

**THE WELFARE EFFECT  
OF MICROCREDIT  
ON RURAL POOR  
IN BANGLADESH**

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**YES-USE**

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## Chapter 1

### Introduction

#### 1.1 What is microcredit?

Since the emergence of microcredit programs researchers have been much attracted to research the effectiveness of these programs. Microcredit programs provide credit to rural poor to make them able to start their own business. Since the emergence of microcredit programs many governmental and nongovernmental organizations in low-income countries have introduced microcredit programs, targeted to the poor. Many Microcredit Institutions (MCI's) provide credit specifically to women. This is because women are more likely to be credit-constrained than men. Researchers have also found that providing credit to women rather than men has a significant influence on the household decision making, such as the status of the children's schooling or health (Faridi, 2011). From table 1 one is able to derive that the majority of participants in microcredit programs are women.

Table 1 Distribution of villages by credit program and group type.

	BRAC	BRDB	GB	None	Total
Females only	7	3	12	0	22
Male only	0	9	1	0	10
Female and male	17	12	11	0	40
No program	0	0	0	15	15
Total	24	24	24	15	87

Note: Sample is 87 villages, 1775 households, and 9215 individuals  
Bangladesh Rural Advanced committee, Microfinance Organization, Bangladesh (BRAC),  
Bangladesh Rural Development Board's (BRDB), Grameen Bank (GB)  
Source: Faridi, 2011

The impact of microcredit programs on the welfare of the participants is very impressive. *The first comprehensive impact study done by Hossain (1988), found that Grameen members' average household income was 43% higher than non-participants (Abdullah, 2011). Grameen bank members spent 8% more on food and 13% more on clothing than non-participants (Ibid). The investment in fixed assets is about 2.5 times higher for borrowers with more than three years' membership than for those who joined during the year of the survey (Ibid).* Thanks to this study one is able to understand the impact of microcredit and see the importance of providing microcredit to the poor. Microcredit participants generate self-employment and the resulting effects on income are impressive (Ibid). Using the figures of above one is also able to derive the fact that the welfare of the participants significantly increases due to their participation in microcredit programs.

*Khandker and Chowdhury (1995) noted that the increase in self-employment among the poor with access to credit has resulted in an increase in rural wages. Mustafa et al. (1996),*

*mentioned that BRAC clients household expenditure increased from an average of BDT419 (BDT - Bangladeshi Currency) per week (members for 1-11 months) to BDT528 (members for 48 or more months), an increase of 28% (Abdullah, 2011). From the quote above it can be concluded that participants have more money available when they participate for a longer period of time, as seen in the figures above.*

## **1.2 The Grameen banking model**

This paper will contain a lot of information about the Grameen Bank, thus it will be necessary to explain the style of banking of the Grameen Bank. The Grameen Bank is a bank which accepts the fact that poor people have no collateral whatsoever. Due to the lack of collateral of the poor, the Grameen Bank has adopted a joint liability system (Yunus, 1997). According to this joint liability system, the poor will form groups of  $\pm$  five people (Ibid). The people in the group will all receive a loan, but they are all mutual responsible for each other's repayments (Ibid). This means that if one person in the group cannot repay his loan, all the other people in the group will not be able to receive more loans unless the defaulter is helped. This way a joint liability system makes sure that people repay their loan. It is based on social control of one's fellow group members. Repayments are made in weekly held meetings where a representative of the Grameen Bank comes to the group to collect the repayments (Ibid).

## **1.3 Describing Bangladesh' poor situation**

*(The data in this section is derived from the World Bank, unless mentioned otherwise).*

The economy of Bangladesh is low rated and its population has a low income level (World Bank). But the economic situation of Bangladesh can improve. This is already proved by other former low income countries. Here are some indicators which illustrate the situation of Bangladesh (Ibid)

- 40% of the population lives in poverty.
- The Gross National Income (GNI) per capita is \$700.
- More than half of the population works in the agricultural sector.
- 56% of the population is illiterate.

These indicators illustrate the poor situation of Bangladesh. A poverty ratio of 40% is very high and thus one could conclude that the people of Bangladesh need help in improving their living standard and to exit poverty. Microcredit programs could contribute to the help which is needed by the poor of Bangladesh.

The GDP per capita (700\$) in Bangladesh is also very low. A small comparison is needed to better understand the poor situation of Bangladesh. Here follow some GNI's of four countries (World Bank).

- Netherlands: \$49 050 per capita.
- India: \$ 1 330 per capita.
- Thailand: \$ 4 150 per capita.
- Cambodia: \$750 per capita.

One should be able to conclude that the economic situation of Bangladesh is very poor. The surrounding neighbours of Bangladesh have a higher GNI per capita. This also shows the poor economic situation of Bangladesh.

The fact that more than half of the population works in the agricultural sector is an important indicator of the fluctuations of income and consumption of the rural poor. This will be discussed in chapter three.

Finally, the fact that 56% of the population is illiterate illustrates that a lot of people cannot receive loans from ordinary banks. Ordinary banks demand people to write everything down, but this is a problem because 56% of the population cannot read and write (Yunus. 1997). The illiterate people cannot thus receive a loan. Even depositing money on one's bank account requires writing (Ibid).

