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The impact of Microcredit on Women's Empowerment.

- **A case study of Microcredit in the Tangail district, Bangladesh.**

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Abstract

The impact of microcredit on women's empowerment remains debated. While some studies suggest that microcredit helps women increase their income earning abilities, leading to greater power within the household, others argue that men often take control over the microcredit, which was allocated to women, leading to a more vulnerable position within the household for women. This paper evaluates the impact of microcredit on women's empowerment in rural Bangladesh. The data was collected via a questionnaire that was conducted on a field study in the district of Tangail in Bangladesh. Furthermore, the impact of microcredit on women's empowerment is examined through a cross-sectional impact methodology, referred to as the control-group method. Microcredit borrowers are compared to soon-to-be microcredit borrowers and the difference between these groups is ascribed to microcredit. An econometric analysis is then employed on the data gathered via the questionnaire. The results confirm that microcredit has a significant positive impact women's empowerment.

Keywords: *Microcredit, women's empowerment, Bangladesh*

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(1) Introduction

By extending small loans to poor individuals, microcredit enables its borrowers to take up income-earning activities that lead to a series of improvements in their economic situation. In addition to the improved income-earning ability, microcredit has been increasingly promoted for its positive impact on empowerment, especially for women borrowers. Theory suggest that microcredit lead to women's empowerment by enabling poor women to earn an independent income and contribute financially to their household, which is supposed to give women greater power within the household. Also, microcredit is seen as a tool in enabling women to free themselves from household confines and get exposure to the outside community. The exposure to the outside community, together with the formation of networks with other women, is expected to lead to greater self-confidence and courage. However, there is no real consensus among academics on the impact of microcredit on women's empowerment. Some studies do state that microcredit has a role in increasing female borrowers income-earning ability, leading to stronger decision-making power and ability to overcome gender-related constraints (see for example, Hashemi, Schuler, and Riley 1996; Holvoet 2005). But others suggest that men often take control over the microcredit, which was allocated to women, leading to a more vulnerable position within the household for women (see for example, Ackerly 1995; Goetz and Gupta 1996). The conflicting results on the impact of microcredit on women's empowerment largely arise from factors such as different methodological approaches, the multidimensional nature of empowerment, and sample-selection biases.

This study empirically examines whether microcredit can promote empowerment of rural women in Bangladesh. The status of Bangladeshi women has improved greatly over the past decade, but gender inequality still exists in almost all aspects of society. The data was collected via a questionnaire that was conducted with 190 women on a field study in the district of Tangail in Bangladesh. Furthermore, the impact of microcredit on women's empowerment is examined through a cross-sectional impact methodology, referred to as the control-group method. Microcredit borrowers are compared to soon-to-be microcredit borrowers and the difference between these groups is ascribed to microcredit. The results from this study are derived from econometric

analysis employed on the data gathered via the questionnaire. The question this study wishes to answer is: Does microcredit empower women? To give the reader a preview of the results, this study do find indications that there is a positive relationship between microcredit and women's empowerment.

This study contributes to existing literature in two ways. First, it introduces new data on the subject, gathered on the field study in the Tangail District in Bangladesh. Second, this study aims to take account for the problem with sample-selection biases that usually arise in similar studies. Sample selection bias refers to the situation when the control-group and the treatment-group are not comparable. For example, microcredit borrowers, compared to non-microcredit borrowers, may be more entrepreneurial or dedicated in the first place. These preexisting differences may affect the empowerment level in the two groups, which may lead to an overestimation of the effect of microcredit on women's empowerment. To avoid biases that arise due to preexisting attributes this study use soon-to-be microcredit borrowers, accepted borrowers who have not yet received a loan, as the control group. This study argues that soon-to-be microcredit borrowers should have similar entrepreneurial ability and dedication as those who are already microcredit borrowers. This in turn makes a comparison between microcredit borrowers and soon-to-be microcredit borrowers more valid than a comparison between microcredit borrowers and non-microcredit borrowers.

This paper is organized as follows: chapter two presents the theoretical framework of microcredit and women empowerment. Chapter three presents previous academic research on the relationship between microcredit and women empowerment. Chapter four presents an overview of Bangladesh and the different microfinance institutions examined in this study. Chapter five covers the empirical methodological approach employed during the data collection. Chapter six presents the analytical approach and its limitations. Chapter seven presents and discusses the results derived from the data analysis. Chapter eight provides a conclusion of the study as well as directions for further studies.

(2) Theoretical framework

The theoretical framework consists of three parts, each of them relevant for the subject of this thesis. First, the financial market and its failures are introduced. Second, the concept of microcredit is explained. Finally, women empowerment and the link to microcredit are examined.

2.1 The financial market

Ray (1998) argues that there is a strong demand for credit, especially small loans, by the poor. The need for credit can be separated into three types: 1) credit for fixed capital, which is needed for start-ups, new technology, expansions etc., 2) credit for working capital necessary for ongoing production, and 3) credit for consumption, which aims to smooth out sudden gaps between income and expenses (Ray, 1998, p. 531). Even though poor individuals demand credit, they still lack access to it in many cases.

Islam (2007) describes three underlying reasons why poor people tend to lack access to credit: information asymmetries, low-potential profitability and lack of portfolio diversification. The potential problem of information asymmetries describes a situation were actors in a transaction agreement don't have access to the same information before the agreement takes place. The actor with more and superior information will have an advantage, which consequently can lead to the potential problem of adverse selection and moral hazard (T. Islam, 2007, p. 73). Adverse selection describes the issue of determining a borrowers' riskiness. Due to the lack of information on the borrower, the bank would like to charge riskier clients higher interest rates to cover for a higher probability of default. The moral hazard problem refers to the situation where the bank wants to ensure that the borrowers use the money for the right purpose and that the borrower makes the full effort to repay what was borrowed. The potential problem derived from adverse selection and moral hazard may be overcome by 1) information to monitor and evaluate clients, 2) enforcement to ensure that contracts are fulfilled, and 3) compensation for incentives to pay back loans (Armendáriz de Aghion and Morduch, 2005, p. 7). The second underlying reason why poor people tend to lack access to credit is the low-potential of profitability for the banks. Small loans that poor people demand bring high risk and workload for a bank to offer. Furthermore, the borrowers may have

difficulties earning an income and they often lack assets. This brings higher risk for the bank to lend out money. An additional factor is that poor individuals often are expensive to serve with financial services since they often live relatively remote in rural areas. Thus, it is often less profitable for banks to serve poor individuals compared to people with higher incomes and more assets. The third underlying reason why poor people tend to lack access to credit is the lack of portfolio diversification. It is riskier to lend to a borrower only involved in one type of income-earning activity. This is especially evident in the agricultural sector where, for example, a drought or a flooding can bring many farmers in one region into a difficult situation at the same time (T. Islam, 2007, p. 74).

Costly information, high risk and small sums involved in lending have made most formal financial institutions unwilling to operate at low-income levels. Another issue in developing countries is that enforcement tends to be undermined by weak judicial systems (Armendáriz de Aghion and Morduch, 2005, p. 8). The weak legal enforcement often forces banks to rely on other kinds of corrective methods, such as threats of not advancing loans in the future in case of default (Ray, 1998, p. 530). Despite the lack of formal financial institutions that provide financial services to low-income individuals, financial services still exist in other forms for the poor. The financial market in many developing countries is characterized by having both a formal and an informal financial market (Chandavarkar, 1992, p. 135). Jamison (2003) defines the informal market as activities and transactions on markets that are not regulated by the state or other formal institutions (Jamison, 2003, p. 7). It consists of actors such as relatives, friends, moneylenders, landlords and other agents who use financial activities as a side source of income (Ray, 1998, p. 538). These small informal lenders are able to gather information on their borrowers day-to-day activities by continuous monitoring. They can also accept repayment in other forms than money, such as labor, which formal institutions cannot (Ray, 1998, p. 536, 537).

Islam (2007) states that the strength of the informal market is that the actors involved often have some type of relationship with each other. These relationships play a significant role since low-income individuals often lack collateral. Instead of a collateral, informal moneylenders use personal knowledge and social peer pressure as a guarantee of repayment. Furthermore, informal moneylenders can use flexible interest rates to

make adjustments to cover risks. Islam (2007) argues that the informal market is of great importance since it provides financial services that the formal market tends not to offer (T. Islam, 2007, p. 67).

However, some argue that there are certain problems with the informal sector that complicate the situation for poor individuals. One of the biggest problems is that informal moneylenders tend to charge high interest rates, which may constrain the borrowers. Research suggests that the flat interest rates charged in the informal market can vary from 25percent to 200percent (Ray, 1998, p. 536, 541; Robinson, 2009, p. 50). Robinson (2009) states that informal moneylenders tend to use different interest rates for different borrowers. Low-income individuals are usually not seen as profitable and they are therefore charged with higher interest rates. Most poor demand small loans that have similar transaction costs for the moneylender as larger loans. To make smalls loans equally profitable, the informal moneylenders often charge higher interest rates on small loans compared to large loans. Also, poor individuals are often charged with higher interest rates compared to others because they have low bargaining power due to their economic situation. Another difficulty for the poor is that they in many aspects have limited information about alternative sources of financial services and limited knowledge about interest rates (Robinson, 2009, p. 50). Islam (2007) argues that the high interest rates together with other circumstances such as unawareness of other financial services keeps poor individuals in a deprivation trap (T. Islam, 2007, p. 69). Due to the problems with both the formal and the informal financial markets, one might suggest that there is a need for an alternative way for the poor to borrow.

2.2 Microcredit

Microcredit is a way of delivering loans to poor individuals and is often suggested to be a way out of poverty (Armendáriz de Aghion and Morduch, 2005, p. 8). Microfinance institutions provide microcredit to poor individuals via their microcredit programs. In addition to microcredit, microfinance institutions usually provide saving and insurance services (Armendáriz de Aghion and Morduch, 2005, p.1). In other words, microcredit is a more narrow term than microfinance. Microcredit and microcredit programs will be the focus of this study.

Microcredit builds on the premise that financial services are needed to make investments in human capital, to smooth out consumption and to overcome unexpected shocks. It can be seen as a solution to include previously excluded poor groups, without access to credit, to the financial market so that they may rise out of poverty by themselves. Microcredit makes an positive economic cycle possible. A microcredit granted to a borrower is invested, which generates an income. The loan can be then be repaid to the microfinance institution, and the borrower may then access another microcredit and eventually increase purchasing power and social recognition. Dobra (2011) argues that microcredit not only open up the opportunity of self-employment, but also contributes to the improvement of the situation for the entire household. Furthermore, microcredit positively effects the social situation of poor individuals by promoting self-confidence and expanding the capacity to play a more important role in society (Dobra, 2011, p. 135, 136).

One of the advantages with microcredit over other financial services is the possibility of receiving a group-based loan where member's work as each other's collateral. The advantage of being a group is that the group can loan a larger amount. This amount is then repaid regularly in small sums by each member, which makes it possible for even the poorest borrower to repay his or hers loan. If the group makes their repayments as they should, they can acquire access to repeated and larger loans (Arun et al., 2009, p. 13).

Microcredit also helps to resolve some problems that are keeping the poor from the financial market discussed in section 2.1. Group-based lending can potentially solve the problem with information asymmetries since the group as a whole is dependent on each other's actions. Individuals who are seen as untrustworthy and therefore risky are excluded from the group. Also, peer pressure within the group functions as an incentive to repay in time (T. Islam, 2007, p. 73). Microfinance institutions manage to solve the problem of low-potential profitability by charging market interest rates, which lowers the costs for microfinance institutions. Furthermore, microfinance institutions often provide technical guidance and business support to microcredit borrowers to improve the performance of the borrowers businesses. The reasoning behind this is that a

borrower whose business is performing well is more likely to earn more income and is therefore more likely to be able to repay the microcredit. Microcredit partly solves the problem with portfolio diversification since members of microcredit programs often engage in different types of activities. However, the problem of unexpected shocks like drought and flooding still remains. Microcredit also contributes to portfolio diversification by using group-based lending. In the group, each member is responsible for every member's debt. If one of the members fails to pay, the other members are obligated to pay this person debt. Since the risk is spread out on many individuals, the risk taken by the microfinance institution will be lower (T. Islam, 2007, p. 74).

2.3 Women empowerment

In the Human Development Report from 2008, UNDP stated that 70 percent of the world's population living on less than 1 USD a day are women (UNDP, 2008). In addition to being poorer than men, women are also more vulnerable, which in part is due to the fact that many developing countries are male-dominated societies. A basic assumption is that poverty reduction strategies are related to the promotion of development. Dobra (2011) argues that while in the developmental process, speaking about development without seeking to reduce inequalities between men and women leads to both partial development and partial poverty reduction (Dobra, 2011 p. 136, 137). Furthermore, the World Bank (2012) has stressed that long-lasting gender inequalities, characteristic of many developing countries, are restraints on economic growth and development (The World Bank, 2012). With the aim to reduce female fragility and poverty, there has been an increasing expectation on microcredit and other poverty strategies to positively affect women's empowerment.

What is empowerment? The World Bank (2009) defines empowerment as "the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Central to this process are actions which both build individual and collective assets, and improve the efficiency and fairness of the organizational and institutional context which govern the use of these assets" (World Bank, 2009). Amartya Sen (1993) explains that the freedom to lead different types of life is reflected in a person's capability set. A person's capability

depends on a variety of factors including social arrangements and personal characteristics. However, the full accounting of individual freedom goes beyond the capabilities of personal living. For example, if a person does not have the courage to choose to live in a certain way, even though she could live that way if she chose to, can it be said that she do have the freedom to live that way (Sen, 1993, p. 31, 32)?

