



## MICROCREDIT COULD INFLUENCE EMPOWERMENT OF WOMEN. A QUANTITATIVE STUDY IN CHITTAGONG, BANGLADESH



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### ABSTRACT

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This paper will explore some of the ways in which microcredit have improved the empowerment of women in Chittagong, Bangladesh in terms of change in annual family income, change in health conditions change in decision-making ability and change in purchasing capacity. This was a quantitative research and using a survey method. Data was collected from a sample of 113 borrowers of microcredit loans. The AMOS software developed for analyzing the Structure Equation Modeling (SEM) and SPSS was used. The findings revealed that decision making capacity and family income have a significant impact towards empowerment of women. The findings supported the results from some earlier studies and also bring out several new ideas such as the importance of family income. The findings have significantly contributed to the advancement of knowledge in the empowerment of women borrowers in Chittagong, Bangladesh. The implications were in the areas of encouraging poor women to increase their self-esteem and self-worth, and thereby empower them. It is recommended that microcredit lending be continued and suitable policies and legislation be implemented to ensure successful implementation. The results of this study will add to the current body of knowledge as well as assist in creating foundational solutions to ensure successful outcomes arising from microcredit loans in Bangladesh.

**Contribution/ Originality:** The paper's primary contribution is finding that decision making capacity and change in family income of rural women have a significant impact on empowerment of women in Bangladesh. This paper argues that despite the inconsistencies in research, microcredit can be a useful empowerment tool and still continues to play a vital role in Bangladesh.

### 1. INTRODUCTION

The Gross National Income (GNI) of Bangladesh in 2016 was Tk 18,314,994 million (\$2,343 million) and the population was 159.9 million. The per capita income in Bangladesh was \$1,466, according to the Bangladesh Bureau of Statistics (The Daily Star, 2016). The GDP growth rate, industrialization and per capita income are developing in Bangladesh but poverty as the anathema still exists in Bangladesh (Daily Sun, 2017). As stated in the Daily Sun (2017) around 1.5 crore people of Bangladesh are ultra-poor and more than three crore people are living below national poverty line (Daily Sun, 2017). The social status especially in rural areas remains very low although women constitute about half of the Bangladesh population (Parveen and Leonhäuser, 2004). Due to the increasing

imbalanced distribution of income, the rich become richer day by day but the poor people become poorer and confine themselves in the poverty trap (Daily Sun, 2017). In Bangladesh, rural women belong to the most deprived section of the society. They face adverse conditions in terms of economic equality and social oppression and a large number of them are extremely poor (Parveen and Leonhauser, 2004). However, since the poverty remains acute in Bangladesh (Mia, 2016) the importance of microfinance is crucial. To support the poor, microfinance is growing at an exponential rate worldwide. In Bangladesh, microfinance has been viewed as an antipoverty program that reaches the poor especially women (Banerjee and Jackson, 2017).

The main purpose of microcredit in Bangladesh is savings mobilization and credit disbursement (Khandker *et al.*, 2016). As stated by Khandker *et al.* (2016) microfinance has grown at an exponential rate worldwide and today, more than 200 million people are direct or indirect beneficiaries. Zhang (2017) stated that around half of the borrowers were living in extreme poverty. By extending microfinancing, it helps the borrowers to generate employment, income, and assets, as well as improve children's schooling for the poor. Microfinance in Bangladesh was initiated by Grameen Bank and has been successful in Bangladesh for more than forty years. The main focus of Grameen bank is the empowerment of rural women (Azam and Alam, 2012). Bangladesh has more than 750 registered MFIs with a network of over 17,000 branches (Khandker *et al.*, 2016). Around 33 million of borrowers were being served in 2014 by registered microfinance institutions in Bangladesh (MRA, 2015). By 2013, the members of microfinance institutions (MFIs) had received a total of more than US\$7.2 billion in annual disbursements, with an outstanding balance of \$4.5 billion (CDF (Credit Development Forum), 2013) equivalent to 3 percent of the country's gross domestic product (Khandker *et al.*, 2016).