Bearing all these indicators in mind one should be able to conclude that Bangladesh needs help. Help in improving the economic situation of the country as well as the living standards of its poor people. Microcredit programs have shown some successes, which illustrates that they are able to alleviate poverty in Bangladesh. This paper will discuss the effect of microcredit on the welfare of rural households in Bangladesh. The social aspect of welfare will not be analysed. Thus this paper will only discuss the effect of microcredit on the welfare in the narrow sense of rural households in Bangladesh. The research question is thus: 'What is the effect of microcredit on the welfare in the narrow sense of rural households in Bangladesh'. This paper will contain four subquestions in order to answer the research question. The subquestions are as following:

- Do microcredit programs in Bangladesh reach the poor?
- Do microcredit programs reduce poverty?
- Do microcredit programs increase the members' income and consumption?
- What is the average payback period of microcredit loans?

At the end the research question will be answered in the conclusion.

## Chapter 2

### Theoretical framework

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Microcredit programs have caused a lot of discussion about the question whether they actually alleviate poverty (de Haas, 2012). These microcredit programs seem to be very effective; a lot of successes have been booked, but are the microcredit programs really as effective as they claim to be?

Microcredit programs aim to alleviate poverty among poor people in third world countries. The programs, such as the Grameen Bank, provide loans to poor people in order to enable them to generate their own income: the microcredit loans need to enable the poor people to invest in productive activities. The great danger however lies in the fact that some poor people tend to consume their loan instead of invest it in income generating activities (Ibid). The rural poor usually do not have a steady consumption pattern throughout the year, because they operate in agricultural activities (Develtere, Patrick, 2005). Some of these poor people use the microcredit loan to compensate major changes in income throughout the year, chapter three of this paper will analyse this further.

The theory behind microcredit loan is already partly stated in the text above, the other part is as following. Poor people in third world countries encounter a lot of complications concerning finding work and receiving a loan from an ordinary bank. This is due to their low education level, their low creditworthiness and because of the fact that the poor usually have no collateral. Bearing these three causes in mind, one could conclude that it is very hard for poor people to improve their living standards. That's why Muhammad Yunus created a bank for the poor, the Grameen Bank (Yunus, 1997). Microcredit programs, such as the Grameen Bank and the Bangladesh Rural Advancement Committee (BRAC), aim to alleviate poverty among poor people and to emancipate the poor. Loans are given to the rural poor to enable them to start their own income generating activities. These loans have to be repaid along with the interest. Thus it is very important to spend the loans on productive activities, in order to receive returns by which one can repay his loan. The need for improving the poor people's life in Bangladesh is very high.

## Chapter 3

### Reaching the poor

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#### 3.1 Introduction

In order to reduce poverty among the poor (thus increase the welfare), microcredit programs have to be able to reach the poor. The two leading microcredit institutions in Bangladesh are the Grameen Bank and the Bangladesh Rural Advancement Committee (BRAC). As one is able to see in table 2, the Grameen Bank and the BRAC have both the same goal, namely *combating poverty and emancipating the poor* (Develtere, Patrick, 2005). Both the Grameen bank and the BRAC have defined their target group *as being comprised of those who have less than half an acre of land* (Ibid). A criticism against microcredit institutions is that they do not reach the vulnerable poor, the bottom poor (Ibid). This chapter will analyse the following subquestion: "Do microcredit programs reach the poor in Bangladesh?"

#### 3.2 Defining the (vulnerable) poor

People often talk about the poor as a homogenous group. The poor are not a homogenous group: there are different gradations and definitions of poverty. The first definition is given in section 3.1 by both the Grameen Bank and the BRAC. Amin, Rai and Topa define a household as poor *if it has low consumption levels* (Amin, 2003). Amin, Rai and Topa define a household as vulnerable if it is not able to smooth the pattern of consumption over the year (Ibid). This paper will use the definition of the poor which is given in section 3.1, because this paper will contain a lot off information about Grameen Bank members as well as BRAC members. The vulnerable households will be defined as in section 3.2 is done.

#### 3.3 Reducing vulnerability

Most researchers do not agree that microcredit programs help the poor to combat their poverty (Develtere, Patrick, 2005). Yet, most researchers do agree that microcredit programs help the poor to reduce their vulnerability (Ibid). According to Morduch, as well as other researchers, microcredit institutions are helping to reduce the vulnerability of their clients (Ibid). *In other words, microcredit programs do assure that the situation of their poor members does not deteriorate any further* (Ibid). Results of Morduch have shown that consumption variability from season to season reduces with 47 percent for Grameen Bank members and with 54 percent for BRAC members (Ibid). *Morduch concludes that the pattern of consumption is smoothed over the year* (Ibid).

Reducing the vulnerability of the poor will help the poor in achieving a more stable life. Many poor people operate in agricultural activities and because of this they do not have a continuous income throughout the year (Ibid). The income will be high during harvest seasons, but low during non-harvest seasons (Ibid). This affects their consumption pattern: during harvest seasons they will consume more than during non-harvest seasons (Ibid).