Cornwall, Eyben and Kabeer (2008) defines empowerment as the process that relates to the power of an individual to redefine his or hers possibilities and to have the ability to act upon them (Cornwall et al., 2008, p. 5). Kabeer (1999) further 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." Accordingly, empowerment is about the improvement of individual's capabilities to make a difference in their settings, which in turn affects their life. Empowerment also relates to the influence of an individual on social and cultural norms in society. In contrast to many other terms, women's empowerment relates to a process, a movement from one state to another. Empowerment also includes agency, in which women themselves are actors in the empowerment process. Furthermore, agency implies that women must not only be able to make a decision, but be aware of their rights to make it (Kabeer, 1999, p. 437).

In many parts of the world, reproduction and care of the family are responsibilities of women, while men have the decision-making power within the household. Women may be constrained when it comes to mobility, voice, education, employment, health care etc. These gender-related constraints affect women's daily life, as well as their productive outcome. Thus, gender-related norms play a part in determining the level of empowerment for a woman (UN DESA, 2009, p. 5). One can therefore argue that it is important to look at gender-related constraints and the division of power within the society and the household to be able to determine the level of women empowerment. Therefore, this study makes a distinction between the outcomes that lead to greater efficiency within the existing norms and outcomes that can be directly interpreted as women empowerment. This distinction builds on the thoughts of Bali Swain (2007) who argues that not all activities that lead to an increase in well-being of a woman are necessarily empowering. For example, improvement in nutrition of children lead to greater efficiency for women in their role in the household, but it also reinforce existing

gender roles within the society. When women are better able to perform such activities, it may lead to an increased feeling of well-being. This might in turn create conditions that lead to women empowerment, but such activities are not empowering on their own (Bali Swain, 2007, p. 75).

Empowerment is not directly observable, and it may be valued differently depending on the views of individuals. As briefly shown above, empowerment is a complex concept with many definitions. This study argues for an interpretation of the concept using both the World Bank's and Kabeer's view of women empowerment. Thus, this study defines women empowerment as the process in which women challenge existing norms of the society, in which they live, to improve their well-being. Furthermore, this study defines women's empowerment within four subgroups: decision-making power in the household, ownership of assets, voice, and mobility. These are defined and exemplified in table 1 below.

Table 1: Empowerment subgroups

Subgroup	Definition	Example
Decision-making power in the household	The ability to make and influence process of reaching decisions	The respondent is able to make a small purchase, like a dress, without consulting with her husband
Ownership of assets	The attribute of an economic good	The respondent owns land in her own name
Voice	The freedom of expression	The respondent feels comfortable expressing her opinion in the precense of her husband or other family member
Mobility	The freedom of movement	The respondent is able to visit the local market without consulting with her husband

This study use women's perceptions of their own situation to accurately capture women's empowerment. For example, if a woman believes that she does not have any part in decision-making in the household, she will most likely not participate in household decisions, even if other members of the family believe that she has a part to play (UN DESA, 2009, p. 5).

2.4 Microcredit and women empowerment

How does microcredit lead to women's empowerment? Microcredit enables women empowerment by placing capital in their hands and allowing them to earn independent income and contribute economically to their households and communities (Cheston and Kuhn, 2002, p. 14). In theory, women invest the microcredit in their own income-earning activity, either in the form of a microenterprise or agricultural production, and accordingly their income, which they themselves control, increases. In other words, involvement in a successful income-generating activity should translate into greater control and economic empowerment. Women's economic empowerment is then expected lead to increased well-being for themselves and also their families. Furthermore, this economic empowerment is seen as enabling women to renegotiate changes in gender roles, which may lead to social empowerment (Mayoux, 2001, p. 438, 439). Microcredit may also lead to increased women empowerment through increased power in decision-making. Browning and Chiappori (1998) show in their collective decision-making model that if behavior in the household is Pareto efficient, the household's objective function takes the form of a weighted sum of individual utilities. This individual weight can represent the bargaining power of the female member in the household, relative to the male member, in determining the allocation of resources in the household. It is then assumed that by increasing the relative value of the female members' time and income, the weight and therefore the bargaining power of the female can be increased within the household (Browning and Chiappori, 1998, p. 1248, 1249). The weight parameter discussed above could reflect women's decision-making power within the household defined and exemplified in table 1.

Still, one need to question the assumed linkage between microcredit and women empowerment since some studies suggest that microcredit, in some cases, may have been a part of the disempowerment of women. It cannot be assumed that women have

control over loan use, even when they are explicitly targeted. For instance, women may be used as low-cost intermediaries between microcredit program staff members and male household members. Even in the case where women control the loan, this may not result in significantly increased incomes. Furthermore, even where there is an increase in income for women, there may be no control by women over income. The male household member may for example take control over the income and use it for personal expenditures. For that very reason, men may be supportive of women's microcredit activities and other income-earning activities. By engaging in a microcredit program, women may be forced to cut their own, already inadequate, expenditure on food and health services to repay their loans. The combination of low incomes, lack of control, and repayment pressure may do little to increase women's empowerment (Mayoux, 2000, p. 12, 13).

(3) Previous studies

There is plenty of literature about the impacts of microcredit, mostly in the form of case studies and evaluations of existing microcredit programs effect on income and consumption. Most of these studies show some evidence that support a positive impact of microcredit on increasing the household income for borrowers. Hulme and Mosley (1996) wrote one of the most cited and earliest studies of microcredit and poverty alleviation. The authors employed a control group approach while looking at the changes in income for household's villages served by microcredit programs and changes for similar households in non-program villages. They conducted the survey in a number of countries including Bangladesh and Indonesia between 1988 and 1992. A positive impact was found on borrowers, both men and female, income with an average increase over the control group ranging from 10-12percent in Indonesia, to around 30percent in Bangladesh (Hulme and Mosley, 1996).

Bangladesh institute of Development studies (BIDS) and the World Bank conducted another early and significant empirical study in 1991 and 1992. A quasi-experimental household survey was conducted on 1,798 households, from 87 villages in rural Bangladesh. This survey has provided data for several analysis (for example Khandker and Pitt 1998). Khandker and Pitt (1998) focused their research on the following three

major microfinance institutions: Grameen Bank, Bangladesh Rural Advancement Committee (BRAC), and Bangladesh Rural Development Boards (BRDB). Impact of microcredit on income was assessed using a double-difference approach between eligible and ineligible households and between microcredit program villages and non-program villages. After controlling for other factors, such as household characteristics, any remaining difference was attributed to the microcredit programs. The main conclusion drawn was that microcredit programs had a positive effect on household consumption, especially for female borrowers. On average, a loan of 100 taka to a female borrower allowed for a net consumption increase of 18 taka (Khandker and Pitt, 1998).

Banarjee, Duflo, Glennerster and Kinnan (2010) conducted a more recent study in 2009 in Hyderabad, the fifth largest city in India. The authors used a randomized evaluation approach were 52 of 104 villages around Hyderabad were randomly selected for opening of a Spandana microfinance branch, while the remainder were not. 18 months after the introduction of microcredit in each area, a household survey was conducted in each village, in a total of 6850 households. The results show a significant impact on how many new businesses started as well as profitability of preexisting businesses in the villages that received microcredit (Banarjee et al., 2010).

As shown above, there seems to be some evidence that participation in microcredit programs has a positive effect on female income and consumption. There is, however, no real consensus among academics about the impact of microcredit on women's empowerment. Existing literature suggests that participating in a microcredit program can be both empowering and disempowering. However, there seem to be a majority that believes that microcredit positively affects women's empowerment. Hashemi, Schuler and Riley (1996) made one of the earliest studies on microcredit and its effect on women empowerment in 1996. A longitudinal study was conducted on 1300 married women in Bangladesh between 1991 and 1994 by comparing participants of two different microcredit programs, Grameen Bank and BRAC, with a control group. The control group was divided into a group of women with access to the same banks and another group with no access to microcredit. Empowerment was assessed via a number of factors such as women's mobility, ability to make purchase, ownership of assets, and political awareness. According to their definition of empowerment, they concluded that

married women involved in a microcredit program were more empowered than the women who were not part of a microcredit program (Hashemi, et al., 1996).

Kabeer (2001) examined the relationship between microcredit and women empowerment by interviewing both female and male microcredit program participants in two provinces in Bangladesh. She argues that conclusions about the impact of microcredit are reflected by the questions asked by the evaluator. On that basis, she suggest that women's own testimonies would give a better picture of the empowerment level than a survey that only measures certain aspects of their behavior. The conclusion from her study is that women who received microcredit had a higher self-worth and better access to capital. Even if participating in a microcredit program in some cases led to a higher workload, the women think positively about their increased contribution to the household income. Furthermore, she finds that in many cases microcredit increased women's decision-making ability within the household (Kabeer, 2001).

A number of studies conducted in India have shown a positive relationship between access to microcredit and women empowerment (Bali Swain 2007; Holvoet, 2005 and Puhazhendi and Badatya, 2002). Bali Swain (2007) examined the effect of Self Help Groups (SHG), a group-lending form of microcredit, on women empowerment in five Indian states. First, a household survey was performed on 805 women who were members of a SHG and on a control group with 156 women who did not have access to SHG or credit in 2000. Three years later, the same survey was performed on the same respondents as in 2000. The authors then compared the increase in empowerment for the treatment group and the control group between 2000 and 2003. Empowerment was measured by looking at the value of owned land, the value of owned assets, whether women were main income earners in the household, literate or not, whether engaged in wage labor or farm activity, and household income. They found a significant improvement from 2000 to 2003 for the SHG group, in contrast with the control group were there were no statistically significant improvements in empowerment (Bali Swain, 2007).

Holvoet (2005) conducted another study of two different microcredit programs in India in 2005. The microcredit participant's household decision-making ability was examined

via a questionnaire. The microcredit programs examined were the Rural Development Program (IRDP) and the Tamil Nadu Women's Development Program (TNWDP), which both have female and male borrowers. The survey was conducted on 497 women who received a loan between 1990 and 1991 from TNWDP, and 200 women who received a loan from TNWDP between 1993 and 1994.The sample also included 420 men and 180 women who received a loan from IDRP, leading to a total sample of 1297 respondents. Decision-making ability was assessed via seven types of decisions; loan use, expenditures, money management, time and task allocation, family matters, agricultural business and the cottage industry. The findings suggest that microcredit has a positive effect on women's decision-making ability, but only when it comes to household decisions regarding loan use and not for household decisions regarding expenditures and family matters (Holvoet, 2005).

Badatya and Puhazhendi (2002) measured the effects of SHG program provided by the National Bank for Agriculture and Rural Development (NABARD) on women empowerment in 2002. They conducted a survey on 115 SHG women participants between 2000 and 2001 both before SHG membership and during their membership. Empowerment was examined through questions on self-confidence, decision-making ability, communication skills and behavioral changes were each of these dimensions had 2 to 4 sub indicators. They found that, in general, members increased their self-confidence as an effect of SHG membership. Also, positive effects regarding influence over financial decision-making within the household, courage to protest, and mobility was a result of SHG membership (Badatya and Puhazhendi, 2002).

The above-examined studies show some form of positive effect of microcredit on women empowerment. There are, however, some studies that have expressed doubts about the flow of automatic benefit of microcredit on women's empowerment (notably Bhattacharya et al., 1996; Goetz and Sen Gupta, 1996). Bhattacharya, Hulme and Montgomery (1996) examined gender differences with regards to control over microcredit. They look at the performance and impact of BRAC and the Government of Bangladesh's Thana Resource Development and Employment programme (TRDEP) based on a household survey conducted on both female and male borrowers in 1992 and 1993. The results show that only 9percent of the first time female borrowers were in

charge of the loan-funded activities, while 87percent described their role in the decision-making as a family partnership. On the other hand, 33percent of the first-time male borrowers had sole authority over the loan-funded activity, while 56percent described it as a family partnership (Bhattacharya et al., 1996).

Goetz and Sen Gupta (1996) studied the effect of microcredit on women empowerment by conducting a questionnaire with 253 female members from Grameen Bank and BRAC. As an indicator on women empowerment, a five-point index of loan control was used with the following measurements; full, significant, partial, very limited and no involvement. They found that in 37percent of the cases, women retained full or significant control over the loan, whereas in 22percent of the cases, women had no involvement in the loan process. Furthermore, the study showed that married women compared to unmarried women had exercised less control over their loans (Goetz and Sen Gupta, 1996).

To summarize, the available evidence points towards microcredit having a positive impact on women's empowerment. However, as shown above, some previous studies suggest that women are unable to control their loans, something that may contribute to disempowerment. The conflicting results on the impact of microcredit on women's empowerment arise from factors such as different methodological approaches, the multidimensional nature of empowerment, and sample-selection biases (Xi et. Al, 2011, p. 241).

(4) Bangladesh and Microfinance institutions

The aim of this chapter is to give a background of the context from which the empirical material was gathered. First, Bangladesh and women's situation in Bangladesh will be covered, and then the microfinance institutions examined in this study will be introduced.

4.1 Bangladesh and women's situation

Bangladesh is located in the northeastern part of the Indian subcontinent. With 150 million people living on an area of 147,570 square kilometers (about one third of the

size of Sweden), Bangladesh is one of the most densely populated countries in the world. Bangladesh is predominately a Muslim country, around 90percent of the population are Muslims with a large minority of Hindus. Bangladesh has during the past decades maintained a high level of development and growth. Poverty has dropped by nearly a third, bringing more than 15 million Bangladeshis out of poverty since 1992. Still, around 43percent of the population lived below the poverty line ($1.25 a day PPP) in 2010 (The World Bank, 2013).

Bangladesh has made important gains in the area of gender equality during the last decade. The government has made reforms with regards to violence against women, equal pay and maternity leave rights. Furthermore, the government has outlawed early marriage and has raised the minimum age for legal marriage to 18 years for women (UN CEDAW, 2010). Despite the recent progress, Bangladesh still has several areas where gender equality could be improved. First, women, especially in the rural areas, are rarely aware of their rights, making it more difficult to change traditional gender discriminating customs within society (The Asian Development Bank, 2001). Also, the United Nations estimated that 48percent of all the girls between 15 and 19 years of age in Bangladesh was either married, divorced or widowed in 2008 (UN, 2008). Another gender equality area is women's legal right to own and manage property. Despite women's significant role in agriculture, social practices and traditional customs exclude women from direct access to land. It is often the case for women not to claim her share of the family property unless it is given willingly. Women often surrender their right to own land and property in exchange to be able to visit their parents or brother's home for assistance in cases of, for example, marital conflicts (FAO, IFAD and ILC, 2004).