There have been several studies on the benefits of microcredit. However, studies evaluating the benefits of microfinance have produced conflicting results (Khandker *et al.*, 2016). Some studies have found substantial positive effects, while others have found none or even negative ones. The findings of a study by Sujatha and Malyadri (2015) revealed that microfinance is a powerful tool in enhancing women empowerment for its all indicators like household economic decision making, legal awareness, mobility, economic security and family decision making. Mayoux (1997) found that microcredit programs are key solutions for both poverty alleviation and women's empowerment because these programs have a positive relationship with increasing women's income levels and control over income. Several scholars concluded that microcredit encouraged poor women and significantly increased their self-esteem and self-worth, and thereby empowered them (Loro, 2013). As stated by Loro (2013) Bangladeshi women gained higher status in society due to microcredit loans. Another study carried out by Khandker *et al.* (2016) showed the positive role of microfinance. A study by Mia (2017) found that in Bangladesh it is generally perceived that microfinance has placed significant contribution on the socio-economic development. The study by Mia (2017) also highlighted that the regulatory framework is still rather weak. On the contrary, Zhang (2017) stated that microfinance has a negative effect on poverty. Khandker *et al.* (2016) reiterated that despite microfinance's overwhelming success in reaching the poor groups through its innovative program design, its induced benefits measured in terms of income, consumption, and other dimensions of household welfare are still debated. As stated by Khandker *et al.* (2016) the lack of an affordable alternative financing mechanism to support income generation does not necessarily mean microfinance is a panacea since it involves entrepreneurial skills. Many of the poor in Bangladesh lack entrepreneurial skills.

There is also no consensus among academics on the relationship between microcredit and empowerment of women in Bangladesh. Some studies asserted that microcredit is not a solution to empower women (Hashmi, 2012). Other studies documented that microcredit has resulted in socio-political empowerment of women in Bangladesh (Habib and Jubb, 2012). Past research also pointed out that the impact of microcredit was higher for women as compared with men (Khandker *et al.*, 2016). Despite the inconsistencies in research, micro credit continues to play a vital role in Bangladesh where there is a lack of access to institutional finance needed for working capital. As suggested by Zhang (2017) more microcredit would benefit poor countries like Bangladesh. This paper will study

some of the ways in which microcredit have improved the empowerment of women in Chittagong, Bangladesh in terms of change in annual family income, change in health conditions change in decision-making ability and change in purchasing capacity.

## 2. LITERATURE REVIEW

### 2.1. The Conceptualization of Women Empowerment

There are several different definitions of empowerment. Adams (2008) were of the view that empowerment is the capacity of groups or individuals to achieve their goals through exercise of power by controlling the circumstances. Empowerment was defined as the process that is related to the power of a person to redefine her or his possibilities and thereafter possess the ability to act upon them (Cornwall *et al.*, 2008). Empowerment is also the process by which individuals or groups are able improve the quality of their lives (Adams, 2008). Food and Agriculture Organization of the United Nations (2015) defined empowerment as the process of empowering or enhancing the capacity of people to make choices and to thereafter transform those choices into desired outcomes. Empowerment was defined by Allsopp and Tallontire (2015) as process that follows a series of steps sequentially in which ownership of one type of power increases the ability to exercise other forms of power. This creates a positive 'power spiral'. Empowerment was also defined the power to make a choice. On the contrary, disempowerment is the denial of capacity to make a choice (Kabeer, 2005). Through the empowerment process, powerless people are enabled to have control over the occurrences in their daily lives (Kishor and Subaiya, 2008).

According to FAOUN (2015) the empowerment of rural women is about expanding women's assets and capabilities to participate in, negotiate with, influence, control and hold accountable the institutions that affect their lives. Based on the framework by Golla *et al.* (2011) a woman is considered to be economically empowered when she has the power and ability to make and act on economic decisions by advancing economically and having the power and agency to benefit from economic activities. As women participate in microcredit organizations, they typically become more empowered and less vulnerable (Hoque, 2004). Golla *et al.* (2011) claimed that women's economic empowerment is fast becoming a key instrument in promoting their abilities to achieve their rights and well-being which subsequently reduces household poverty and increases economic growth, productivity and efficiency. Mahtab (2007) defines empowerment' as a process of transformation which enable a women to identify her own skills and strengths to bring changes in her life situation, make decisions and exercise control over surroundings. Women's empowerment as defined by Khanday (2015) starts with the understanding of women's positive self-esteem, self-image, duties and rights, capabilities and potentialities. Past research on women's empowerment has focused on several aspects of empowerment such as household decision-making and self-esteem (e.g; (Kishor and Subaiya, 2008; Mahmud and Tasneem, 2014). In the enforcement process, some studies have looked the women's access to labor force and finance (e.g; (Allsopp and Tallontire, 2015; Ganle *et al.*, 2015)). Therefore, there are various definitions and dimensions of women empowerment. Based on the discussion above, it is revealed that women's empowerment is complex and also methodologically difficult