Table 2 Organizational characteristic of Grameen Bank and BRAC

Grameen Bank	BRAC
<ul style="list-style-type: none"> <li>- Evolved from a minimalist credit approach into a social institution with holistic characteristics</li> <li>- Bank (since 1983)</li> <li>- Goal: Combating poverty and emancipating the poor</li> <li>- Social program supporting credit. The Sixteen Decisions these include, <i>"We shall not take any dowry at our sons' wedding, neither shall we give any dowry at our daughters' wedding"</i>. <i>"We shall collectively undertake bigger investments for higher incomes"</i>—to be respected by all members; training sessions, health program (since 1993); members receive first credit/loan after two weeks of training</li> <li>- From the beginning, most members are female (as of 2003, 95%)</li> <li>- Decentralization to member level: 90% shares, bottom-up approach; group (five members each), center, branch, regional office, zone office, headquarters</li> <li>- Solidarity group lending to individuals of the group (progressive loans, social collateral)</li> <li>- Elaborated information and communication system, flexible and critical, trial and error in the field</li> <li>- Six kinds of loans and four kinds of saving funds</li> <li>- Repayment above 90% for female members</li> <li>- Total membership: 1990, 869,538; 1993, 2,065,661; 2003, 2,940,000</li> </ul>	<ul style="list-style-type: none"> <li>- Holistic credit-plus approach: Initially, organization with several branches. Later, microcredits added as one of the pillars of the program</li> <li>- Largest NGO in Bangladesh (since 1998, bank status can be given to branches)</li> <li>- Goal: Combating poverty and emancipating the poor</li> <li>- Elaborated social program. The Seventeen Promises these include, <i>"We will fight against polygamy and injustices to our men and all women"</i>; <i>"We will regularly deposit our weekly savings"</i>—to be respected by all members; training; consciousness raising and education; paralegal program; members receive first credit/loan after minimum four weeks' training</li> <li>- Initially, almost as many men as women (as of 2003, 99% women)</li> <li>- Decentralization, but strong guidance; headquarters, regional office, zone office or branch, village community, group (of five to seven people)</li> <li>- Initially, solidarity group lending to village community, now to individuals (progressive loans, social collateral)</li> <li>- Elaborated information and communication system, flexible and critical, trial and error in the field</li> <li>- Three kinds of loans and four kinds of saving funds</li> <li>- Repayment above 90% for female members</li> <li>- Total membership: 1990, 460,763; 1994, 1,036,300; 2003, 3,939,439</li> </ul>

source: Develtere, Patrick, 2005

Thanks to the microcredit programs the poor are being enabled to also operate in non-agricultural activities. The poor will thus partly earn their income by operating in non-agricultural activities during non-harvest seasons. Poor people will be enabled to earn an income throughout the year. This section will discuss three ways which can reduce vulnerability. This can be read in the text below.

Firstly, a development which reduces the vulnerability of the members of the Grameen Bank as well as the members of the BRAC, is the fact that there is a greater stability of labour supply amongst the members in comparison with non-members (Ibid). A reason for this development can be that Grameen Bank members as well as BRAC members have a greater incentive to work, due to their repayment obligations. The repayment obligations have to be fulfilled, thus there has to be money to repay these obligations. Members thus have a high incentive to work. Another reason for the greater stability of labour supply can be that, due to the microcredit programs, the members are enabled to operate in non-harvest seasons. With the received loans, members can setup non-agricultural income generating activities, such as sewing or other craftsmen activities.

Secondly, the Grameen Bank and BRAC members also (see the text above) partly operate in non-agricultural activities (Ibid). This way their fluctuations in consumption from season to season reduce (Ibid). During non-harvest seasons, the members can earn their money with non-agricultural activities and during harvest seasons the members can earn their money with the harvest. Thus members are able to earn money throughout the whole year. This implies that consumption fluctuations throughout the year will decrease. A great danger however is that borrowers could use their microcredit loan to compensate major changes income and thus use their loan for consumption instead of investing it in income generating activities (de Haas, 2012). The returns of consumption are zero and thus the borrowers could encounter problems in repaying their microcredit loan. In theory, the microcredit loans should be used for income generating activities.

*Finally, a third way to reduce the vulnerability is to increase members' net worth (Ibid).* Members with a high net worth also have a high creditworthiness (Ibid). This is due to the fact that members with a high net worth can sell assets in cases of dire needs. Members with a high net worth are more likely to receive loans as well as to be able to repay them.

### **3.4 Reaching the poor**

According to Khandker and Montgomery et al. the official criterion (the definition of the poor) of the Grameen bank and the BRAC is often neglected: *15 to 30 percent of BRAC members do not belong to the target group* (Develtere, Patrick, 2005). Similar figures have been found for the Grameen Bank (Ibid).