4.2 BURO Bangladesh

BURO Bangladesh is a national non-government development organization that was established in 1991. Their goal is to work for the poor and rural people to reduce income poverty. Over the years, the organization has specialized in providing microcredit to the rural poor and it currently serves 1.1 million poor individuals, particularly women, via 632 branch offices in all districts of Bangladesh. BURO Bangladesh offers a range of different financial services including loan-, saving- and insurance services to both men and women (BURO Bangladesh, 2013a).

BURO Bangladesh's most popular form of microcredit is called the general loan and is given exclusively to women. The general loan is intended to allow rural poor women to finance their economic activates, ranging from small businesses to agricultural activities. The general loan is a form of group-based loan discussed in chapter 2. Each village is divided into separate groups of around 30 women who receive individual loans. At the same time the women in the group depends on each other actions. If the individuals in the group make their repayment as they should, they can acquire access to repeated and larger loans. The group method works as a guarantor by creating peer pressure in the group for regular repayments. The amount received by each member range from USD 60 to 600, given in Taka, and depends on type of economic activity and borrower's management capacity. The amount for the next loan will also be based on previous repayments of the member. The general loan has a flat interest rate of 11percent, which is repaid within a year in 46 installments (BURO Bangladesh, 2013b).

A flat interest rate of 11percent is the interest charge by most microfinance institutions since the government has capped the flat interest rate that microfinance institution can charge at 11percent. This means that if a borrower takes an income-generating loan of Taka 1,000, and pays back the entire amount within a year in weekly installments, she'll pay a total amount of Taka 1,110, i.e. Taka 1,000 as principal, plus Taka 110 as interest for the year, equivalent to 11percent flat rate (Grameen Bank, 2013a). Members are required to attend weekly group meetings in their village to ensure repayment. BURO Bangladesh also strives to make these appointments a forum for learning and discussion between their members, which they believe empowers the women, making them even better customers in repaying the loans (BURO Bangladesh, 2013b).

4.3 BRAC

BRAC is as of November 2012 the largest non-governmental organization in the world, measured in the number of people it has helped. It was established in 1972 and is no present in all districts of Bangladesh and in Pakistan, Sri Lanka, Uganda, Tanzania, South Sudan, Sierra Leone, Liberia, Haiti and the Philippines. BRAC currently serves 4.39 million Bangladeshi individuals, most of who are women, via 2,150 branch offices with microcredit (BRAC, 2013a). BRAC has two forms of microcredit: one called Progoti,

which is given for both men and women, and one called Dabi, which is given exclusively for women. The Dabi microcredit program ranges from USD 50 to 700, given in Taka, and is given in a group setting that is labeled the Village Organization (VO). The VO, each with 30-40 women, function as a platform for poor women to come together, exchange information and raise awareness on social issues concerning their daily lives. Furthermore, the VO works as an informal guarantor by creating peer pressure in the group for regularly repayments. Borrowers repay their loans via weekly installments at a flat interest rate of 11percent during VO meetings held in the borrowers village. These loans are generally used for small operations poultry, livestock or handicraft (BRAC, 2013b).

4.4 Grameen Bank

The Grameen Bank was formed in 1976 when professor Muhammed Yunus launched a research project to examine the possibility of designing a credit system targeted to the rural poor. In October 1983, the project was transformed into an independent bank named the Grameen Bank. In 2006, the Grameen Bank and Muhammed Yunus were jointly awarded the Nobel Peace price. The organization is built around a group-based credit approach that utilizes peer-pressure within the group to ensure that the borrowers follow through with their payments. As stated earlier, the government of Bangladesh has fixed the flat interest rate that microfinance institutions can charge at 11percent. Grameen Bank's flat interest rate is at 10percent, which is repaid via weekly installments (Grameen Bank, 2013a). The Grameen Bank has a total of 8.39 million active borrowers of whom 97percent are women. It operates via 2,567 branches in 81,386 villages in Bangladesh (Grameen Bank, 2013b).

(5) Field Study in Bangladesh

The empirical material was gathered during the fall of 2012 in eight rural villages in the Tangail district, Bangladesh. The Tangail district is located in the northwestern part of Bangladesh, 100 km from the capital of Bangladesh, Dhaka. It was chosen as an appropriate district since it, according to staff members of both BURO Bangladesh and BRAC, is representative of Bangladesh in some aspects. The southern part of the Tangail

district is more densely populated, closer to the capital of the district and more developed than the northern part of Tangail. The first villages visited in the southern part were Agbikrum Hati and Akandapare, both located less than or equal to 6 km from Tangail city (point 1 in figure 1 below). The study was also conducted in Paikpara, Deojan and Pathrail, three villages in the southern part of Tangail located further away from Tangail city compared to Agbikrum Hati and Akandapare. Paikpara, Deojan and Pathrail were all located 6 to 12 km from Tangail city (point 2 in figure 1 below). Finally, the study was conducted in the northern part of Tangail in Baojian, Mirzabari and Teriata. These villages were located 55 to 67 km from Tangail city (point 3 in figure 1 below). The northern part of Tangail is, compared to the southern part, more rural and less developed.

Figure 1: Map of Tangail

5.1 Field Methodology

Because of the abstract nature of empowerment and its different definitions, there is a wide range of measuring methods. The choice of method depends on the aim of the study and on how one defines empowerment. The methods are many, both combinations and different types of qualitative and quantitative may be used. Due to the purpose of this thesis and its definition of empowerment, a quantitative method consisting of a questionnaire is used. Using a questionnaire with standardized answers makes it easier to compile data and it is therefore possible to give precise and testable expression to qualitative ideas. The questionnaire used in this thesis is based on questions for measuring empowerment used in other studies such as Bali Swain (2007) and Hashemi, Schuler, and Riley (1996). The different sources use similar or the same questions in their surveys. The emphasis of this thesis is on women empowerment and the main part of the questions deals with this topic. The questionnaire included multiple choice questions where answer choices were provided to the respondent, dichotomous questions that had only two alternatives, yes or no, and questions were the respondent answered with a number (age, number of years in microcredit program etc.) The same specific questions were asked to all the respondents and are presented in detail in appendix 1.

The questionnaire was conducted with both female microcredit borrower and soon-to-be female microcredit borrowers. To be able to make contact with microcredit borrowers and soon-to-be microcredit borrowers, staff members from BURO Bangladesh, BRAC, and Grameen Bank allowed me to visit their weekly repayment meetings. After the meeting, the research was presented and then the microcredit borrowers and soon-to-be microcredit borrowers who wanted to participate were asked the questions in the questionnaire, via an independent female translator named Mehnaz Morshed Disha, at another village site. Conducting the questionnaire at another village site was done to make the respondent more comfortable in answering the questions.

5.2 Descriptive data and patterns of empowerment

A total of 190 women answered questionnaire. 126 respondents had received microcredit from a microfinance institution. 64 of the respondents had been accepted

into a microcredit program but had not yet received microcredit but is about to within a couple of weeks. As stated earlier, this group is defined as soon-to-be microcredit borrowers.

Table 2: Microfinance institutions

	N	Percentage
BURO Bangladesh	89	62.24
BRAC	34	23.78
Grameen Bank	12	8.39
Others (ASA, Junota, Jamal, and Islamic)	8	5.59
	143	100

Table 2 tells us that of the 126 respondents that had received microcredit 89 respondents were part of BURO Bangladesh, 34 were part of BRAC, 12 were part of Grameen Bank and 8 were part of other microfinance institutions. Note that some of the respondents were enrolled in more than one microcredit program. These respondents will be counted as microcredit borrower. Thus, no further specification applies to those that received microcredit from more than one microfinance institution. This study aims at evaluating the effect of microcredit on women's empowerment. Thus, no analysis will be made showing the difference in empowerment depending on which microfinance institution the respondent is member of.

Table 3: Demography

	All (OBS = 190)		Microcredit borrower (OBS = 126)		Soon-to-be Microcredit borrower (OBS = 64)	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	34,0	10,6	36,1	10,3	29,8	10,1
Monthly Expenditure of the Household (Thousand BDT)	10,9	3,8	10,9	3,8	10,7	3,8
Number of Children	2,6	1,3	2,6	1,2	2,4	1,5
Land (Acres)	0,3	0,4	0,3	0,4	0,3	0,2
Number of Income-earners	1,5	0,7	1,6	0,8	1,3	0,6
Islam	0,8	0,4	0,8	0,4	0,7	0,5

Table 3 gives selected characteristics of the sample for microcredit borrowers and soon-to-be microcredit borrowers. Microcredit borrowers tend to be older and have a slightly

higher monthly expenditure. Also, microcredit borrowers have slightly more income-earners in the household and children compared to soon-to-be microcredit borrowers. What is not noted in table 3 regarding demography was that all the respondents were either married, divorced, or widowed. Also, all the respondents had at least one child.

Table 4: Income-earning activity

	All (OBS = 190)	Percentage	Microcredit borrower (OBS = 126)	Percentage	Soon-to-be Microcredit borrower (OBS = 64)	Percentage
Agricultural Work	87,0	45,8	51,0	40,5	36,0	56,3
Non Agricultural Work	12,0	6,3	10,0	7,9	2,0	3,1
Own Business	11,0	5,8	10,0	7,9	1,0	1,6
Husbands Business	80,0	42,1	55,0	43,7	25,0	39,1
Total	190,0	100,0	126,0	100,0	64,0	100,0

Table 4 gives information regarding income-earning activity for microcredit borrowers and soon-to-be microcredit borrowers. The picture that emerges is that soon-to-be microcredit borrowers seem to be, on average, more involved in the agricultural sector compared to microcredit borrowers. On the other hand, microcredit borrowers seem to be, on average, more involved in the non-agricultural sector. Furthermore, microcredit borrowers seem to be more likely, compared to soon-to-be microcredit borrowers, to be involved in an own business.

Table 5 below presents the empowerment indicators of this study, separated into the four subgroups presented in chapter 2. The indicators are corresponding to the questions on empowerment in the questionnaire. To be able to measure the respondent's answers to these questions a yes is transformed to a 1, and a no is transformed to a 0. In other words, a respondent given a 1 is seen as more empowered than a respondent given a 0. The broad picture that emerges is that microcredit borrowers are, on average, more empowered compared to soon-to-be microcredit borrower. This is seen via a higher value on every empowerment indicator. Also, the majority of both microcredit borrowers and soon-to-be microcredit borrower show low empowerment levels in the aspect of mobility, deciding to work outside the home, and land ownership.

Table 5: Empowerment indicators

	All (OBS = 190)		Microcredit borrower (OBS = 126)		Soon-to-be Microcredit borrower (OBS = 64)	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Decision-making indicators						
Make a small purchase (e.g. dress) without consulting husband	0,25	0,43	0,29	0,46	0,16	0,37
Have a say in whether to purchase major goods for the household (eg: TV)	0,72	0,45	0,76	0,43	0,64	0,48
Have a say in whether to work outside home	0,11	0,31	0,14	0,35	0,05	0,21
Have a say in how many children to have	0,87	0,34	0,90	0,29	0,80	0,41
Have a say in whether to buy or sell property	0,43	0,50	0,48	0,50	0,34	0,48
Have a say in whether or not to send children to school	0,91	0,29	0,97	0,18	0,78	0,42
Ownership of assets indicators						
Landownership in own name	0,04	0,20	0,06	0,23	0,02	0,13
Personally own property and/or valuables (eg: jewelry)	0,57	0,50	0,59	0,49	0,55	0,50
Have independent savings	0,34	0,47	0,50	0,50	0,02	0,13
Voice indicators						
Comfortable giving opinion in the presence of husband	0,77	0,42	0,82	0,39	0,69	0,47
People in the village listen to ideas and opinions	0,96	0,20	0,98	0,13	0,91	0,29
Mobility indicators						
Comfortable going to the local market without asking permission from husband or other family member	0,15	0,36	0,17	0,38	0,11	0,31
Comfortable going to the neighboring village without asking for permission from husband or other family member	0,01	0,10	0,02	0,13	0,00	0,00

Minimum = 0 and Maximum = 1

5.3 Limitations with the questionnaire methodology

The method used in this thesis has, like most methods, some limitations. But the chosen method is believed to be appropriate due to the purpose of this study. To give credibility to this thesis, it is important to highlight and clarify the limitations of using the

questionnaire method. Some argue that it may be problematic to use the questionnaire method since individuals have different frames of references, which results in the fact that the answer choices can have different meaning for different individuals. Another potential problem with using a questionnaire is that the questions often are broad and general, making room for individual interpretations that is not reflected in the limited answering choices (Gaiha and Thapa, 2006, p. 12). Furthermore, the questionnaire was conducted in English but most of the respondents that were involved in the study did not have sufficient language skills to answer the questions. Also, most of the women were unable to read both English and Bangladeshi. Therefore, an interpreter was required to translate the English questions into Bangladeshi, and then back to English. Consequently, it is possible that there was some divergence from the original question (Pan, 2007, p. 5). The same interpreter was used during all interviews, making all the respondents answer the same interpreted questions. It is therefore believed that the problem described above with using an interpreter is, to some degree, dealt with. Another limitation with the questionnaire and the sample as a whole is that it is rather small and only conducted in one district of Bangladesh. The sample might therefore not be entirely representative of all women living in Bangladesh, but the sample size is according to Scheyvens and Storey (2003) large enough for econometric methods and can be used to draw some conclusions (Scheyvens and Storey, 2003, p. 44).