### 2.2. Enhancing Decision Making Capacity

In Bangladesh, men are normally the "head" of their families and they have the power and authority in making decisions (Sultana, 2011). Rural women in Bangladesh are generally not considered equal with men. In Bangladesh; males are considered the breadwinners whereas the females are considered as temporary guests (Haque and Yamao, 2008). However, microcredit has placed credit in the hands of women and research has shown that this income generating activity is translated in greater empowerment that encompasses decision making capacity (Kabeer, 2001; Azam and Alam, 2012). Based on the World Development Report (2014) the women's participation in household activities can lead to greater bargaining power and empowerment. This leads to an increase their participation in their household's decision making process. As argued by Kabeer (2001) the additional income contributes to their

household and increased their decision making ability within their household. Kabeer (2005) stated that the concept of empowerment is measured through three dimensions namely resources, agency and achievements. As explained by Kabeer (2001) agency is the process of making a choice that is made and transformed into effect. This suggests that microcredit has an influence on decision making by women. Badatya and Puhazhendi (2002) found a positive relationship between microcredit loans and financial decision making. Similarly, based on a study by Azam and Alam (2012) it was found that the rural women were getting more recognition relating to major decision making process in their household. In a study by Parveen and Leonhauser (2004) the distribution of empowerment indicators show 73% have a moderate to high participation in household decision-making. However, Holvoet (2005) argued that the decision making ability is restricted to decisions regarding use of the loan but excludes decisions relating to family matters and expenditures.

Based on the past research findings discussed above and logically extending them, the following hypothesis was formulated for testing in the present study. This hypothesis will explore the relationship between decision making ability and empowerment of women in rural Bangladesh.

H1: Decision making capacity is positively related to empowerment of women in rural Bangladesh.

### 2.3. Change in Annual Family Income

Research has shown that microcredit resulted in improvements in family income of rural women in Bangladesh. A study by Haque and Yamao (2008) concluded that, the monthly income of the participant household increased after joining microcredit program compared to their income level before joining the program. As stated by Hashemi *et al.* (1996) women take microcredit loans are in a way making financial contributions to their households and gain empowerment. Kabeer (2001) found that microcredit increased the self-worth of women and gave them better access to capital. The participation of women in Bangladesh led to increase in household income (Kabeer, 2001). In addition, Kishor and Subaiya (2008) asserted that women's empowerment was to a large extent determined by their access and control over resources. Through microcredit loans from Grameen Bank or other lending institutions, women received more recognition and the micro credit program resulted in raising their annual family income (Azam and Alam, 2012). Studies have shown that women who provide support for the families have higher empowerment. However, some studies suggest that microcredit may contribute towards disempowerment of women where the women may have no control over the loan. There may not be a significant increase in income or the male member of the household may take control of the income and use it for their personal expenditure (Mayoux, 2000). Empirical evidence indicates that women who contribute towards household incomes are likely to be empowered regardless of microcredit loan programs (Razzaque and Bidisha, 2012).

Based on the past research findings discussed above and logically extending them, the following hypothesis was formulated for testing in the present study. This hypothesis will explore the relationship between decision making ability and empowerment of women in rural Bangladesh.

H2: Change in Family Income is positively related to empowerment of women in rural Bangladesh.

### 2.4. Change in Health Conditions

Past research showed that the integration of microfinance and health programs can affect some aspects of wellbeing and health such as preventive services, family planning and management of problems related to health (Leatherman and Dunford, 2010). Microlending has brought a change in health conditions of women and their family in Bangladesh. Research by Rahman and Ahmad (2010) also showed that borrowers had higher quality of life and also developed their awareness towards health care. A study by Chowdhury and Khandker (1995) found that members of micro-credit programmes met their calorie requirements. In the study by Chowdhury and Khandker (1995) it was found that women members got a higher boost in meeting calorie requirements than their male counterparts. Based on a survey conducted by Azam and Alam (2012) it was revealed that using open place