Amin, Rai and Topa conclude that microcredit is successful in reaching the poor, but it lacks in reaching the vulnerable poor (Amin, 2003). *Vulnerability refers to the inability of*

households to insure against idiosyncratic risks, and it is distinct from measures of consumption variability (Ibid). It provides an example of how an antipoverty program, which is successful at reaching the poor, may exclude those most in need of assistance, the vulnerable poor (Ibid). The theory behind these conclusions is as following and has already partly been discussed in section 3.3. Vulnerable poor households are not able to smooth their pattern of consumption over the year (Develtere, Patrick, 2005). Since many borrowers operate in the agricultural sector, their income varies throughout the year (Ibid). During harvest seasons their income is relatively high, but during other seasons their income is relatively low (Ibid). Thus the consumption pattern varies from season to season.

Khandker and Hussain however do point out that a large part of the Grameen Bank members consist of the bottom poor (Ibid). Khandker has done many research concerning microcredit programs in Bangladesh. One of his findings is that 65 percent of the BRAC members and 55 percent of the Grameen Bank members did not own any land at all (Ibid). This implies that microcredit programs do reach the poor, since more than half of the Grameen Bank members and the BRAC members do not own any land at all. In section 3.1 one can read the definition of poverty and one will be able to conclude that the majority of the Grameen Bank members and the BRAC members live in poverty.

Other researchers have come to the same conclusions as Khandker (Ibid). Evans, Adams, Mohammed and Norris have found out that 11 percent of the BRAC members do not belong to the target group (Ibid). This means that 89 percent of BRAC's clients meet the official criterion for participating in the BRAC's program (Ibid). These results answer the subquestion of chapter three positively, meaning that microcredit programs do reach the poor. The results of Evans, Adams, Mohammed and Norris also confirm that microcredit programs reach the poorest people in Bangladesh (Ibid).

Table 3 BRAC Members per Wealth Group

Wealth group	Richest	Moderate	Poorest
Members	10%	24%	29%
Non-members	82%	65%	60%
Former members	8%	11%	11%

Source: Develtere, Patrick, 2005

According to the study of Evans, Adams, Mohammed and Norris there is still room for improvement (Ibid). Their results have shown that 60 percent of the poorest people do not do not participate in BRAC's program (see table 3) (Ibid).

### 3.5 Problems in reaching the poorest

In table 4 one is able to see the possible problems in reaching the poorest (Develtere, Patrick, 2005). Considering the program-related problems, the Grameen Bank and the BRAC have been growing exponentially (Ibid). This indicates that the BRAC as well as the Grameen bank have been doing their best in reaching as many clients as possible (Ibid). The

exponential growth could lead into a loss of efficiency (Ibid). Future research should address this phenomenon.

Evans has argued that the membership requirements are a very big problem for the poorest people (Ibid). Paying registration fees, saving and attending group meetings are very time-consuming activities, which are often impossible for the very poor (Ibid). Most of the very poor people need to spend their time in income/ food generating activities in order to survive the day (Ibid). Thus the membership requirements form a huge obstacle for the very poor to participate in microcredit programs.

Table 4 Possible Barriers to Participation in Microcredit Programs

Program-related problems	Client-related problems
* Insufficient supply of microcredit programs	* Insufficient means
* Membership requirements	* Bad health or vulnerable to crises
* Expectations of the peer group	* Lack of education
* Institutional incentives	* Individual and household preferences

Source: Develtere, Patrick, 2005

Another factor which makes it hard to reach the poorest is that the group mechanism makes things harder for the very poor people (Ibid). Evans and Hulme said that moderate/ poor members of the Grameen Bank and the BRAC preferably do not allow the bottom poor into their group (Ibid). This is because the bottom poor form a very high risk and have a very low creditworthiness (Ibid). Not only the moderate/ poor members preferably do not allow the poorest into their group, but so do microcredit institutions (Ibid). Microcredit institutions consider the very poor also as a high risk and they consider them in having more problems in repaying their loan (Ibid). Microcredit institutions often want to assure their own sustainability and taking high risks could endanger their sustainability. Thus most microcredit institutions often prefer the richer poor as clients, since they have fewer risks in repaying their loan (Ibid).

Considering the client-related problems, *self-selection or self-exclusion is regarded as one of the major obstacles* (Ibid). Morduch, Hashemi and agree that the poorest people often do not take any loans, because the bottom poor consider a loan as too risky (Ibid). Having a loan means having a burden on your shoulders. The bottom poor have very few assets and taking a microcredit loan increases their debt, which the bottom poor could consider as very fearful (Ibid). The bottom poor could be afraid of the fact that the returns of their investments are lower than their costs of borrowing (Ibid). This is a major reason why the very poor prefer to not take any loans. The result of this is that many very poor household exclude themselves of taking a microcredit loan, they fall through the net. The Grameen Bank as well as the BRAC have come to the conclusion that the poor who fall through the net have to be

reached in different ways (Ibid). That is why the Grameen Bank and the BRAC want to make special efforts to reach the bottom poor in order to help them improve their living standards. An example of these special efforts is the BRAC's Income Generating for Vulnerable Group Developmental program (Ibid).