(6) Econometric Analysis

From the data gathered via the questionnaire, the relationship between microcredit and women's empowerment is analyzed through a cross-sectional impact methodology, referred to as the control-group method. The quantitative data analysis has been conducted comparing microcredit borrowers with soon-to-be microcredit borrowers using the data gathered from the questionnaire. To further clarify, both the treatment group and the control group have been accepted into a microcredit program. The difference between the groups is that the treatment group, microcredit borrowers, has received microcredit and the control group, soon-to-be microcredit borrowers, has not received microcredit but is about to within a couple of weeks. To estimate the effect of microcredit on empowerment this study constructs a multiple linear regression model with the ordinary least squares (OLS) method.

6.1 Model specification

The method of ordinary least squares (OLS) has been used to analyze the data presented in the previous chapter. As mentioned earlier, the aim of this study is evaluate the impact of microcredit on women empowerment. The OLS model suits the purpose well in that a positive effect of microcredit on women empowerment is captured by the coefficient β_2. The null hypothesis is that microcredit has no effect on women empowerment. If β_2 obtains a significant positive value, it means that the null hypothesis can be rejected and that microcredit has a positive effect on women empowerment.

Women empowerment is measured via an empowerment index. The index is built on the empowerment indicators presented earlier in table 5, which in turn are derived from the respondent's answers on the thirteen empowerment questions in the questionnaire (found in appendix 1). To be able to measure the respondent's answers to these questions; a yes is transformed to a 1 and a no is transformed to a 0. The values for each of the thirteen empowerment indicators are then summed into an aggregate index with one-point increments from 0 to 13. An individual with a high aggregate empowerment index empowerment score is considered to be more empowered than an individual with a low aggregate empowerment index score.

The OLS model, in its most basic form, only includes the dependent variable empowerment index and the independent variable microcredit borrower. The model is then built up gradually by adding one independent control variable at a time. This is done to derive how the relationship between microcredit and women empowerment changes when independent control variables are added. There are a total of twelve independent variables conducted for in the model. Thus, there are twelve models, where the most comprehensive model includes twelve independent variables. Equation 1 below defines the most comprehensive model with all the independent variables.

Equation 1:

$$Empowerment\ index = \beta_1 + \beta_2\ Microcredit\ borrower + \beta_3\ Years\ of\ Microcredit\ Program\ Membership + \beta_4\ Age + \beta_5\ Hindu + \beta_6\ Expenditure + \beta_7\ Agriculture\ work + \beta_8\ Own\ Business + \beta_9\ Husband's\ Business + \beta_{10}\ Household\ Landownership + \beta_{11}\ Age\ at\ Marriage + \beta_{12}\ Number\ of\ Children + \beta_{13}\ Number\ of\ Income\text{-}earners\ in\ the\ Household + \varepsilon$$

Furthermore, this study aims to investigate the impact of microcredit on each of the empowerment indicators presented in table 5. The OLS models are, like before, built up gradually by adding one independent at a time. But the dependent variable is no longer empowerment index. Instead, each of the empowerment indicators is the dependent variable one at the time. In other words, the second OLS model has make small purchases as the dependent variable, the third OLS model has involved in decision to make large purchases as the dependent variable etc. As before, the relationship between the dependent variable and microcredit borrower is first tested, then independent control variables are gradually added.

6.2 Limitations with the control-group methodology

The possible limitations with the control-group method can be divided into four different categories: sample selection bias, reverse causation, dropouts and, motivational problems. Sample selection bias refers to the case where the control-group may turn out not to be completely comparable with the treatment-group. In other words, there is a possibility that the study suffers from bias due to endogeneity of decisions involved in program participation and the unobserved household, individual, and area characteristics. A main concern in assessing the impact of microcredit is that program placement is non-random and participants self-select themselves into the microcredit program (A. Islam, 2007, p. 12). A prospective member decides that he or she wants to participate in the microcredit program. The potential participant also has to be approved by officials of the microfinance institution. Thus, there are likely to be observable and unobservable differences in characteristics between participants and non-participants. Borrowers may, for example, have a more entrepreneurial spirit or be more dedicated. If the treatment group (the borrowers) have a tendency to possess an

attribute which is not usually controlled for (such as entrepreneurial ability), the comparison between the treatment-group and the control-group will be biased since it will ascribe achievements to the microcredit program that are in fact in part due to preexisting attributes of the treatment-group. In order to evaluate the program properly it is needed to take into account potential selection bias that could arise for non-random placements of the microcredit program, and common village-specific, household-specific and individual-specific unobservable characteristics (Hulme, 2000, p. 84, 85). To avoid biases that arise due to preexisting attributes this study use soon-to-be microcredit borrowers, accepted borrowers who have not yet received a loan, as the control-group. This study argues that accepted soon-to-be microcredit borrowers who have not yet received microcredit should have similar entrepreneurial ability and dedication as those who are already microcredit borrowers. To deal with village-specific unobservable characteristics, the soon-to-be microcredit borrowers and microcredit borrowers come from the same villages.

The second potential problem with the control-group method is reverse causation, which refers to the situation where some of the independent variables are endogenous. This might be the case when the dependent variable causes at least one of the independent variables, when there are relevant independent variables omitted from the model, or when the independent variables are subject to measurement error (Hulme, 2000, p. 85). Reverse causation is likely to be an issue given the model specification presented earlier. Observing that microcredit borrowers are more empowered than soon-to-be microcredit borrowers does not necessarily imply that microcredit made borrowers more empowered. For example, if a woman benefits from microcredit she is more likely to become empowered, but she is more likely to benefit from the microcredit if she is empowered. Thus, the causal link could run from empowerment to benefit of microcredit, not the other way around. Using instrumental variables is a common approach to tackle the issue of endogeneity. This approach addresses the potential problem of reverse causation described above, but it is difficult to find suitable instruments. The instruments must both be uncorrelated with the dependent variable (empowerment index) and correlated with the variable that is suspected of being endogenous (microcredit). Given the number of different empowerment indicators encompassed in the empowerment index, and based on the small data, there does not

appear to be any variable suitable to be an instrument for the potential endogenous variable[1]. A review of studies with similar methodological approach used in this study shows that little effort has been devoted to examining the potential of endogeneity bias. This suggest that endogeneity is either too complicated to handle due to lack of data or not a severe concern in this kind of studies (see for example, Hashemi, Schuler, and Riley 1996).

The third potential problem with using the control-group method is referred to as the dropout problem. Dropouts can cause an incomplete bias due to the fact that those who drop out presumably were impacted differently than those who remainder. Those who benefit from participation in a microcredit program invest the microcredit they are given in their business and generate more additional income than the interest they pay back on their loan. Most of these people stay in the microcredit program. Those who are made worse off fail to invest the money and then drop out. By including only those who remain in the program in the treatment group, those who suffer negative impact are ignored. This would lead to an overestimation impact analysis of the microcredit program. However, dropouts can also be generated by success. After successfully improving their business, they develop their own saving, and do not longer need microcredit and therefore leave the program. In this scenario, the impact analysis of the microcredit program would underestimate the impact since the greatest successes are ignored in the analysis. A potential solution to the dropout problem is to replace the dropouts with individuals sampled at random from the original population (Hulme, 2000, p. 90).

The fourth potential problem with using the control-group method is referred to as the motivational problem. It might be the case that the treatment group and/or the control-group refuse to reply or feel uncomfortable speaking about topics that are "taboo" in society. Another challenge is to be able to motivate the control-group to respond to the questionnaire. The control-group has no connection to the program evaluated, and their incentives to cooperate are low (Hulme, 2000, p. 90). This study approaches this

[1] This study tested distance to branch office and land ownership as instruments with empowerment index as the dependent variable. None of the potential instruments were significant in the first-stage regression. Consequently, they are unlikely to have much success in predicting the outcome when they are used to replace microcredit in the second-stage regression. See table 21 and 22 for first-stage regressions in appendix 2.

potential problem by letting the control group be individuals who have been approved for microcredit but has not yet received microcredit. Consequently, this study argues that this group of soon-to-be microcredit borrowers should be as motivated to respond to the questionnaire as the treatment group.

6.3 Predictions

Following this thesis theoretical framework, the hypothesis of this study is that the microcredit variables (microcredit borrower and years of microcredit program membership) will have a positive effect on women empowerment, i.e. their coefficients are positive for women's empowerment. However, it is possible that they differ in their effects. A combination of women's increased economic activity and control over income resulting from microcredit is expected to improve women's decision-making power, ownership of assets, mobility, and voice. In the context of rural Bangladesh, there are certain structural inequalities and social norms that reinforce the subservient position within the household and the community. This study doesn't suggest that microcredit will completely reverse these structural inequalities prevalent in the society. However, this study expects that microcredit will help women in contesting those prescribed gender rules and, hence, lead to greater empowerment.

There may be other factors that can have an impact on women's empowerment, and these variables are needed to control for. These independent variables are corresponding to the questions asked in the questionnaire and can be divided into two subgroups: individual and household characteristics. Individual characteristics include age, age at marriage, Hindu, agricultural work, own business, husband's business. Household characteristics include expenditure, landownership, number of children, and number of income earners in the household.

Age can be both positively and negatively related to women's empowerment. It may be the case that younger females, because of their low age, lack power within the household and society. It may also be the case that older women are dependent on their husband's or sons for support. Age at marriage is seen as positively related to women's empowerment. This study argues that a women that gets married at an high age are

more prone to enabling herself through education and work, and not getting stuck in a childbearing and dependent state at an low age. Hindu is chosen to represent religion as Bangladesh is a Muslim country and Hinduism is the minority religion. This enables estimation whether Hindu respondents are more or less empowered compared to Muslim respondents. It is expected that Hindu can be both positively and negatively related to empowerment. Agricultural work is expected to have a negative impact on women empowerment since the agricultural sector, in general, brings low income which in turn may put women in a dependent state. Own business is expected to have a positive effect on women empowerment since this study assumes that a woman who has her own business is likely to control both her income and a potential microcredit. On the contrary, husband's business is expected to have a negative impact on women empowerment. A potential scenario for a woman who works in her husband's business is that she receives microcredit, which is invested in her husband's business. Thus, she losses control over both the microcredit and potentially her income.

This study suggests that expenditure and land ownership can to some extent determine the household's standard of living. Both these variables are expected to have a positive effect on women empowerment since standard of living is negatively associated with the number of children in the household. A high number of children in the household bring, in general, a higher domestic workload for the woman. Thus, she is less likely to generate her own income and is put in a state of dependence. There is no explicit expectation on the sign of the coefficient linked to the number of income earners in the household. It can be argued that it can take a positive value since a household with more income earners can have a higher standard of living and are therefore more empowered following the earlier reasoning. On the other hand, it can be argued that it can take a negative value since more income earners in the household can lead to less decision-making power over household expenditure, thus, negatively effecting women's empowerment. A summary of the independent variables, including its definition and expected impact on empowerment, is shown in table 6 below.

Table 6: Summary predictions

	Definition	Expected Impact
Microcredit borrower	The respondent has received microcredit	+
Years of Microcredit program membership	Number of years of microcredit program membership	+
Age	Age in years	+/-
Hindu	The respondents religion is Hindu	+/-
Expenditure	Monthly household expenditure	+
Agricultural Work	The respondents income earning activity is agricultural	-
Own Business	The respondents income earning activity is her own business	+
Husband's Business	The respondents income earning activity is her husband's business	-
Household Land Ownership	Land ownership is defined in terms of acres	+
Age at Marriage	The age at which the respondent got married	+
Number of Children	The number of children the respondent has	-
Number of Income-earners in the Household	The number of income earners in the household	+/-

(7) Regression Results

This chapter is separated into two main parts. The first part evaluates the impact of microcredit on empowerment. The second part evaluates the impact of microcredit on the different subgroups of empowerment presented in chapter 2.

7.1 Empowerment

The OLS model, in its most basic form, only includes the dependent variable empowerment index and the independent variable microcredit borrower. The model is then built up gradually by adding one independent variable at a time. This is done to see how the relationship between microcredit and women empowerment changes when independent variables are added. The broad picture that emerges from the OLS results in Table 7 below is that microcredit seems to have a significant positive effect on women's empowerment. This is according to the expectations presented in the previous chapter. Although the magnitude of the effect depends on the set of controls used, microcredit increases the level of empowerment. The estimated effect from the most complete specification including both individual and household characteristics is statistically significant at the 5 percent level. In terms of magnitude, the empowerment index is expected to increase, on average, with 1,6 points if the respondent has received microcredit in the most basic OLS model without other independent control variables. In the most comprehensive model, the empowerment index is expected to increase, on average, with 1 point holding all the other independent control variables constant. The pattern of estimates and significant level across different sets of independent control variables indicates that the estimate for microcredit on women's empowerment is robust. Furthermore, it was expected that the number of years of microcredit membership was going to have a positive impact on women empowerment. The results in table 7 tell us that the length of microcredit membership is not significantly positively correlated with women empowerment. A potential explanation might be that the initial microcredit given enhances a women's empowerment the most. The additional microcredits given over the years brings marginally less value to women's empowerment.