and ash or soil for sanitary purpose decreased from 12 to 3 and 62 to 32 percent respectively after the micro-credit program. The women's access to and control over resources contributed to their welfare and a reduction in fertility (Abadian, 1996). A study by Sado *et al.* (2014) indicated that women's involvement in decision-making was one of the determinants for the use of maternal healthcare services. A study by Mamun (2013) provided further support towards the positive impact of microcredit program on health care of women and their households. However, in the study by Mamun (2013) it was highlighted that micro-credit approach alone will not achieve the desired result. Instead, a welfare approach with constant mentoring to use the money is also important. Indebtedness is another issue arising from access to microcredit and there is research that found relationship between indebtedness and problems related to mental health (Fitch *et al.*, 2011). Fitch *et al.* (2011) stated that one in four people with mental health problems are in debt, while one in two people in debt have a mental health problem. Leatherman and Dunford (2010) stated that micro-credit borrowers frequently report that the cost of illness causes difficulties with loan repayment and savings deposits, often requiring clients to use their business loans and other household assets to pay for healthcare expenses.

Based on the past research findings discussed above and logically extending them, the following hypothesis was formulated for testing in the present study. This hypothesis will explore the relationship between decision making ability and empowerment of women in rural Bangladesh.

H3: Change in Health conditions is positively related to empowerment of women in rural Bangladesh.

### 2.5. Change in Purchasing Capacity

There is a wider acceptability of the notion that access to microcredit by women in Bangladesh can bring about change in their socioeconomic situation (Khalily, 2004). After the introduction of micro credit, the women borrowers in Bangladesh got the chance to be income earning members of their families and this gave them higher authority with regards to purchasing power (Kohinur, 2007). According to Hashemi *et al.* (1996) micro-credit increased empowerment of women. As stated by Hashemi *et al.* (1996) microcredit had resulted in an increase in asset possessions registered in the personal names of borrowers. Azam and Alam (2012) also found that the percentage of the beneficiaries considering their nature of purchasing capacity during before and after involvement with Grameen Bank micro-credit program increased. In the study by Azam and Alam (2012) it was revealed that in case of both no purchasing capacity and poor purchasing capacity categories, percentage of women beneficiaries decreased from 12 to 2 percent and 38 to 21 percent respectively after involving with Grameen Bank micro-credit program. Similarly, Rahman *et al.* (2009) found that one of the consequences of microcredit was in producing higher income and ownership of properties. Suguna (2006) further identified that economic empowerment encompasses better access to economic assets both inside and outside the home. The study by Parveen and Leonhauser (2004) revealed that the distribution of empowerment indicators show that only 44% have a very low to low access to resources and 93% have a very poor to poor asset ownership. In addition, Mahmud *et al.* (2012) found that wealth had a significant negative association with women's household decision-making. In addition, the association between covariates and different empowerment indicators was not consistent (Mahmud *et al.*, 2012). Furthermore, the decision making ability by women is restricted to decisions regarding use of the loan but excludes decisions relating to family expenditures which can mean purchasing decisions (Holvoet, 2005).

After Grameen bank introduced their micro credit program, the rural women in Bangladesh got the opportunity to be money-earning member of the family. This elevated their stature not only in the family but in the society as well. Due to the extra money these women received from Grameen Bank, an immense change occurred in the purchasing capacity for these rural women. Past studies also showed that unlike "city women", the rural women are not into cosmetics or any other unnecessary products and the extra money is being used for their better health and better living conditions. This implies that the micro credit program has given these rural women better



authority when it comes to the purchasing power (Kohinur, 2007). Therefore, this variable can be related to the positive generation of hypothesis of:

H4: Change in purchasing capacity is positively related to empowerment of rural women