### **3.6 Conclusion**

The foregoing findings show that microcredit programs reach a significant number of the very poor. However, the Grameen Bank and the BRAC do not succeed in reaching the majority of the very poor. This should not be seen as a failure, but as an indicator that microcredit programs are not necessarily the way out for all the poor (Ibid). The people who fall through the net have to be reached in different ways. Future research should address the importance of reaching the very poor in different ways as well as evaluate the progress.

## Chapter 4

### Reducing poverty

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#### 4.1 Introduction

“Do microcredit programs reduce poverty?” This question is subjected to a lot of discussions among scientists (Develtere, Patrick, 2005). On one hand, there are researchers who are convinced that microcredit programs can reduce poverty, such as Khandker, and on the other hand there are researchers who are not so sure about this (Ibid). One of those researchers who question that microcredit programs reduce poverty is Morduch (Khandker, 2003). The impact of microcredit programs in Bangladesh remains controversial (Zaman, 1999). *Data collected by the World Bank in 1992 have been used to show widely varying results depending on the methodology chosen to assess impact* (Ibid). This chapter will analyse the subquestion: “Do microcredit programs reduce poverty?”.

#### 4.2 Poverty effects of microcredit programs: Khandker's analysis

Khandker is very positive about microcredit programs reducing poverty (Develtere, Patrick, 2005). Khandker has examined the Grameen Bank and the BRAC and he has come to the conclusion that microcredit programs can reduce poverty (Ibid). *Khandker (1998) estimates that for every 100 taka lent to a woman, household consumption increases by 18 taka; interestingly the figure is 11 taka if the same amount was lent to a man* (Zaman, 1999). A reason for the fact that the consumption of men increases less than the consumption of women can be that women invest their money responsibly in income generating activities. The women's returns of investing are thus higher than her costs of borrowing, which makes the women able to consume more.

Furthermore, Khandker point out that moderate poverty reduces with 15% and that the ultra-poverty declines with 25% for BRAC borrowers who have a loan for up to three years (Ibid). Khandker found out that the rate of poverty reduction declines with increasing membership length (Ibid). *For instance, for households who have been members for more than five years the absolute rate of reduction was 9% for moderate poverty and 18% for ultra-poverty suggesting that the rate of poverty reduction per year was considerably lower than for households who had been members for up to three years* (Ibid). *Thus, the reduction of the level of poverty is variable and declines with the passage of time* (Ibid).

Khandker goes further in analysing the poverty effects of microcredit programs (Develtere, Patrick, 2005). He has revealed that the per capita spending and net worth (assets and savings), for both the Grameen Bank and BRAC members has increased. In Khandker's study he has revealed that women score better than men when it comes to per capita spending (Ibid). He has also revealed that men generally have a higher net worth (Ibid). The female members of the Grameen Bank seem to show better results than the female members of the BRAC (Ibid).

*Khandker argues that for a program to be successful, it is not only important to alleviate the poverty of its clients but also to achieve a long-term sustainability of the benefits (Ibid). Khandker points out that it takes approximately five years for a poor member to work up to above the poverty line, and it generally takes eight years before the member is able to function independently from the microcredit institution (Ibid). Consequently, Khandker is convinced that providing microcredit is an effective instrument to reduce poverty and even to overcome it (Ibid).*

#### **4.3 Poverty effects of microcredit programs: Morduch's analysis**

Morduch does not agree with Khandker in terms of Khandker's analysis (Morduch, 1998). According to Morduch the microcredit institutions do not target their clients as they should (Ibid). Morduch states that 15 to 30 percent of the BRAC and Grameen Bank clients do not belong to the target group (Ibid). Morduch also states that microcredit programs successfully reach the poor, but that they are less successful in reaching the vulnerable poor (Ibid). Amin, Rai and Topa also come to the same conclusions (Amin, 2003).

