerment score is higher for the PRIME credit plus households than the PRIME credit only households. But certainly, as evident from the above table, female headed households are more empowered considering the dimensions and the indicators. As it is evident that female headed households are more vulnerable and their exit rate from the market is relatively higher, therefore, a normal question arise “are they truly empowered and able to maintain themselves independently”. A probable reason is that most of the female head of the households are widow or separated. Therefore, in the absence of male member in the family they have to do all the tasks by themselves and therefore, the empowerment score is high for them.

9. Discussion and Policy Implications

Women are not just a homogeneous group across different geographical locations, socio-cultural context and economic status. Thus empowering them is a vast and very slow process to be achieved. Moreover, true empowerment depends on so many factors, ranging from the household to community level, that a single approach, having almost all the instrument

of development may not succeed by hundred percent or even be totally sustained. Problems need to be removed from the root. However, development program like microfinance or any long term strategy can slowly play a significant role. ***Still, it is not rational to consider this as the only way out for all the tribulations of this kind.*** Monetary empowerment can be a route for improving certain critical elements at the household and family levels; it is certainly not the only panacea for the plethora of issues cutting across the societal and economic stratum. It cannot completely vouch for the individual level emancipation, which is also an integral part of empowerment.

A contextual milieu is needed whereby people's choices for improving their ability to expand their routes to new livelihoods and better incomes would be possible. When Kabeer denotes people's innate strength as "the expansion of freedom of choice and action to shape one's life", she is also alluding to the plethora of barriers and structurally inbuilt constraints which effectively bar men and especially women, from accessing life choices. Kabeer's strategy (2001) is to define real empowerment as 'the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them'. Thus, when the poor or extreme poor have the capacity, which could be anything from economic resources to voice and agency, to induce change in the institutions that concern their lives, we could claim to have achieved some sort of enabling environment for their emancipation, that would render them empowered.

The social-structural milieu dictated that women be viewed as wives and mothers, relegated to invisible household activities but not direct participants of economic production. Basically they were responsible for works which were more often than not, unpaid. And as a result they were implicitly left out from public and paid spheres. This was not only detrimental to the household but also an additional burden on the men who were failing to procure adequate productive work for sustaining the family income and health and nutrition. With the advent of time, the continued persistence of women's unaccounted work was creating a vacuum in the GDP accounting. Without the recognition of women's contribution to productive and reproductive activities especially at the household level, the national accounts were truncated and women's unseen contribution remained baffling to policy makers.

Women's empowerment, particularly by the United Nations Population Information Network (POPIN), is viewed as being underscored by five main characteristics, which are: women's sense of self-worth, their right to have access to opportunities and resources, their right to have the power to control their own lives, both within and outside the home, their right to have and to determine choices and their ability to influence the direction of social changes to create a better social and economic order, at both the national and international level. When these changes are to be tracked and these impacts are gauged, it becomes a deliberate and multifaceted progression to be accredited. Nonetheless, it can be recognized by proxy terms, such as economic security, mobility, purchasing power, political activism, minor/major decision making, control over the entire process of loan use, awareness, freedom from domination and so on.

Within this context, where contextual impediments to peoples' choices were rampant, where the poor especially the women had no voice and agency, PRIME (Programmed Initiatives for

Monga Eradication) a project of Palli Karma Shahayak Foundation (PKSF), was administered through sixteen Partner Organizations (POs). The prime objective of this project was aimed at helping the ultra-poor households of Greater Rangpur, who consistently suffered food uncertainty and seasonal starvation. The geography of this area is flat, intricately criss-crossed by major rivers, and yearly swamped by water, i.e., during October and November, which are the pre-harvest months. As the majority of people were engaged in agricultural wage, lack of wage employment during this period resulted in persistent and continuing lack of food. The effect of inundation rendered the primary livelihood of agriculture and wage labour, scarce. This adverse situation was intensely compromised by dearth of remunerated activity due to lack of industrialization, insufficient manufacturing and/or services. The presence of IGA activities could have absorbed the excess, unskilled labour that was available, and their pecuniary state would have improved.