### 3. METHODOLOGY AND RESEARCH DESIGN

#### 3.1. Research Design

This research is based on positivism philosophy. Positivism relates to the philosophical stance of the natural scientist (Saunders *et al.*, 2012). According to Saunders *et al.* (2012) research approaches are mainly based on the research philosophies, whereby the deductive approach is commonly used by researchers with traditional natural scientific views (positivism), while inductive approach is usually based on phenomenology (interpretivism). In this study, with a deduction approach, a theory and hypotheses were developed. This is a quantitative study where quantitative analysis techniques that range from providing simple descriptive of the variables involved, to establishing statistical relationships among variables through complex statistical modelling were used (Saunders *et al.*, 2012). A research strategy using the survey method was designed to collect data and test the hypotheses. This is a cross sectional study where a “snapshot” of data was taken at a particular time seeking to explain how factors are related (Saunders *et al.*, 2012). Collection of primary data was done using a self-administered questionnaire. For current study, self-administered questionnaire was chosen due to its convenience, inexpensive and greater anonymity (Saunders *et al.*, 2012). The purpose of the questionnaire was to generalize from a sample to a population to make inferences about the characteristics of the population (Saunders *et al.*, 2012). The self-administered questionnaires were administered directly and delivered by hand and collected later (Saunders *et al.*, 2012). The emphasis here is on studying to explain the relationships between the independent variables and empowerment of women as the dependent variable. The reliability of a measure is established by testing for both consistency and stability and this was based on Cronbach’s alpha which is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. For validity, the testing was through expert review and by pilot testing involving 20 respondents. Data analysis was based on descriptive and inferential statistics that were generated using SPSS and SEM AMOS tools.

#### 3.2. Sampling Technique and Sample Size

The target population were women residing around Chittagong who have taken microcredit loans. One of the limitations was confidentiality of borrowers and illiteracy. Ethical consideration of confidentiality and privacy was assured to the respondents. Random sampling was done through the assistance of village heads. A total of 150 households were identified. In addition, the borrowers were identified during meetings and briefings and presentations held for borrowers by Grameen Bank. The qualification criterion was that the borrower must be a female and the loan was taken at least one year ago. Based on statistics of Microfinance by Commercial and Specialized Bank, the total numbers of borrowers were 2.5million (Bangladesh Economic Review, 2014). Due to time limitation, the target sample size was 100 respondents. Hair *et al.* (2006) stated that preferably the sample size should be 100 or larger.

#### 3.3. Instrumentation

Self-administered questionnaires were used to collect virtually all data that was analyzed by computer (Saunders *et al.*, 2012). Three demographic variables (gender, marital status and age) were included. The fixed alternative questions required the respondents to choose the best answer based on a five- point Likert-type scale. The questionnaires encompass the questions for measuring purchasing capacity, decision making capability, income generation, health conditions and empowerment. The questionnaire was translated in Bangladeshi language as most of the respondents were illiterate.

### 3.4. Data Collection

In this study, direct distribute and collect survey was the preferred method because the sample population consists of respondents with low educational levels. The self-administered survey instrument was composed of closed-ended questions. The direct distribute and collect method was used and for illiterate respondents, each question was explained and the response noted. Initially a total of 120 questionnaires were completed. A total of 7 questionnaires were removed due to omissions or errors. Only 113 questionnaires were usable and the rest were incomplete or inappropriate.

### 3.5. Data Analyses

As stated by Sekaran (2003) in data analyses there were three objectives: getting a feel for the data, testing the goodness of data, and testing the hypotheses developed for the research. The feel for the data gave preliminary ideas of how good the scales were, how well the coding and entering of data have been done, and so on (Sekaran, 2003). Descriptive statistics was used to acquire a feel for the data by checking the central tendency and the dispersion. The mean, the range, the standard deviation, and the variance in the data gave the researcher a good idea of how the respondents have reacted to the items in the questionnaire and how good the items and measures are Sekaran (2003). The AMOS software developed for analyzing the Structure Equation Modeling (SEM) and SPSS were used to test present the model in a causal path diagram to show the hypothesized relationships among constructs of interest. SEM is an efficient method to perform analyzes of the causal relationships in a structural model and tests the hypotheses (Awang, 2012). Using Amos Graphic interface, the structural model was created to test causal effects. The two sets of text output namely the standardized regression weights and the regression weights were examined.

## 4. RESULTS

### 4.1. Demographic Profiles of the Respondents

The respondents included all females only 100% (n=113). Majority of the respondents, 78% (n=88) were married. The respondents age included 37% (n=42) between the age range of 18 – 25 years, 26% (n=29) between the age range of 26 to 35 years, 19% (n=21) between the age range of 36 - 45 years, 11% (n=12) between the age range of 36 to 45 years, and 8% (n=9) above the age of 55 years.