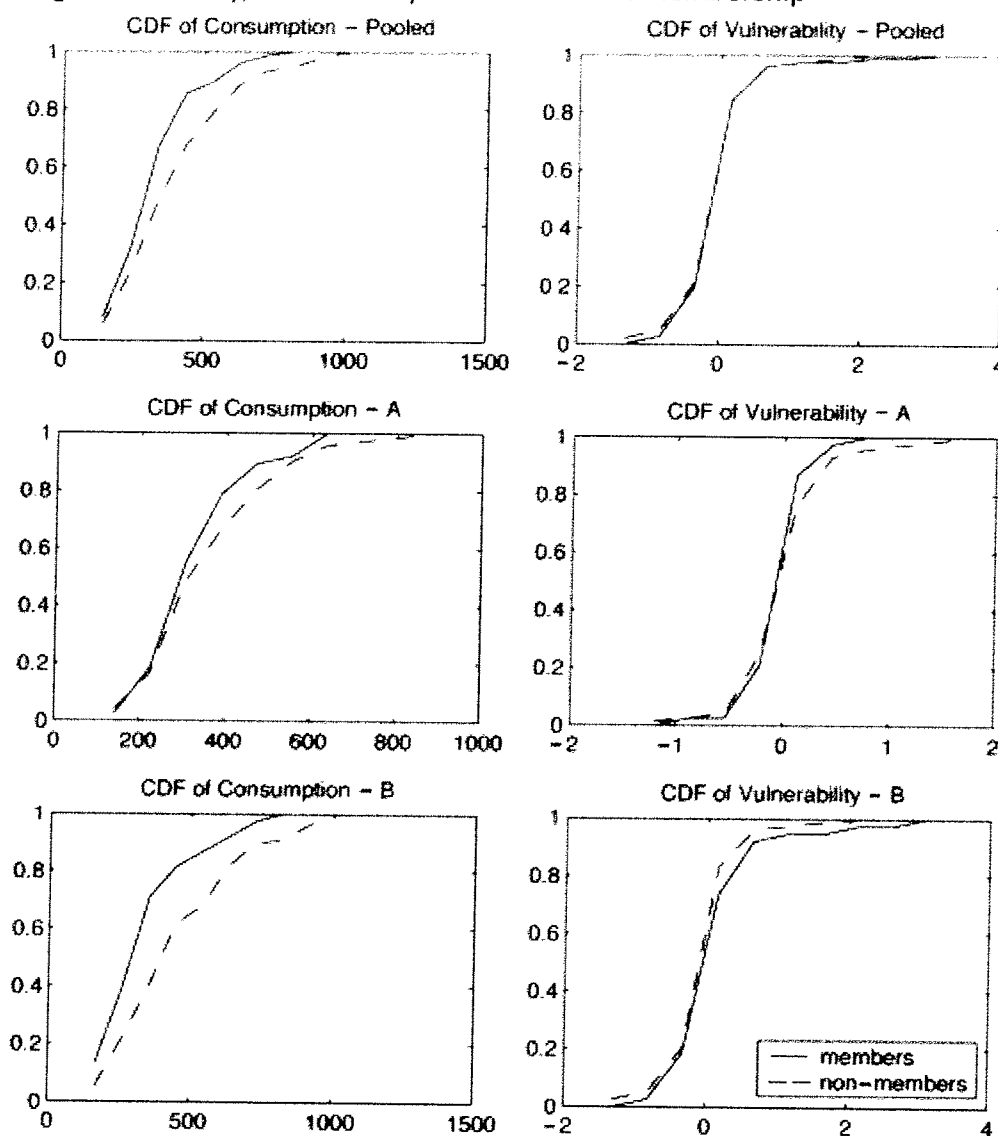
As already has been stated, the Grameen Bank and the BRAC define the poor as following: the ones who own less than half an acre of land (Develtere, Patrick, 2005). Morduch states that the microcredit institutions also help people who own more than half an acre of land (Morduch, 1998). Morduch has also shown that 30% of the households were above the eligibility threshold (Ibid). *Morduch finds no evidence of increases in consumption (and therefore reduction in poverty) using the same data (as Khandker) (Ibid). However, he does find that microcredit contributes to reducing household vulnerability, since consumption variability is 47% lower for eligible Grameen households, 54% lower for eligible BRAC households compared to a control group (Ibid).*

The vulnerability of the poor is already discussed in section 3.3, but it will be partly discussed here as well. Morduch gives a reason for the reduction of the vulnerability of the poor (Ibid). He states that the consumption pattern is smoothed due to the smoothing of the income which is caused by a significantly lower labour supply variability (Ibid). Thus the members have a significantly lower labour supply variability in comparison with non-members. A lower labour supply variability can be the result of the fact that the members are enabled to work also in the non-agricultural sector. Thus the members will be able to earn money throughout the whole year. For further explanation of the consumption pattern see section 3.3.

#### **4.4 Evidence from Amin, Rai and Topa**

According to Amin, Rai and Topa there is clear evidence that microcredit institutions reduce the poverty of their clients (Amin, 2003). Amin, Rai and Topa made diagrams which show the Cumulative Distribution Functions (CDFs) of average monthly consumption and income for microcredit members and non-members. This can be seen in figure 1.

Figure 1 Poverty, vulnerability and microcredit membership



Source: Amin, 2003

#### 4.5 Hoque's advice

Thanks to the study of Serajul Hoque (2004) one is able to conclude that microcredit programs not always have a significant effect on the reduction of poverty. Serajul Hoque has looked at a unique data set about the BRAC. *The BRAC is one of the largest microcredit providers in Bangladesh (Ibid).*

*The analysis revealed that the majority of the population in the sample households lived below the poverty line but that poverty was slightly more prevalent among household receiving BRAC credit than among similar non-BRAC households: 63% compared to 61,2% respectively (Ibid). These results suggest that BRAC's microcredit program has had a minimal impact on the reduction of poverty (Ibid). Taken together, the statistically insignificant effect of microcredit on household consumption and the higher incidence of poverty among BRAC households relative to non-BRAC households leads to the conclusion that microcredit had*



*negligible impact on the reduction of poverty (Ibid).*

The results of Hoque's study were very disappointing. But why were they disappointing? *It is important to recognise, that for microcredit to make an impact on the reduction of poverty, the credit has to be used in productive purposes* (Hoque, 2004). The analysis of Hoque's study showed that only slightly more than a half of the sample BRAC households (54,7%) used their loans for any productive purposes (Ibid).