Table 7: OLS Results - dependent variable: Empowerment index

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	1.636***	1.322**	1.389**	1.432**	1.506***	1.453**	1.473***	1.445***	1.112**	1.065**	1.051**	1.030**
	(0.305)	(0.431)	(0.444)	(0.447)	(0.441)	(0.442)	(0.431)	(0.416)	(0.395)	(0.396)	(0.393)	(0.392)
Years of Microcredit Program Membership		0.0285	0.0163	0.0161	0.00368	0.00273	-0.00872	-0.0161	-0.0130	-0.0119	-0.0132	-0.0101
		(0.0276)	(0.0339)	(0.0339)	(0.0337)	(0.0337)	(0.0330)	(0.0319)	(0.0304)	(0.0303)	(0.0301)	(0.0301)
Age			0.0108	0.00869	0.0136	0.0125	0.0140	0.0189	0.00770	0.0164	0.0167	0.0261
			(0.0173)	(0.0175)	(0.0173)	(0.0173)	(0.0169)	(0.0163)	(0.0157)	(0.0170)	(0.0169)	(0.0180)
Hindu				0.307	0.190	0.1000	0.0781	0.105	0.107	0.132	0.194	0.130
				(0.346)	(0.344)	(0.350)	(0.341)	(0.329)	(0.315)	(0.315)	(0.315)	(0.317)
Expenditure					1.055*	1.054*	0.851*	0.786*	0.546	0.507	0.440	0.539
					(0.407)	(0.406)	(0.401)	(0.388)	(0.367)	(0.368)	(0.367)	(0.372)
Agricultural Work						-0.396	-0.209	-2.111***	-2.032***	-2.014***	-2.077***	-2.450***
						(0.295)	(0.293)	(0.573)	(0.531)	(0.530)	(0.528)	(0.585)
Own Business							2.019**	0.161	0.367	0.326	0.109	0.0133
							(0.625)	(0.775)	(0.720)	(0.719)	(0.724)	(0.725)
Husband's Business								-2.188***	-2.125***	-2.213***	-2.267***	-2.645***
								(0.574)	(0.532)	(0.535)	(0.532)	(0.591)
Age of Marriage									0.149**	0.146**	0.147**	0.138*
									(0.0536)	(0.0536)	(0.0532)	(0.0534)
Number of Children										-0.155	-0.182	-0.170
										(0.116)	(0.116)	(0.116)
Household Landownership											0.662	0.689
											(0.364)	(0.363)
Number of Income-earners in the Household												-0.332
												(0.228)
_cons	5.047***	5.047***	4.724***	4.697***	2.148	2.434*	2.727*	4.677***	3.579**	3.885**	3.936**	4.324**
	(0.248)	(0.248)	(0.573)	(0.574)	(1.134)	(1.152)	(1.127)	(1.201)	(1.328)	(1.344)	(1.336)	(1.358)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.128	0.129	0.126	0.125	0.151	0.155	0.196	0.252	0.257	0.260	0.270	0.275

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Also, women's age seems to have a significant effect on women empowerment. This shows the importance of enforcing the existing law on delaying the age of marriage for continuous women empowerment in Bangladesh. Agricultural work and husband's business seem to be negatively correlated with women empowerment. A potential explanation is that a woman engaged in agricultural activities, in most cases, earns little income. In turn, this might put that woman in a state of economic dependency towards her husband. A reason why woman working for her husband is less empowered might be because she has lost control over her income and potentially her microcredit to her husband.

The results steaming from table 7 confirms the notion that microcredit has a positive impact on women's empowerment. However, these results do not tell us in what way microcredit has a positive impact on women's empowerment. To get insight in this matter, the impact of microcredit is examined on each of the empowerment indicators in section 7.2.

7.2 Subgroups of Empowerment

The OLS models in this section are, like in the previous section, built up gradually by adding one independent control variable at a time. The dependent variable is no longer empowerment index. Instead, each of the empowerment indicators is the dependent variable one at the time. This section is divided into the four subgroups of empowerment, namely decision-making power within the household, ownership of assets, voice, and mobility.

7.2.1 Decision-making power within the household

Decision-making power within the household is the subgroup that shows the amount of say the woman has in household decisions. Decision-making power is in turn divided into the following six separate indicators: ability to make small purchases, involved in decision to make large purchases, involved in decision to work outside the home, involved in decision on how many children to have, involved in decision to buy or sell property, and involved in decision to send children to school. Microcredit seem to be significantly positive correlated with ability to make small purchases, involved in decision on how many children to have, and involved in decision to work outside the

home at the 10 percent level in the simplest model without independent control variables. When the independent control variables are added to the model, microcredit is no longer significantly correlated to the empowerment indicators presented above. This suggest that the relationship between microcredit and ability to make small purchases, involved in decision on how many children to have, and involved in decision to work outside the home is not very robust.

Testing the relationship between microcredit and involved in decision to send children to school, it is found in the simplest model, without independent control variables, that microcredit is significantly positive at the 1 percent level. When each control variable is added, the effect of microcredit on involved in decision to send children to school gets less significant. In the model with all independent control variables, the relationship is no longer significant. This suggests that the independent control variables affect the dependent variable involved in decision to send children to school. Thus, the relationship between microcredit and involved in decision to send children to school is not as robust as seen in the simplest model without independent control variables. Microcredit shows a positive significant impact at the 10 percent level on involved in decision to buy or sell property. This is the case in all the models, from the model without independent control variables to the model with all the independent control variables. This suggests that the relationship is robust. However, microcredit did not show significant impact on involved in decision to make large purchases, even in the simplest model without independent control variables. These decisions, which have traditionally been within the male domain, reflect that although the women have enhanced their decision-making power, microcredit have not been able to make substantial impact in this key area. The variable husband's business show a significant negative impact on Involved in decision to make large purchases, ability to make small purchases, Involved in decision to work outside the home. On the other hand, the independent variable age of marriage is significantly positive to involved in decision to buy or sell property, involved in decision on how many children to have, and involved in decision to make large purchases. The OLS models for ability to make small purchases (table 8), involved in decision to make large purchases (table 9), involved in decision to work outside the home (table 10), involved in decision on how many children to have

(table 11), involved in decision to buy or sell property (table 12), and involved in decision to send children to school (table 13) are found in appendix 2.

7.2.2 Ownership of assets

The subgroup ownership of assets shows if a woman owns land or any other property or valuable. This is measured in terms of own landownership, ownership of property and/or valuables, and independent savings. Microcredit shows to have no significant positive (or negative) impact on landownership in own name and personally own property and/or valuable. On the contrary, the positive relationship between microcredit and independent savings is significant at the 1 percent level in all the models, from the most basic without independent control variables to the most comprehensive model with all the independent control variables. This suggests that the relationship is robust. An explanation might be that the microcredit borrowers have built up a trust and relationship with the microcredit program, and thus been able to access the other financial services offered by the microfinance institutions. The soon-to-be microcredit borrowers have not yet built up this trust and relationship. Age, age of marriage and own business is positive significant, in most of the models, in explaining landownership in own name. In the case of ownership of assets, it seems as household traits and traditions are more important than microcredit. The OLS models for own landownership (table 14), ownership of property and/or valuables (table 15), and independent savings (table 16) are found in appendix 2.

7.2.3 Voice

Voice is a variable showing the woman's freedom of expression, if she is able to express her views in the presence of her husband, family members and others. Voice is examined via two variables: comfortable giving opinion in the presence of husband or other family member and village people listen to ideas and opinions. Microcredit is a positive significant explanatory variable in the most basic model without independent control variables for both comfortable giving opinion in the presence of family member and Village people listen to ideas and opinions. However, the relationship seems not to be that strong since when independent control variables are added, the relationships are no longer significant. Furthermore, expenditure seem to be positively correlated with comfortable giving opinion in the presence of family member while number of children

is negatively significant in explaining comfortable giving opinion in the presence of family members. The OLS models for comfortable giving opinion in the presence of husband or family member (table 17) and Village people listen to ideas and opinions (table 18) are found in appendix 2.

7.2.4 Mobility

Mobility is the subgroup that defines a women's freedom of movement. Mobility is divided into two indicators: comfortable going to the local market without asking for permission and comfortable going to the neighborhood village without asking for permission. Microcredit shows no significant relationship to either comfortable going to the local market without asking for permission or comfortable going to the neighborhood village without asking for permission. As presented in table 5 in chapter 4, both microcredit borrowers and soon-to-be microcredit borrowers are highly restricted in their freedom of movement. Also, husband's business and agricultural work is negatively significant in explaining both comfortable going to the local market without asking for permission and comfortable going to the neighborhood village without asking for permission. This might be explained by the fact that most of the individuals involved in the agricultural activities live in their home village. Thus, a person whose income-earning activity is located in, for example, another village is consequently more mobile. The OLS models for comfortable going to the local market without asking for permission (table 19) and comfortable going to the neighborhood village without asking for permission (table 20) are found in appendix 2.

(8) Conclusion

This study empirically evaluates the impact of microcredit on women's empowerment in the Tangail district in Bangladesh. The findings, derived from the OLS models, suggest that microcredit has a positive impact on women's empowerment. The results indicate that microcredit strengthens women's family standing represented by their greater role in the household decision-making process. The result that microcredit has a positive effect on women's decision making ability within the household is in line with the findings from Holvoet (2005) and Kabeer (2001). However, the impact of microcredit on women's freedom of mobility is indistinct based on the empirical results. This suggests

that it would be relevant to further investigate how microcredit impact different dimensions of women's empowerment to improve the potential of microcredit as an empowerment tool.

Years of microcredit program membership was expected to have a positive impact on empowerment. The findings in this study suggest that this doesn't have to be the case. Thus, there is room for empowerment related improvements within the microcredit programs. This study therefore suggests that more studies should evaluate the relationship between years of microcredit program membership and women's empowerment in the future. It is important to keep in mind that a quantitative analysis of aggregated data has its limitations. Reality is not easily captured in numbers and most quantitative analysis is required to some simplification and generalization. This does not render the results meaningless, but they are to be interpreted carefully. Since this study was based on a small sample size from only a few villages in the Tangail district the results cannot be generalized to other districts of Bangladesh. More extensive studies that include a larger sample size from different districts could further shed light on how microcredit affects women empowerment.

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Appendix

Appendix 1: Questionnaire

1. Name of village?
2. How old are you?
3. What Religion do you belong to?
4. What is your primary activity?

5. What is your household's monthly expenditure?
6. Do you have a husband?
7. At what age did you get married?
8. How many children do you have?
9. How much land does your household own?
10. How many income earners do your household have?
11. a. Do you think you are eligible for a microcredit program?
    11. b. If yes, which microcredit program are you enrolled in?
    11. c. If yes, but not enrolled, what is the reason you remain not enrolled?
12. How many years have you been a part of that microcredit program?
13. If you wanted to buy a sari or a dress, would you feel free to do so without consulting with your husband (if you have one) or other family member?
14. Do you have a say in whether to purchase major goods for the household such as a TV?
15. Do you have a say in whether you should work outside the home?
16. Do you have a say in how many children to have?
17. Do you have a say in whether to buy or sell property?
18. Do you have a say in whether or not to send your children to school?
19. Do you own land in your own name?
20. Do you personally own any other property or valuables, such as jewelry?
21. Do you have independent savings that you control?
22. Do you feel comfortable giving your opinion in the presence of your husband (if you have one) or other family member?
23. Do you feel that people in the village listen to your ideas and opinions?
24. Do you feel comfortable going to the local market without asking for permission from your husband (if you have one) or other family member?
25. Do you feel comfortable going to the neighboring village without asking for permission from your husband (if you have one) or other family

Appendix 2: Data

Table 8: OLS Results - dependent variable: Ability to make small purchases

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.137*	0.132	0.0875	0.0877	0.101	0.101	0.105	0.0998	0.0861	0.0859	0.0834	0.0845
	(0.0658)	(0.0933)	(0.0955)	(0.0963)	(0.0956)	(0.0962)	(0.0947)	(0.0926)	(0.0959)	(0.0965)	(0.0964)	(0.0967)
Years of Microcredit Program Membership		0.000468	0.00862	0.00862	0.00641	0.00641	0.00434	0.00303	0.00251	0.00252	0.00230	0.00212
		(0.00599)	(0.00727)	(0.00729)	(0.00730)	(0.00732)	(0.00724)	(0.00709)	(0.00738)	(0.00740)	(0.00739)	(0.00743)
Age			-0.00723	-0.00723	-0.00636	-0.00636	-0.00610	-0.00522	-0.00554	-0.00549	-0.00545	-0.00596
			(0.00372)	(0.00376)	(0.00375)	(0.00376)	(0.00370)	(0.00363)	(0.00382)	(0.00415)	(0.00414)	(0.00445)
Hindu				0.00112	-0.0198	-0.0195	-0.0235	-0.0186	-0.0249	-0.0248	-0.0145	-0.0110
				(0.0745)	(0.0744)	(0.0761)	(0.0748)	(0.0732)	(0.0766)	(0.0769)	(0.0772)	(0.0782)
Expenditure					0.188*	0.188*	0.152	0.140	0.120	0.120	0.109	0.103
					(0.0882)	(0.0884)	(0.0881)	(0.0862)	(0.0892)	(0.0897)	(0.0900)	(0.0918)
Agricultural Work						0.00102	0.0349	-0.306*	-0.303*	-0.303*	-0.314*	-0.294*
						(0.0642)	(0.0644)	(0.127)	(0.129)	(0.129)	(0.130)	(0.144)
Own Business							0.365**	0.0322	0.0497	0.0495	0.0132	0.0183
							(0.137)	(0.172)	(0.175)	(0.175)	(0.178)	(0.179)
Husband's Business								-0.392**	-0.390**	-0.390**	-0.399**	-0.379*
								(0.128)	(0.129)	(0.130)	(0.130)	(0.146)
Age of Marriage									0.0139	0.0139	0.0142	0.0147
									(0.0130)	(0.0131)	(0.0131)	(0.0132)
Number of Children										-0.000755	-0.00528	-0.00596
										(0.0283)	(0.0285)	(0.0286)
Household Landownership											0.110	0.109
											(0.0892)	(0.0896)
Number of Income-earners in the Household												0.0180
												(0.0563)
_cons	0.156**	0.156**	0.372**	0.372**	-0.0826	-0.0833	-0.0303	0.319	0.182	0.184	0.192	0.171
	(0.0536)	(0.0537)	(0.123)	(0.124)	(0.246)	(0.251)	(0.247)	(0.267)	(0.322)	(0.328)	(0.328)	(0.335)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.017	0.012	0.027	0.021	0.040	0.035	0.066	0.107	0.105	0.100	0.103	0.098

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 9: OLS Results - dependent variable: Involved in decision to make large purchases