### 4.2. Reliability

Reliability is the extent to which a variable is consistent in what it is intended to measure (Hair *et al.*, 2006). The overall Cronbach alpha coefficient variable was 0.823. The Cronbach alpha value was above 0.7 and this is acceptable (Pallant, 2010). Pilot testing was done and this provided with some idea of the questionnaire's face validity (Saunders *et al.*, 2012). For face validity, experts were asked to comment on the representativeness and suitability of the questions (Saunders *et al.*, 2012).

### 4.3. Descriptive Statistics

Based on Table 1, the values of skewness and kurtosis values are within +3 and -3 standard deviations from its mean (Zikmund *et al.*, 2010). The mean of all the variables is above 3.8 and the standard deviation is low.

Table-1. Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Purchasing	2.80	4.80	3.8619	.38645	-.117	.227	.269	.451
Health	3.00	5.00	4.2013	.54676	-.424	.227	-.596	.451
Income	3.40	5.00	4.3009	.39472	.022	.227	-.761	.451
Decision	2.60	4.60	3.9186	.38045	-.570	.227	.224	.451
Empower	3.00	5.00	4.5327	.44369	-1.083	.227	1.060	.451

Source: Prepared by author based on primary data collected and analysed in this study

#### 4.4. The Inter-Relationships among the Observed Variables in a Model

The model is converted into Amos Graphic. It is drawn using rectangles (instead of ellipses) as shown in Figure 1. The estimated beta, its standard error, and probability value is given in Table 2. The information given would be adequate for the researcher to test the hypothesis for beta. In this research study, the R-value of 0.52 explains 52% of the variance in empowerment of women.

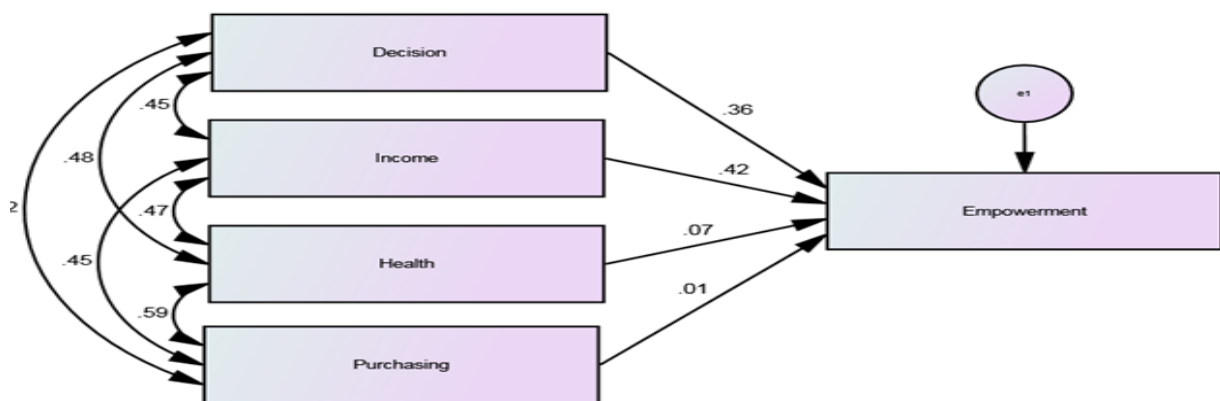


Figure-1. The regression path coefficients among the variables in the model.

Source: Prepared by author based on primary data collected and analysed in this study

#### 4.5. Analyzing the Causal Effects

The causal effects are shown in Table 2. The path coefficient of Decision making ability to Empowerment of Women is 0.362. This value indicates that for every one unit increase in decision making ability, its effects would contribute 0.503 unit increase in Empowerment of Women. And more importantly the effects of Decision making ability on Empowerment is significant ( $p < 0.05$ ). Thus, the hypothesis H1 that states decision making ability has significant and positive effects on Empowerment of Women was proven. The path coefficient of Family Income is 0.423. This value indicates that for every one unit increase in family income, its effects would contribute 0.423 unit increase in Empowerment of women. The effects of Family Income on Empowerment is significant ( $p < 0.05$ ). Thus, the hypothesis H2 that states Family Income has significant and positive effects on Empowerment of Women is proven. The path coefficient of Health Conditions to Empowerment of Women is 0.074 but the effects of Health Conditions on Empowerment is not significant ( $p > 0.05$ ). Thus, the hypothesis H3 that states Health Conditions has significant and positive effects on Empowerment of Women is not supported. The path coefficient of Purchasing Capacity Women is 0.010 but the effects of Family Income on Empowerment is not significant ( $p > 0.05$ ). Thus, the hypothesis H4 which states that Family Income has significant and positive effects on Empowerment of Women is not supported.