In the year 2006, a pilot project of PRIME was introduced to cater to ultra-poor households, and to ensure their access to financial services. A phenomenon termed “Monga” or “Scarcity” was a recurrent occurrence in this area. PRIME aimed to help people to cope with shocks, through a short-term assistance, strategically supported through financial and non-financial instruments like crisis loans and work related accessibility to food. There was an attempt through PRIME, to make available, diversification of livelihoods and varied income sources within the households so as to ensure that households’ food insecurity, during the lean-harvesting season, would remain minimum or non-existent. This was achieved by making reachable, flexible microcredit, micro-savings and training on income generating activities for the target group members. Additional support is in the form of long-term supportive measures, both financial and non-financial, like the provision of health services and medicines to the members.

In an attempt to gauge the situation and decipher the links of income interjections in the form of microcredit combined with a holistic approach of PRIME, a component on women’s empowerment was introduced. It was opined that the overall performance of PRIME could be further enhanced if an analysis on the women is done with the aim of identifying the lacunae and high-lighting the successes. The exercise for reviewing women empowerment revolved around certain key indicators. The queries are broadly categorized under 10 categories namely, (1) Mobility, (2) Economic Security, (3) Purchasing Power, (4) Involvement in Major Household Decisions, (5) Involvement in Family Planning issues, (6) Overall Control Over Loan Use, (7) Participation in Household Income and Efficiency, (8) Freedom From Domination Within Household (9) Leadership and Political Awareness, and (10) Social Awareness and Speaking in Public.

Those who were included in the survey mainly comprised of female members of the household, primarily female loanee or wife of male loanee or female household head for the microcredit program participant households. Significant improvement in financial security of women is consistent with the overall findings of PRIME program i.e., in the past four rounds where findings reveal that PRIME participant households are in improved position in terms of income, expenditure, asset accumulation and livestock than non-participant households.

This empirical study reveals that greater access to PRIME increases the overall empowerment indicator of women. The result is consistent with the other empirical studies, like, Pitt, Khandker and Cartwright (2006), Osmani, L. N. K., (2007), Hashemi et. al., (1996). In our study, we found that, PRIME participating women members are more empowered than 'never participants' group. Although there was no direct intervention for empowering women in the PRIME design, the participation in the program itself improves the environment because of participation in economic activities and social group meetings. Our results corroborate the facts that Women from PRIME participant group are more empowered; they are more engaged in economic activities; they are more engaged in social violence against women in the society; they participate in training. Finally, they have higher mobility, economic security, purchasing power and better control over borrowed amount. This is probably be the outcome of economic conditions of the families. We thought that PRIME women members would be more involved in the political process. That has not happened. There is no significant difference between 'participant' and 'never participant' groups. Participation in micro finance program has improved their status in the family. It is true that 'women empowerment' requires long process; economic emancipation is one intervention in the process. The PRIME credit plus households are more empowered than the PRIME credit only households.

Women's position in relation to men must also be assessed when interventions are planned and implemented. Effective training on different activities and gender education can play a vital role here. Thus it should incorporate specific strategy for women to harness the greatest benefit for the society and ensure true women empowerment.

References

Ali, I., & Hatta, Z. A. (2012). Women's Empowerment or Disempowerment through Microfinance: Evidence from Bangladesh. *Asian Social Work and Policy Review*, 6(2), 111-121.

Ainsworth, A. T. (2012). Statistics Workshop: Introduction to Item Response Theory. Annual Western Psychological Association Conference, San Francisco, CA. Chair: Jodie Ullman, CSU San Bernardino.

Ahmed, S. U. (1982). Entrepreneurship and Economic Development, Dhaka University Studies, Part-C, Vol. 3(1), 41-53

Bound, J., Jaeger, D. A., & Baker, R. M. (1995). Problems with Instrumental Variables Estimation When the Correlation between the Instruments and the Endogenous Explanatory Variable is Weak. *Journal of the American statistical association*, 90(430), 443-450.

Casper, K. L., (1994). The Women and Children's Health Program and Gender Equity in Banchte Shekha. Evaluation Report prepared for Ford Foundation, NORAD, and The Asia Foundation Donor Consortium (Dhaka: The Asia Foundation, March, 1994)

DeMars, C. (2010). Item Response Theory. Oxford University Press.

ESiM, S. (2001). Empowerment of Women Throughout The Life Cycle As A Transformative Strategy For Poverty Eradication. United Nations No. EGM/Pov/2001/EP, 1.