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.121	0.112	0.120	0.115	0.117	0.126	0.129	0.125	0.0727	0.0727	0.0713	0.0739
	(0.0686)	(0.0973)	(0.101)	(0.101)	(0.102)	(0.102)	(0.101)	(0.100)	(0.100)	(0.101)	(0.101)	(0.101)
Years of Microcredit Program Membership		0.000869	-0.000576	-0.000554	-0.000851	-0.000691	-0.00251	-0.00346	-0.00330	-0.00330	-0.00343	-0.00383
		(0.00625)	(0.00766)	(0.00768)	(0.00777)	(0.00778)	(0.00774)	(0.00769)	(0.00771)	(0.00774)	(0.00775)	(0.00778)
Age			0.00128	0.00152	0.00164	0.00181	0.00205	0.00268	0.000967	0.000957	0.000982	-0.000216
			(0.00391)	(0.00396)	(0.00399)	(0.00400)	(0.00396)	(0.00393)	(0.00399)	(0.00434)	(0.00435)	(0.00466)
Hindu				-0.0344	-0.0373	-0.0221	-0.0256	-0.0220	-0.0269	-0.0269	-0.0209	-0.0127
				(0.0784)	(0.0793)	(0.0808)	(0.0800)	(0.0793)	(0.0801)	(0.0804)	(0.0810)	(0.0819)
Expenditure					0.0253	0.0256	-0.00649	-0.0150	-0.0629	-0.0629	-0.0693	-0.0820
					(0.0939)	(0.0939)	(0.0941)	(0.0934)	(0.0932)	(0.0938)	(0.0944)	(0.0962)
Agricultural Work						0.0667	0.0965	-0.151	-0.140	-0.140	-0.146	-0.0982
						(0.0682)	(0.0688)	(0.138)	(0.135)	(0.135)	(0.136)	(0.151)
Own Business							0.321*	0.0790	0.118	0.118	0.0968	0.109
							(0.147)	(0.187)	(0.183)	(0.183)	(0.186)	(0.187)
Husband's Business								-0.285*	-0.275*	-0.275*	-0.280*	-0.232
								(0.138)	(0.135)	(0.136)	(0.137)	(0.153)
Age of Marriage									0.0282*	0.0282*	0.0284*	0.0296*
									(0.0136)	(0.0137)	(0.0137)	(0.0138)
Number of Children										0.000176	-0.00245	-0.00404
										(0.0296)	(0.0299)	(0.0300)
Household Landownership											0.0641	0.0608
											(0.0936)	(0.0938)
Number of Income-earners in the Household												0.0424
												(0.0590)
_cons	0.641***	0.641***	0.602***	0.606***	0.544*	0.496	0.543*	0.797**	0.578	0.578	0.583	0.533
	(0.0559)	(0.0560)	(0.130)	(0.130)	(0.262)	(0.266)	(0.264)	(0.290)	(0.337)	(0.343)	(0.344)	(0.351)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.011	0.006	0.001	-0.003	-0.008	-0.008	0.012	0.029	0.035	0.029	0.026	0.024

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 10: OLS Results - dependent variable: Involved in decision to work outside the home

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.0960*	0.0196	0.00513	0.0107	0.0178	-0.00234	0.00657	-0.000471	-0.00596	-0.00743	-0.00778	-0.00732
	(0.0479)	(0.0674)	(0.0695)	(0.0700)	(0.0699)	(0.0684)	(0.0508)	(0.0407)	(0.0423)	(0.0426)	(0.0427)	(0.0428)
Years of Microcredit Program Membership		0.00693	0.00957	0.00955	0.00836	0.00800	0.00290	0.000993	0.00175	0.00179	0.00175	0.00168
		(0.00433)	(0.00530)	(0.00530)	(0.00534)	(0.00520)	(0.00389)	(0.00312)	(0.00325)	(0.00326)	(0.00327)	(0.00329)
Age			-0.00234	-0.00262	-0.00215	-0.00254	-0.00189	-0.000617	-0.000954	-0.000679	-0.000673	-0.000890
			(0.00271)	(0.00274)	(0.00274)	(0.00267)	(0.00199)	(0.00160)	(0.00169)	(0.00183)	(0.00183)	(0.00197)
Hindu				0.0396	0.0284	-0.00539	-0.0152	-0.00807	-0.00230	-0.00152	-0.0000465	0.00143
				(0.0542)	(0.0544)	(0.0541)	(0.0402)	(0.0322)	(0.0338)	(0.0339)	(0.0342)	(0.0346)
Expenditure					0.101	0.100	0.0102	-0.00690	-0.0000101	-0.00124	-0.00283	-0.00512
					(0.0645)	(0.0629)	(0.0472)	(0.0379)	(0.0393)	(0.0396)	(0.0399)	(0.0406)
Agricultural Work						-0.149**	-0.0653	-0.559***	-0.557***	-0.556***	-0.558***	-0.549***
						(0.0456)	(0.0345)	(0.0560)	(0.0569)	(0.0571)	(0.0573)	(0.0639)
Own Business							0.901***	0.418***	0.412***	0.411***	0.406***	0.408***
							(0.0736)	(0.0758)	(0.0771)	(0.0773)	(0.0786)	(0.0791)
Husband's Business								-0.568***	-0.566***	-0.569***	-0.570***	-0.562***
								(0.0561)	(0.0570)	(0.0575)	(0.0578)	(0.0645)
Age of Marriage									-0.00599	-0.00610	-0.00606	-0.00584
									(0.00574)	(0.00576)	(0.00578)	(0.00584)
Number of Children										-0.00489	-0.00553	-0.00582
										(0.0125)	(0.0126)	(0.0127)
Household Landownership											0.0158	0.0152
											(0.0395)	(0.0397)
Number of Income-earners in the Household												0.00768
												(0.0249)
_cons	0.0469	0.0469	0.117	0.113	-0.131	-0.0238	0.107	0.613***	0.696***	0.706***	0.707***	0.698***
	(0.0390)	(0.0388)	(0.0896)	(0.0898)	(0.180)	(0.178)	(0.133)	(0.117)	(0.142)	(0.145)	(0.145)	(0.148)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.016	0.024	0.023	0.020	0.028	0.076	0.491	0.673	0.672	0.670	0.669	0.667

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 11: OLS Results - dependent variable: Involved in decision on how many children to have

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.108*	0.0220	0.0375	0.0451	0.0519	0.0551	0.0558	0.0539	-0.0210	-0.0165	-0.0183	-0.0194
	(0.0516)	(0.0726)	(0.0748)	(0.0753)	(0.0753)	(0.0757)	(0.0758)	(0.0756)	(0.0710)	(0.0714)	(0.0713)	(0.0715)
Years of Microcredit Program Membership		0.00780	0.00496	0.00493	0.00378	0.00383	0.00340	0.00290	0.00477	0.00467	0.00451	0.00466
		(0.00466)	(0.00570)	(0.00570)	(0.00575)	(0.00576)	(0.00580)	(0.00580)	(0.00547)	(0.00548)	(0.00547)	(0.00550)
Age			0.00252	0.00215	0.00260	0.00266	0.00272	0.00305	0.000172	-0.000673	-0.000641	-0.000174
			(0.00291)	(0.00294)	(0.00295)	(0.00296)	(0.00297)	(0.00297)	(0.00283)	(0.00307)	(0.00307)	(0.00329)
Hindu				0.0535	0.0426	0.0479	0.0471	0.0489	0.0585	0.0561	0.0638	0.0607
				(0.0583)	(0.0586)	(0.0599)	(0.0600)	(0.0598)	(0.0567)	(0.0569)	(0.0572)	(0.0579)
Expenditure					0.0980	0.0981	0.0904	0.0859	0.0436	0.0474	0.0391	0.0441
					(0.0694)	(0.0696)	(0.0706)	(0.0704)	(0.0661)	(0.0664)	(0.0666)	(0.0679)
Agricultural Work						0.0232	0.0302	-0.101	-0.0841	-0.0859	-0.0937	-0.112
						(0.0505)	(0.0516)	(0.104)	(0.0956)	(0.0958)	(0.0958)	(0.107)
Own Business							0.0765	-0.0514	-0.0182	-0.0143	-0.0414	-0.0461
							(0.110)	(0.141)	(0.129)	(0.130)	(0.131)	(0.132)
Husband's Business								-0.151	-0.134	-0.125	-0.132	-0.151
								(0.104)	(0.0957)	(0.0965)	(0.0965)	(0.108)
Age of Marriage									0.0214*	0.0218*	0.0220*	0.0215*
									(0.00964)	(0.00967)	(0.00966)	(0.00975)
Number of Children										0.0150	0.0116	0.0122
										(0.0209)	(0.0211)	(0.0212)
Household Landownership											0.0823	0.0837
											(0.0660)	(0.0663)
Number of Income-earners in the Household												-0.0165
												(0.0417)
_cons	0.797***	0.797***	0.722***	0.717***	0.480*	0.464*	0.475*	0.609**	0.520*	0.490*	0.497*	0.516*
	(0.0420)	(0.0418)	(0.0964)	(0.0966)	(0.193)	(0.197)	(0.198)	(0.218)	(0.239)	(0.243)	(0.242)	(0.248)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.018	0.027	0.026	0.025	0.030	0.026	0.023	0.029	0.034	0.031	0.034	0.030

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 12: OLS Results - dependent variable: Involved in decision to buy or sell property

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.132	0.258*	0.274*	0.276*	0.273*	0.276*	0.276*	0.275*	0.261*	0.265*	0.264*	0.258*
	(0.0758)	(0.107)	(0.110)	(0.111)	(0.112)	(0.112)	(0.113)	(0.113)	(0.114)	(0.115)	(0.115)	(0.115)
Years of Microcredit Program Membership		-0.0114	-0.0143	-0.0143	-0.0138	-0.0138	-0.0134	-0.0137	-0.0165	-0.0166	-0.0168	-0.0160
		(0.00685)	(0.00839)	(0.00842)	(0.00852)	(0.00854)	(0.00861)	(0.00865)	(0.00881)	(0.00883)	(0.00885)	(0.00886)
Age			0.00254	0.00246	0.00227	0.00234	0.00230	0.00246	0.00261	0.00191	0.00193	0.00431
			(0.00429)	(0.00434)	(0.00438)	(0.00439)	(0.00440)	(0.00443)	(0.00456)	(0.00495)	(0.00496)	(0.00530)
Hindu				0.0108	0.0153	0.0211	0.0217	0.0226	-0.00281	-0.00481	0.00177	-0.0144
				(0.0860)	(0.0869)	(0.0888)	(0.0890)	(0.0892)	(0.0914)	(0.0918)	(0.0925)	(0.0932)
Expenditure					-0.0410	-0.0408	-0.0352	-0.0373	-0.0973	-0.0942	-0.101	-0.0762
					(0.103)	(0.103)	(0.105)	(0.105)	(0.106)	(0.107)	(0.108)	(0.109)
Agricultural Work						0.0256	0.0204	-0.0412	-0.0424	-0.0439	-0.0506	-0.145
						(0.0749)	(0.0766)	(0.155)	(0.154)	(0.154)	(0.155)	(0.172)
Own Business							-0.0563	-0.117	-0.0653	-0.0620	-0.0852	-0.109
							(0.163)	(0.210)	(0.209)	(0.209)	(0.213)	(0.213)
Husband's Business								-0.0709	-0.0698	-0.0627	-0.0684	-0.164
								(0.155)	(0.154)	(0.156)	(0.156)	(0.174)
Age of Marriage									0.0426**	0.0428**	0.0430**	0.0406*
									(0.0155)	(0.0156)	(0.0156)	(0.0157)
Number of Children										0.0125	0.00961	0.0128
										(0.0338)	(0.0341)	(0.0341)
Household Landownership											0.0703	0.0770
											(0.107)	(0.107)
Number of Income-earners in the Household												-0.0841
												(0.0672)
_cons	0.344***	0.344***	0.268	0.267	0.366	0.348	0.339	0.403	-0.0676	-0.0922	-0.0868	0.0115
	(0.0617)	(0.0614)	(0.142)	(0.143)	(0.287)	(0.292)	(0.294)	(0.326)	(0.385)	(0.391)	(0.392)	(0.399)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.011	0.020	0.017	0.011	0.007	0.002	-0.003	-0.007	0.020	0.016	0.012	0.016

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 13: OLS Results - dependent variable: Involved in decision to send children to school

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.187***	0.123*	0.148*	0.153*	0.158*	0.156*	0.156*	0.156*	0.0789	0.0875	0.0867	0.0830
	(0.0431)	(0.0607)	(0.0623)	(0.0627)	(0.0628)	(0.0632)	(0.0633)	(0.0635)	(0.0580)	(0.0579)	(0.0580)	(0.0576)
Years of Microcredit Program Membership		0.00584	0.00131	0.00128	0.000486	0.000445	0.000388	0.000485	0.00318	0.00298	0.00291	0.00349
		(0.00390)	(0.00475)	(0.00475)	(0.00479)	(0.00481)	(0.00485)	(0.00487)	(0.00446)	(0.00444)	(0.00445)	(0.00443)
Age			0.00401	0.00373	0.00404	0.00400	0.00400	0.00394	0.000798	-0.000824	-0.000811	0.000910
			(0.00242)	(0.00245)	(0.00246)	(0.00247)	(0.00248)	(0.00249)	(0.00231)	(0.00249)	(0.00249)	(0.00265)
Hindu				0.0412	0.0337	0.0298	0.0297	0.0294	0.0448	0.0402	0.0435	0.0318
				(0.0485)	(0.0489)	(0.0499)	(0.0501)	(0.0502)	(0.0463)	(0.0461)	(0.0465)	(0.0466)
Expenditure					0.0680	0.0679	0.0669	0.0678	0.0364	0.0437	0.0401	0.0582
					(0.0579)	(0.0580)	(0.0589)	(0.0591)	(0.0539)	(0.0538)	(0.0542)	(0.0547)
Agricultural Work						-0.0170	-0.0161	0.00886	0.0258	0.0225	0.0191	-0.0492
						(0.0421)	(0.0431)	(0.0875)	(0.0780)	(0.0776)	(0.0779)	(0.0861)
Own Business							0.00998	0.0343	0.0581	0.0657	0.0540	0.0365
							(0.0917)	(0.118)	(0.106)	(0.105)	(0.107)	(0.107)
Husband's Business								0.0287	0.0475	0.0640	0.0611	-0.00818
								(0.0875)	(0.0781)	(0.0783)	(0.0785)	(0.0869)
Age of Marriage									0.0131	0.0138	0.0138	0.0121
									(0.00787)	(0.00784)	(0.00785)	(0.00786)
Number of Children										0.0288	0.0274	0.0296
										(0.0170)	(0.0171)	(0.0171)
Household Landownership											0.0355	0.0404
											(0.0537)	(0.0534)
Number of Income-earners in the Household												-0.0609
												(0.0336)
_cons	0.781***	0.781***	0.662***	0.658***	0.494**	0.506**	0.507**	0.482**	0.496*	0.439*	0.442*	0.513*
	(0.0351)	(0.0350)	(0.0803)	(0.0804)	(0.161)	(0.164)	(0.165)	(0.183)	(0.195)	(0.197)	(0.197)	(0.200)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.086	0.092	0.101	0.099	0.101	0.097	0.092	0.088	0.051	0.061	0.058	0.070