Table-2. The Regression Path Coefficients between the constructs and its significance

Hypothesis Statement for Path Analysis	Estimate	P	Significance	Result of Hypothesis
H1. Decision Making ability exert a positive influence on empowerment of women	.362	***	Significant	Supported
H2. Income Capacity exert a positive influence on empowerment of women	.423	***	Significant	Supported
H3. Health conditions exert a positive influence on empowerment of women	.074	.399	Not Significant	Not Supported
H4. Purchasing capacity exert a positive influence on empowerment of women	.010	.799	Not Significant	Not Supported

Source: Prepared by author based on primary data collected and analysed in this study

## 5. DISCUSSION AND CONCLUSION

The results of this study revealed that family income have the most influence on empowerment of women in Chittagong followed by decision making ability. However, it was found that health conditions and purchasing capacity had positive relationship with empowerment but there was no significant impact on empowerment. The findings emphasize the criticality of factors that contribute towards empowerment of women with microcredit loans in Chittagong, Bangladesh. The evidence from this study suggests that the greater the family income contribution and decision making ability, the greater the empowerment will be. Past research also showed that decision making ability have a predictive effect on empowerment (Kabeer, 2001; Azam and Alam, 2012). Parveen and Leonhauser (2004) also stated that 73% of women borrowers have a moderate to high participation in household decision-making. Azam and Alam stated that after joining micro-credit program, the change in decision making ability of women borrowers increased. The influence of family income towards empowerment is also consistent with earlier studies. Similarly, Hashemi *et al.* (1996) found that women take microcredit loans are in a way making financial contributions to their households and gain empowerment. The influence of health conditions deviated from earlier studies. Roy (2004) found that direct evaluations of effects of micro-credit programmes on women's health are practically non-existent. This may also be due to domestic violence that can affect health. A study by Bhuiya and Chowdhury (2002) found that women with micro-credit loans had higher odds of being subject to domestic violence than non-borrowers. The influence of purchasing capacity also deviated from earlier studies. The findings of this study contradict with past research that found evidence to support purchasing capacity (Suguna, 2006; Kohinur, 2007). A study by Montgomery *et al.* (1996) found that while 100% male recipients of loans retained control over the loans, but very few women did had control over the loans. Another possible explanation for these findings is that rural women in Bangladesh are generally not considered equal with men. In Bangladesh; males are considered the breadwinners whereas the females are considered as temporary guests and there is no room for women to create their own voices outside of those of their husbands or fathers (Hoque, 2004). The findings will also provide theoretical and practical implications for managing expatriates and offer an alternative viewpoint. The result of this research shows that micro-credit is undeniably important to poor families, but it is insufficient on its own to address the multi-dimensional challenges of poverty. This research helps to fill the research gaps, hence adds to the literature on empowerment of women in Bangladesh. The evidence from this study contains implications for the continuous extension of microcredit to women in Bangladesh. This study shows that despite microfinance's overwhelming success in Bangladesh, the benefit towards empowerment of women is still debatable. This study found that not all the factors in this study had a significant effect towards empowerment of women. However, in view of the positive influence of decision making capacity and family income contribution, the government of Bangladesh should consider the positive influence of microcredit on empowerment of women in Bangladesh. Knowledge of empowerment of women is necessary to alleviate poverty through empowerment of women. The findings are also expected to assist in creating foundational solutions to support empowerment of women in Chittagong, Bangladesh. There are several limitations of this study. There are other moderators and mediators such as age of borrowers that were not examined and should be examined in future studies. The data for this study was collected via a self-reported questionnaire that could be susceptible to bias. Borrowers who failed to repay their

debts were not included in this study. These limitations of this study provide directions for future research. For future studies, a more in-depth research on factors that affect empowerment of women can be undertaken. This study was a cross sectional study and for future research, a longitudinal study can be undertaken. The impact of microcredit loans on empowerment of women over time can differ. In addition, future research can include larger sample size to get better results. It is also recommended that future research should include assessment from various sources that include family members.

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