From the above, one is able to conclude, that for microcredit to have a significant effect on the reduction of poverty, the microcredit loans have to be used for productive purposes.

#### **4.6 Conclusion**

The question whether microcredit programs actually alleviate poverty is much subjected to discussion, this can be read in the text of this chapter. Khandker is very positive about microcredit programs reducing poverty. On the other hand this paper also includes the analysis of Morduch where one is able to conclude that according to Morduch microcredit programs have no positive effect on the welfare of the rural poor.

Hoque's study is very important, because it states that microcredit programs can be successful in reducing poverty. In order to reduce poverty, the borrowers have to invest their loans in income generating activities. The borrowers will have a profit if the returns of the investments are higher than the costs of borrowing.

Since this paper has not found any leading results about the question whether microcredit programs alleviate poverty, it will give an advice of how poverty can be reduced.

It should be stressed that the notion of Hoque (for microcredit to have a significant effect on the reduction of poverty, the microcredit loans have to be used for productive purposes) is very important. If Hoque's advice will be conducted by the borrowers, they will have a chance in alleviating their poverty. So investing in productive purposes can alleviate poverty.

## Chapter 5

### Increasing income and consumption

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#### 5.1 Introduction

Microcredit programs in Bangladesh offer credit to poor people, which they can use to enhance income generating activities (Rahman, 2010). As already has been stated, the goal of microcredit programs, such as the ones offered by the Grameen Bank and the BRAC, is to reduce poverty. This can be done by increasing the consumption of the poor. Therefore the subquestion which will be analysed by chapter five is: “Do microcredit programs increase the members’ income and consumption?”

#### 5.2 Consumption difference between borrowers and non-borrowers: Rahman’s analysis

According to Rahman, (see table 5) non-members relatively consume more basic items such as cereals and vegetables than members (Ibid). Another interesting aspect which Rahman points out is the fact that the relative consumption on items, which contain a lot of proteins, such as meat and fish are higher for members (Ibid). A reason for this could be that members are able to afford more, since meat and fish are more expensive than cereals and vegetables. Non-members relatively spend more money on food items than members do. A reason for this can be that non-members do not earn enough money to buy non-food items. Non-members are thus considered to spend most of their income on food. And members relatively spend more money on non-food items, except for Chokoria, which is a district in Bangladesh (Ibid). The relative consumption of education is higher for borrowers than for non-borrowers (Ibid). This could be seen a very good indicator of the fact that borrowers are wealthier than non-borrowers. Most households in Bangladesh operate in agricultural activities and try to survive day by day. It should be stressed that most of these poor households do not have enough time to go to school, since school is very time-consuming. The fact that the relative consumption of education of members is higher than for non-members could be seen as a success of microcredit programs if the increase in relative consumption of education of members is a direct result of participating in microcredit programs. Future research should study whether the increase in relative consumption of education of members is a direct result of participating in microcredit programs.

Rahman also pointed out another very interesting finding: non-members consumed more cigarettes than members (Ibid). Rahman has not given a reason for this, but a reason for this interesting phenomenon could be that borrowers have a higher incentive to spend their money responsibly. This could be due to that borrowers have repayment obligations and these obligations have to be fulfilled. Borrowers could thus have a higher incentive to spend their money wisely on income generating activities, such as assets or (in the long-run) education. This could be a good research to pursue in the future to uncover whether this is the case.

Rahman concludes that borrowers are better off than non-borrowers since their total expenditure in terms of Taka (the Bangladeshi currency) is higher in comparison with the non-borrowers (Ibid).

Table 5 Average Consumption of Borrowers and Non-borrowers of the Three Districts.