Gobezie, G. (2010). Empowerment of Women in Rural Ethiopia: A Review of Two Microfinance Models. *PRAXIS The Fletcher Journal of Human Security*, XXV, 23-37.

Goetz, A. M., & Gupta, R. S. (1996). Who Takes the Credit? Gender, Power, and Control Over Loan Use in Rural credit Programs in Bangladesh. *World Development*, 24(1), 45-63.

Goetz, A. M., & Sen Gupta, R. (1994). Who Takes the Credit? Gender, Power and Control over Loan use in Rural Credit Programmes In Bangladesh.

Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural Credit Programs and Women's Empowerment in Bangladesh. *World Development*, 24(4), 635-653.

Ali, I., & Hatta, Z. A. (2012). Women's Empowerment or Disempowerment through Microfinance: Evidence from Bangladesh. *Asian Social Work and Policy Review*, 6(2), 111-121.

Kabeer, N. (2001). Conflicts over Credit: Re-evaluating the Empowerment Potential of Loans to Women in Rural Bangladesh. *World development*, 29(1), 63-84.

Kabeer, N. (2001). Reflections on the Measurement of Women's Empowerment in Discussing Women's Empowerment-Theory and practice, Sida Studies No. 3. Stockholm: Novum Grafiska AB.

Mayoux, L. (2005). Women's empowerment through sustainable micro-finance: Rethinking Discussion Draft. Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.121.2948&rep=rep1&type=pdf> Accessed Date October 13, 2015

Karim, L. (2008). Demystifying Microcredit The Grameen Bank, NGOs, and Neoliberalism in Bangladesh. *Cultural Dynamics*, 20(1), 5-29.

Moghadam, V. M. (2005). The Feminization of Poverty and Women's Human Rights. Gender Equality and Development Section. SHS Papers in Women's Studies/Gender Research No. 2. Division of Human Rights, Social and Human Sciences Sector.

Morduch, J. (1998). Does Microfinance Really Help the Poor?: New Evidence from Flagship Programs in Bangladesh. Research Program in Development Studies, Woodrow School of Public and International Affairs.

Narayan-Parker, D. (Ed.). (2002). Empowerment and Poverty Reduction: A Sourcebook. World Bank Publications.

Osmani, L. N. K. (2007). A Breakthrough in Women's Bargaining Power: The Impact of Microcredit. *Journal of International Development*, 19(5), 695-716.

Osmani, S. R., & Khalily, M. A. (2011). Readings in Microfinance: Reach and Impact. Institute of Microfinance and University Press Limited.

Pitt, M. M., Khandker, S. R., & Cartwright, J. (2006). Empowering Women with Microfinance: Evidence from Bangladesh. *Economic Development and Cultural Change*, 54(4), 791-831.

Pitt, M. M., & Khandker, S. R. (1998). The Impact of Group-based Credit Programs on Poor Households in Bangladesh: Does the Gender of Participants Matter?. *Journal of political economy*, 106(5), 958-996.

Rahman, R. I., Begum, A., & Bhuyan, H. R. (2009). Impact of Paid Employment and Self-Employment on Income and Prospects of Household Food Security. A Research conducted by Bangladesh Institute of Development Studies under NFPCSP of GoB and FAO, Dhaka.

Rahman, R. I., Begum, A., and Bhuyan, H. R., (2012). BIDS Monograph Number 22. Household Food Insecurity: Economic Access and Social Factors.

Rahman, R. I. (2000). Poverty Alleviation and Empowerment through Microfinance: Two Decades of Experience in Bangladesh (No. 20). Bangladesh Institute of Development Studies.

Rahman, R. I. (1986). Impact of Grameen Bank on the Situation of Poor Rural Women (No. 1). Bangladesh Institute of Development Studies, Agriculture and Rural Development Division.

Rahman, S., Junankar, P. N., & Mallik, G. (2009). Factors Influencing Women's Empowerment on Microcredit Borrowers: A Case Study in Bangladesh. *Journal of the Asia Pacific Economy*, 14(3), 287-303.

Muhammad, S. D., Shaheen, G., Naqvi, S. I. H., & Zehra, S. (2012). Women Empowerment and Microfinance: A case study of Pakistan. *African Journal of Business Management*, 6(22), 6497-6503.

Todd, H. (1996). Women at the Center: Grameen Bank Borrowers After One Decade.

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