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 14: OLS Results - dependent variable: Landownership in own name

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.0399	0.0466	0.0781	0.0688	0.0714	0.0695	0.0710	0.0714	0.0872	0.0846	0.0829	0.0806
	(0.0309)	(0.0437)	(0.0442)	(0.0441)	(0.0442)	(0.0445)	(0.0439)	(0.0440)	(0.0447)	(0.0450)	(0.0447)	(0.0445)
Years of Microcredit Program Membership		-0.000604	-0.00635	-0.00631	-0.00674*	-0.00678*	-0.00765*	-0.00756*	-0.00986**	-0.00981**	-0.00996**	-0.00959**
		(0.00281)	(0.00337)	(0.00334)	(0.00338)	(0.00338)	(0.00336)	(0.00337)	(0.00344)	(0.00345)	(0.00342)	(0.00342)
Age			0.00510**	0.00555**	0.00573**	0.00569**	0.00580***	0.00573**	0.00681***	0.00728***	0.00731***	0.00841***
			(0.00172)	(0.00172)	(0.00173)	(0.00174)	(0.00172)	(0.00173)	(0.00178)	(0.00193)	(0.00192)	(0.00205)
Hindu				-0.0661	-0.0702*	-0.0735*	-0.0751*	-0.0755*	-0.0968**	-0.0955**	-0.0883*	-0.0958**
				(0.0341)	(0.0344)	(0.0352)	(0.0347)	(0.0348)	(0.0357)	(0.0358)	(0.0358)	(0.0360)
Expenditure					0.0370	0.0369	0.0214	0.0223	0.00318	0.00107	-0.00662	0.00491
					(0.0408)	(0.0409)	(0.0408)	(0.0410)	(0.0416)	(0.0418)	(0.0417)	(0.0423)
Agricultural Work						-0.0143	0.0000491	0.0255	0.0197	0.0206	0.0133	-0.0301
						(0.0297)	(0.0299)	(0.0606)	(0.0602)	(0.0603)	(0.0600)	(0.0665)
Own Business							0.155*	0.180*	0.199*	0.196*	0.171*	0.160
							(0.0636)	(0.0819)	(0.0815)	(0.0817)	(0.0823)	(0.0823)
Husband's Business								0.0293	0.0242	0.0194	0.0132	-0.0309
								(0.0606)	(0.0602)	(0.0608)	(0.0605)	(0.0671)
Age of Marriage									0.0176**	0.0174**	0.0176**	0.0165**
									(0.00607)	(0.00609)	(0.00605)	(0.00607)
Number of Children										-0.00838	-0.0115	-0.0101
										(0.0132)	(0.0132)	(0.0132)
Household Landownership											0.0766	0.0797
											(0.0413)	(0.0412)
Number of Income-earners in the Household												-0.0387
												(0.0259)
_cons	0.0156	0.0156	-0.136*	-0.130*	-0.220	-0.209	-0.187	-0.213	-0.460**	-0.443**	-0.437**	-0.392*
	(0.0251)	(0.0252)	(0.0569)	(0.0566)	(0.114)	(0.116)	(0.115)	(0.127)	(0.150)	(0.153)	(0.152)	(0.154)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.004	-0.002	0.039	0.053	0.052	0.048	0.073	0.069	0.108	0.105	0.118	0.124

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 15: OLS Results - dependent variable: Personally own property and/or valuables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.0404	-0.0554	-0.0344	0.00250	0.00750	0.00396	0.00575	0.00811	0.0223	0.0113	0.0112	0.00689
	(0.0763)	(0.108)	(0.111)	(0.109)	(0.110)	(0.110)	(0.110)	(0.110)	(0.113)	(0.114)	(0.114)	(0.114)
Years of Microcredit Program Membership		0.00870	0.00487	0.00471	0.00387	0.00381	0.00278	0.00342	0.00142	0.00167	0.00166	0.00233
		(0.00691)	(0.00846)	(0.00827)	(0.00837)	(0.00839)	(0.00843)	(0.00844)	(0.00873)	(0.00873)	(0.00875)	(0.00878)
Age			0.00339	0.00158	0.00191	0.00184	0.00197	0.00154	0.00295	0.00501	0.00501	0.00700
			(0.00432)	(0.00427)	(0.00430)	(0.00431)	(0.00431)	(0.00432)	(0.00452)	(0.00489)	(0.00491)	(0.00525)
Hindu				0.262**	0.254**	0.248**	0.246**	0.244**	0.219*	0.225*	0.226*	0.212*
				(0.0845)	(0.0854)	(0.0872)	(0.0871)	(0.0870)	(0.0906)	(0.0907)	(0.0915)	(0.0924)
Expenditure					0.0714	0.0712	0.0532	0.0589	0.0537	0.0445	0.0439	0.0649
					(0.101)	(0.101)	(0.103)	(0.102)	(0.106)	(0.106)	(0.107)	(0.108)
Agricultural Work						-0.0261	-0.00940	0.156	0.159	0.163	0.163	0.0837
						(0.0735)	(0.0750)	(0.152)	(0.153)	(0.153)	(0.153)	(0.171)
Own Business							0.180	0.342	0.351	0.341	0.339	0.319
							(0.160)	(0.205)	(0.207)	(0.207)	(0.210)	(0.211)
Husband's Business								0.190	0.177	0.156	0.156	0.0757
								(0.152)	(0.153)	(0.154)	(0.155)	(0.172)
Age of Marriage									0.00886	0.00798	0.00800	0.00599
									(0.0154)	(0.0154)	(0.0155)	(0.0156)
Number of Children										-0.0367	-0.0369	-0.0342
										(0.0334)	(0.0337)	(0.0338)
Household Landownership											0.00535	0.0110
											(0.106)	(0.106)
Number of Income-earners in the Household												-0.0703
												(0.0665)
_cons	0.547***	0.547***	0.446**	0.422**	0.250	0.269	0.295	0.125	-0.0322	0.0401	0.0405	0.123
	(0.0621)	(0.0620)	(0.143)	(0.140)	(0.282)	(0.287)	(0.288)	(0.318)	(0.381)	(0.387)	(0.388)	(0.396)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	-0.004	-0.001	-0.003	0.042	0.039	0.034	0.036	0.039	0.029	0.030	0.025	0.026

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 16: OLS Results - dependent variable: Own independent savings

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.484***	0.380***	0.371***	0.385***	0.398***	0.389***	0.391***	0.384***	0.385***	0.374***	0.374***	0.367***
	(0.0638)	(0.0898)	(0.0927)	(0.0930)	(0.0923)	(0.0927)	(0.0924)	(0.0877)	(0.0914)	(0.0916)	(0.0918)	(0.0909)
Years of Microcredit Program Membership		0.00951	0.0111	0.0111	0.00894	0.00878	0.00767	0.00581	0.00577	0.00601	0.00606	0.00718
		(0.00576)	(0.00707)	(0.00705)	(0.00705)	(0.00705)	(0.00707)	(0.00672)	(0.00704)	(0.00702)	(0.00704)	(0.00698)
Age			-0.00145	-0.00217	-0.00132	-0.00150	-0.00136	-0.000117	-0.000111	0.00189	0.00188	0.00520
			(0.00361)	(0.00363)	(0.00362)	(0.00362)	(0.00361)	(0.00344)	(0.00364)	(0.00394)	(0.00395)	(0.00418)
Hindu				0.104	0.0835	0.0680	0.0659	0.0729	0.0750	0.0806	0.0782	0.0556
				(0.0720)	(0.0719)	(0.0733)	(0.0730)	(0.0693)	(0.0730)	(0.0730)	(0.0736)	(0.0735)
Expenditure					0.182*	0.182*	0.162	0.146	0.146	0.137	0.140	0.175*
					(0.0852)	(0.0852)	(0.0860)	(0.0817)	(0.0850)	(0.0851)	(0.0858)	(0.0863)
Agricultural Work						-0.0680	-0.0499	-0.532***	-0.532***	-0.528***	-0.525***	-0.657***
						(0.0618)	(0.0628)	(0.121)	(0.123)	(0.123)	(0.123)	(0.136)
Own Business							0.195	-0.276	-0.276	-0.286	-0.277	-0.311
							(0.134)	(0.163)	(0.167)	(0.166)	(0.169)	(0.168)
Husband's Business								-0.555***	-0.555***	-0.575***	-0.573***	-0.707***
								(0.121)	(0.123)	(0.124)	(0.124)	(0.137)
Age of Marriage									0.000269	-0.000581	-0.000653	-0.00399
									(0.0124)	(0.0124)	(0.0124)	(0.0124)
Number of Children										-0.0356	-0.0345	-0.0301
										(0.0268)	(0.0271)	(0.0269)
Household Landownership											-0.0263	-0.0169
											(0.0850)	(0.0842)
Number of Income-earners in the Household												-0.117*
												(0.0530)
_cons	0.0156	0.0156	0.0588	0.0494	-0.390	-0.341	-0.313	0.182	0.175	0.245	0.243	0.381
	(0.0520)	(0.0517)	(0.120)	(0.119)	(0.237)	(0.241)	(0.241)	(0.253)	(0.307)	(0.311)	(0.312)	(0.315)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.231	0.238	0.234	0.238	0.253	0.254	0.258	0.332	0.318	0.321	0.318	0.333

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 17: OLS Results - dependent variable: Comfortable giving opinion in the presence of husband

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.130*	0.0608	0.0709	0.0677	0.0799	0.0606	0.0606	0.0597	-0.00726	-0.0288	-0.0296	-0.0307
	(0.0639)	(0.0903)	(0.0932)	(0.0940)	(0.0934)	(0.0927)	(0.0930)	(0.0932)	(0.0930)	(0.0918)	(0.0920)	(0.0923)
Years of Microcredit Program Membership		0.00628	0.00444	0.00446	0.00242	0.00208	0.00208	0.00186	0.00401	0.00450	0.00443	0.00460
		(0.00579)	(0.00710)	(0.00712)	(0.00714)	(0.00705)	(0.00711)	(0.00714)	(0.00716)	(0.00704)	(0.00706)	(0.00709)
Age			0.00163	0.00179	0.00259	0.00221	0.00221	0.00236	-0.000294	0.00374	0.00376	0.00426
			(0.00363)	(0.00367)	(0.00366)	(0.00363)	(0.00364)	(0.00366)	(0.00371)	(0.00395)	(0.00396)	(0.00425)
Hindu				-0.0224	-0.0417	-0.0741	-0.0741	-0.0733	-0.0655	-0.0541	-0.0508	-0.0542
				(0.0727)	(0.0728)	(0.0733)	(0.0735)	(0.0737)	(0.0743)	(0.0731)	(0.0737)	(0.0747)
Expenditure					0.174*	0.173*	0.173*	0.171	0.144	0.126	0.122	0.128
					(0.0862)	(0.0852)	(0.0865)	(0.0868)	(0.0865)	(0.0853)	(0.0859)	(0.0876)
Agricultural Work						-0.143*	-0.143*	-0.200	-0.188	-0.179	-0.183	-0.203
						(0.0618)	(0.0632)	(0.128)	(0.125)	(0.123)	(0.124)	(0.138)
Own Business							-0.000763	-0.0565	-0.0339	-0.0527	-0.0643	-0.0694
							(0.135)	(0.173)	(0.169)	(0.167)	(0.169)	(0.171)
Husband's Business								-0.0656	-0.0476	-0.0885	-0.0914	-0.112
								(0.128)	(0.125)	(0.124)	(0.125)	(0.139)
Age of Marriage									0.0131	0.0113	0.0114	0.0109
									(0.0126)	(0.0124)	(0.0125)	(0.0126)
Number of Children										-0.0717**	-0.0731**	-0.0725**
										(0.0269)	(0.0272)	(0.0273)
Household Landownership											0.0352	0.0366
											(0.0852)	(0.0855)
Number of Income-earners in the Household												-0.0177
												(0.0538)
_cons	0.688***	0.688***	0.639***	0.641***	0.222	0.324	0.324	0.383	0.369	0.510	0.513	0.533
	(0.0520)	(0.0520)	(0.120)	(0.121)	(0.240)	(0.241)	(0.243)	(0.269)	(0.313)	(0.312)	(0.313)	(0.320)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.016	0.017	0.013	0.008	0.024	0.047	0.042	0.038	0.022	0.055	0.050	0.045

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 18: OLS Results - dependent variable: Village people listen to ideas and opinions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.0779*	0.0799	0.0880*	0.0884	0.0906*	0.0884	0.0885	0.0882	0.0407	0.0367	0.0357	0.0359
	(0.0305)	(0.0432)	(0.0446)	(0.0449)	(0.0451)	(0.0454)	(0.0455)	(0.0456)	(0.0381)	(0.0382)	(0.0381)	(0.0382)
Years of Microcredit Program Membership		-0.000188	-0.00166	-0.00166	-0.00204	-0.00208	-0.00216	-0.00225	-0.000262	-0.000171	-0.000259	-0.000288
		(0.00277)	(0.00340)	(0.00340)	(0.00344)	(0.00345)	(0.00348)	(0.00349)	(0.00293)	(0.00293)	(0.00292)	(0.00294)
Age			0.00130	0.00129	0.00144	0.00139	0.00140	0.00147	-0.000743	0.0000104	0.0000279	-0.0000560
			(0.00173)	(0.00176)	(0.00177)	(0.00177)	(0.00178)	(0.00179)	(0.00152)	(0.00164)	(0.00164)	(0.00176)
Hindu				0.00252	-0.00110	-0.00486	-0.00501	-0.00464	0.0344	0.0365	0.0407	0.0413
				(0.0348)	(0.0351)	(0.0359)	(0.0360)	(0.0360)	(0.0304)	(0.0304)	(0.0305)	(0.0309)
Expenditure					0.0325	0.0325	0.0311	0.0303	0.0246	0.0213	0.0168	0.0159
					(0.0416)	(0.0417)	(0.0423)	(0.0424)	(0.0354)	(0.0355)	(0.0356)	(0.0363)
Agricultural Work						-0.0166	-0.0154	-0.0406	-0.0222	-0.0207	-0.0249	-0.0216
						(0.0302)	(0.0309)	(0.0628)	(0.0512)	(0.0512)	(0.0512)	(0.0571)
Own Business							0.0132	-0.0115	-0.00518	-0.00868	-0.0233	-0.0225
							(0.0659)	(0.0849)	(0.0694)	(0.0693)	(0.0702)	(0.0707)
Husband's Business								-0.0291	-0.0190	-0.0266	-0.0303	-0.0269
								(0.0628)	(0.0513)	(0.0516)	(0.0516)	(0.0576)
Age of Marriage									0.00433	0.00401	0.00413	0.00422
									(0.00517)	(0.00517)	(0.00516)	(0.00521)
Number of Children										-0.0134	-0.0152	-0.0153
										(0.0112)	(0.0113)	(0.0113)
Household Landownership											0.0445	0.0443
											(0.0353)	(0.0354)
Number of Income-earners in the Household												0.00297
												(0.0223)
_cons	0.906***	0.906***	0.867***	0.867***	0.789***	0.801***	0.802***	0.828***	0.860***	0.886***	0.890***	0.886***
	(0.0248)	(0.0249)	(0.0574)	(0.0577)	(0.116)	(0.118)	(0.119)	(0.132)	(0.128)	(0.130)	(0.129)	(0.132)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.028	0.023	0.021	0.016	0.014	0.010	0.005	0.000	-0.016	-0.014	-0.011	-0.016

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 19: OLS Results - dependent variable: Comfortable going to the local market without asking for permission

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.0652	0.113	0.111	0.100	0.109	0.0983	0.0970	0.0941	0.0824	0.0714	0.0682	0.0695
	(0.0553)	(0.0782)	(0.0808)	(0.0812)	(0.0810)	(0.0811)	(0.0810)	(0.0802)	(0.0835)	(0.0835)	(0.0830)	(0.0832)
Years of Microcredit Program Membership		-0.00434	-0.00391	-0.00386	-0.00535	-0.00554	-0.00479	-0.00558	-0.00470	-0.00445	-0.00473	-0.00494
		(0.00502)	(0.00616)	(0.00615)	(0.00619)	(0.00617)	(0.00620)	(0.00615)	(0.00643)	(0.00641)	(0.00636)	(0.00639)
Age			-0.000378	0.000125	0.000709	0.000495	0.000399	0.000931	0.000415	0.00248	0.00254	0.00193
			(0.00315)	(0.00317)	(0.00318)	(0.00317)	(0.00317)	(0.00315)	(0.00333)	(0.00359)	(0.00357)	(0.00383)
Hindu				-0.0726	-0.0866	-0.105	-0.104	-0.101	-0.0983	-0.0925	-0.0790	-0.0748
				(0.0629)	(0.0631)	(0.0641)	(0.0640)	(0.0634)	(0.0667)	(0.0666)	(0.0665)	(0.0673)
Expenditure					0.126	0.126	0.139	0.132	0.139	0.130	0.115	0.109
					(0.0747)	(0.0745)	(0.0754)	(0.0747)	(0.0777)	(0.0776)	(0.0775)	(0.0790)
Agricultural Work						-0.0811	-0.0934	-0.299**	-0.297**	-0.293**	-0.307**	-0.283*
						(0.0541)	(0.0551)	(0.110)	(0.112)	(0.112)	(0.111)	(0.124)
Own Business							-0.133	-0.334*	-0.338*	-0.348*	-0.395*	-0.389*
							(0.117)	(0.149)	(0.152)	(0.152)	(0.153)	(0.154)
Husband's Business								-0.237*	-0.233*	-0.254*	-0.266*	-0.241
								(0.111)	(0.112)	(0.113)	(0.112)	(0.125)
Age of Marriage									-0.00465	-0.00552	-0.00513	-0.00451
									(0.0113)	(0.0113)	(0.0112)	(0.0113)
Number of Children										-0.0367	-0.0426	-0.0434
										(0.0245)	(0.0245)	(0.0246)
Household Landownership											0.144	0.143
											(0.0768)	(0.0771)
Number of Income-earners in the Household												0.0215
												(0.0485)
_cons	0.109*	0.109*	0.121	0.127	-0.178	-0.119	-0.139	0.0727	0.146	0.218	0.229	0.204
	(0.0450)	(0.0451)	(0.104)	(0.104)	(0.208)	(0.211)	(0.212)	(0.232)	(0.281)	(0.284)	(0.282)	(0.288)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.002	0.001	-0.005	-0.003	0.007	0.014	0.015	0.034	0.026	0.033	0.047	0.043

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 20: OLS Results - dependent variable: Comfortable going to the neighborhood village without asking for permission

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Microcredit borrower	0.0159	0.0309	0.0336	0.0319	0.0315	0.0317	0.0316	0.0306	0.0300	0.0290	0.0289	0.0277
	(0.0157)	(0.0222)	(0.0229)	(0.0231)	(0.0232)	(0.0234)	(0.0234)	(0.0231)	(0.0240)	(0.0241)	(0.0242)	(0.0241)
Years of Microcredit Program Membership		-0.00136	-0.00186	-0.00185	-0.00177	-0.00177	-0.00173	-0.00201	-0.00172	-0.00170	-0.00171	-0.00153
		(0.00143)	(0.00175)	(0.00175)	(0.00177)	(0.00178)	(0.00179)	(0.00177)	(0.00184)	(0.00185)	(0.00185)	(0.00186)
Age			0.000440	0.000522	0.000491	0.000495	0.000489	0.000678	0.000614	0.000818	0.000820	0.00135
			(0.000893)	(0.000903)	(0.000910)	(0.000914)	(0.000916)	(0.000904)	(0.000955)	(0.00104)	(0.00104)	(0.00111)
Hindu				-0.0119	-0.0112	-0.0108	-0.0107	-0.00965	-0.00760	-0.00702	-0.00663	-0.0103
				(0.0179)	(0.0181)	(0.0185)	(0.0185)	(0.0182)	(0.0191)	(0.0192)	(0.0194)	(0.0195)
Expenditure					-0.00688	-0.00687	-0.00612	-0.00864	-0.00439	-0.00530	-0.00572	-0.000101
					(0.0214)	(0.0215)	(0.0218)	(0.0215)	(0.0223)	(0.0224)	(0.0226)	(0.0229)
Agricultural Work						0.00166	0.000960	-0.0722*	-0.0714*	-0.0710*	-0.0714*	-0.0926*
						(0.0156)	(0.0159)	(0.0318)	(0.0323)	(0.0323)	(0.0325)	(0.0361)
Own Business							-0.00757	-0.0790	-0.0827	-0.0837	-0.0850	-0.0905*
							(0.0339)	(0.0429)	(0.0437)	(0.0438)	(0.0445)	(0.0446)
Husband's Business								-0.0841**	-0.0841**	-0.0862**	-0.0866**	-0.108**
								(0.0318)	(0.0323)	(0.0326)	(0.0327)	(0.0364)
Age of Marriage									-0.00325	-0.00334	-0.00333	-0.00386
									(0.00325)	(0.00326)	(0.00327)	(0.00329)
Number of Children										-0.00363	-0.00380	-0.00309
										(0.00707)	(0.00715)	(0.00715)
Household Landownership											0.00413	0.00563
											(0.0224)	(0.0224)
Number of Income-earners in the Household												-0.0188
												(0.0141)
_cons	-2.60e-17	5.20e-18	-0.0131	-0.0120	0.00457	0.00338	0.00228	0.0773	0.116	0.124	0.124	0.146
	(0.0128)	(0.0128)	(0.0296)	(0.0296)	(0.0596)	(0.0608)	(0.0612)	(0.0665)	(0.0806)	(0.0819)	(0.0822)	(0.0836)
N	190	190	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.000	-0.000	-0.004	-0.007	-0.012	-0.018	-0.023	0.010	0.009	0.005	-0.001	0.004

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 21: First-stage regressions, Household Landownership as potential instrument - dependent Variable: Microcredit borrower

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Household Landownership	0.119	0.0873	0.0690	0.0626	0.0686	0.0508	0.0543	0.0495	0.0660	0.0646
	(0.0976)	(0.0945)	(0.0943)	(0.0951)	(0.0944)	(0.0960)	(0.0960)	(0.0962)	(0.0967)	(0.0971)
Age		0.0121***	0.0130***	0.0130***	0.0123***	0.0121***	0.0122***	0.0108**	0.0130***	0.0125**
		(0.00313)	(0.00314)	(0.00315)	(0.00315)	(0.00315)	(0.00315)	(0.00325)	(0.00365)	(0.00413)
Hindu			-0.151	-0.157*	-0.184*	-0.186*	-0.182*	-0.185*	-0.175*	-0.171*
			(0.0785)	(0.0794)	(0.0798)	(0.0799)	(0.0799)	(0.0825)	(0.0827)	(0.0838)
Expenditure				0.0541	0.0509	0.0361	0.0301	0.00470	-0.00720	-0.0122
				(0.0941)	(0.0933)	(0.0945)	(0.0945)	(0.0972)	(0.0973)	(0.0994)
Agricultural work					-0.136*	-0.120	-0.255	-0.240	-0.235	-0.216
					(0.0673)	(0.0690)	(0.139)	(0.139)	(0.139)	(0.156)
Own Business						0.150	0.0152	0.0388	0.0223	0.0268
						(0.149)	(0.192)	(0.193)	(0.192)	(0.194)
Husband's Business							-0.155	-0.142	-0.165	-0.147
							(0.140)	(0.140)	(0.141)	(0.158)
Age of Marriage								0.0158	0.0148	0.0152
								(0.0139)	(0.0139)	(0.0140)
Number of Children									-0.0420	-0.0426
									(0.0307)	(0.0309)
Number of Income-earners in the Household										0.0164
										(0.0610)
_cons	0.626***	0.225*	0.236*	0.112	0.212	0.242	0.385	0.254	0.331	0.314
	(0.0459)	(0.113)	(0.112)	(0.243)	(0.246)	(0.248)	(0.280)	(0.327)	(0.331)	(0.337)
N	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	0.003	0.071	0.085	0.081	0.096	0.096	0.098	0.073	0.078	0.073

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.

Table 22: First-stage regressions, Distance to Branch office as potential instrument - dependent variable: Microcredit borrower

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Distance to Branch office	-0.00475	-0.00260	-0.00806	-0.00590	-0.00153	-0.00229	-0.00315	-0.000721	0.000769	0.000927
	(0.0111)	(0.0108)	(0.0110)	(0.0129)	(0.0130)	(0.0130)	(0.0130)	(0.0136)	(0.0137)	(0.0137)
Age		0.0123***	0.0132***	0.0132***	0.0125***	0.0123***	0.0124***	0.0109***	0.0131***	0.0125**
		(0.00313)	(0.00313)	(0.00314)	(0.00314)	(0.00314)	(0.00314)	(0.00324)	(0.00366)	(0.00414)
Hindu			-0.171*	-0.171*	-0.192*	-0.193*	-0.191*	-0.190*	-0.181*	-0.176*
			(0.0803)	(0.0805)	(0.0807)	(0.0806)	(0.0806)	(0.0833)	(0.0834)	(0.0847)
Expenditure				0.0350	0.0521	0.0300	0.0205	0.00629	0.00274	-0.00252
				(0.110)	(0.109)	(0.111)	(0.111)	(0.112)	(0.112)	(0.114)
Agricultural work					-0.133	-0.115	-0.248	-0.235	-0.229	-0.208
					(0.0684)	(0.0700)	(0.139)	(0.139)	(0.139)	(0.156)
Own Business						0.166	0.0330	0.0546	0.0444	0.0491
						(0.147)	(0.190)	(0.190)	(0.190)	(0.191)
Husband's Business							-0.155	-0.140	-0.160	-0.139
							(0.140)	(0.140)	(0.141)	(0.158)
Age of Marriage								0.0155	0.0148	0.0153
								(0.0142)	(0.0142)	(0.0143)
Number of Children									-0.0395	-0.0403
									(0.0307)	(0.0308)
Number of Income-earners in the Household										0.0187
										(0.0610)
_cons	0.685***	0.256*	0.293*	0.200	0.230	0.276	0.431	0.266	0.311	0.289
	(0.0615)	(0.124)	(0.124)	(0.316)	(0.314)	(0.316)	(0.346)	(0.407)	(0.408)	(0.415)
N	190	190	190	190	190	190	190	190	190	190
Adj. R-sq	-0.004	0.068	0.085	0.080	0.094	0.095	0.096	0.072	0.075	0.070

Standard errors in parentheses

* means statistically significant at 10%, ** means statistically significant at 5%, *** means statistically significant at 1%.