	Gazipur		Dinajpur		Chokoria		Total	
	Bor	NB	Bor	NB	Bor	NB	Bor	NB
Cereal	835.80 (13.68)	743.02 (16.07)	874.78 (19.91)	919.65 (22.99)	725.59 (15.11)	716.12 (16.93)	812.05 (16.23)	792.93 (18.66)
Pulses	196.74 (3.22)	195.55 (4.23)	191.78 (4.37)	199.53 (4.98)	197.99 (4.12)	190.16 (4.49)	95.50 (3.90)	195.08 (4.57)
Vegetable	559.13 (9.15)	509.77 (11.02)	520.84 (11.85)	503.01 (12.57)	450.00 (9.37)	390.29 (9.23)	510 (10.12)	467.69 (10.94)
Meat & Fish	1317.34 (21.56)	732.35 (15.84)	1003.43 (22.84)	848.65 (21.21)	1166.85 (24.30)	837.04 (19.80)	1162.54 (22.9)	806.01 (18.95)
Milk & Egg	293.81 (4.81)	198.72 (4.29)	174.54 (3.97)	152.47 (3.81)	214.7 (4.47)	209.29 (4.95)	227.68 (4.42)	186.82 (4.35)
Cigarettes and betel leaves	245.40 (4.02)	239.15 (5.17)	130.91 (2.98)	138.25 (3.45)	197.42 (4.11)	173.58 (4.10)	191.24 (3.70)	183.66 (4.24)
Other	550.33 (9.01)	479.64 (10.37)	384.23 (8.79)	369.53 (9.24)	383.1 (7.98)	330.09 (5.52)	439.22 (8.59)	393.08 (8.37)
<b>Total food</b>	<b>3998.56 (65.45)</b>	<b>3098.21 (67.02)</b>	<b>3280.53 (74.69)</b>	<b>3131.12 (78.28)</b>	<b>3335.61 (69.48)</b>	<b>2846.69 (67.33)</b>	<b>3538.23 (69.87)</b>	<b>3025.34 (70.87)</b>
Fuel	175.96 (2.88)	131.54 (2.85)	134.23 (3.05)	111.80 (2.79)	168.61 (3.51)	179.61 (4.24)	159.6 (3.15)	140.98 (3.29)
Electricity	194.74 (3.19)	167.26 (3.61)	63.34 (1.44)	62.69 (1.56)	131.00 (2.72)	117.53 (2.78)	129.69 (2.45)	115.82 (2.65)
Clothing	225.64 (3.69)	129.81 (2.80)	177.40 (4.03)	149.52 (3.78)	181.65 (3.78)	175.67 (4.15)	194.90 (3.83)	151.66 (3.57)
Education	250.74 (4.10)	97.55 (2.11)	92.92 (2.11)	55.55 (1.38)	141.53 (2.95)	99.70 (2.35)	161.73 (3.05)	84.266 (1.95)
Health	247.31 (4.05)	187.79 (4.06)	153.71 (3.50)	131.58 (3.29)	205.62 (4.28)	186.04 (4.40)	202.21 (3.94)	168.47 (3.92)
Other	1016.25 (16.63)	810.28 (17.52)	489.96 (11.15)	357.30 (8.93)	636.61 (13.26)	622.38 (14.72)	714.27 (13.68)	596.65 (13.36)
<b>Total non-food</b>	<b>2110.64 (34.55)</b>	<b>1524.25 (32.98)</b>	<b>1111.57 (25.31)</b>	<b>868.47 (21.72)</b>	<b>1465.03 (30.52)</b>	<b>1380.95 (32.67)</b>	<b>1562.41 (30.12)</b>	<b>1257.89 (29.12)</b>
<b>Total</b>	<b>6109.2 (100)</b>	<b>4622.46 (100)</b>	<b>4392.1 (100)</b>	<b>3999.59 (100)</b>	<b>4800.64 (100)</b>	<b>4227.64 (100)</b>	<b>5100.64 (100)</b>	<b>4283.23 (100)</b>

The figures in the parentheses show the percentage of consumption in terms of total expenditure (in Taka)

Source: Rahman, 2010

### 5.3 Consumption difference between borrowers and non-borrowers: Jahur's and Quadir's analysis

According to the study of Jahur and Quadir of 2010, microcredit programs have a significant effect on the income of microcredit program members (Jahur, Quadir, 2010). The study has examined the difference of sample borrowers before taking a loan and after taking a loan (see table 6) from the Rural Development Scheme (RDS) in Bangladesh (Ibid). The RDS is based on ideals and teachings of the Islam (Ibid). The RDS is totally different from traditional microcredit institutions, such as the Grameen Bank and the BRAC, because the Grameen Bank and the BRAC are not based on Islamic ideals and teachings (Ibid). Jahur and Quadir

have collected the data from table 6 with a hypothesis that the difference in the level of income as a result of availing of micro credit from RDS is insignificant (Ibid). This means that the (null hypothesis is)  $H_0$ = microcredit from RDS has no significant impact on the income level. This means that the  $H_1$ =microcredit from RDS does have a significant impact on the income level. The significant is at 1 percent. This means that  $H_0$  will be rejected if the results show a significance level of 0,01 or less. Having stated the hypothesis, it is now time to state the results.

Table 6 Showing the Descriptive Results and Paired't' Test Results.

	Before Loan	After Loan
Mean	1848,15	4267
Std. Deviation	934,1266	1238,49
Coefficient of Correlation	0.897*	

\*Significant at 1% level.

Paired Differences					
Mean differences	Std. Deviation	Std. Error	t	DOF	Significant
2418,52	718,46	138,2674	17,492	26	0,1

Source: (Jahur, Quadir, 2010)

From the perusal of Table 6 it has been found that both correlation and paired't' test results are significant (Ibid). These indicate that there is a significant relationship between Income before Loan and Income after Loan; and the difference in the level of income as a result of taking loan from RDS is statistically significant (Ibid). This has led us to reject the null hypothesis that the difference in the level of income as a result of micro-credit from RDS is insignificant (Ibid). Therefore we adopt the  $H_1$ , concluding that microcredit from the RDS has a significant impact on the income level.

Due to the fact that Jahur's and Quadir's study states that the RDS has a significant impact on the income level (the income increases significantly), one is also able to state that the total value of consumption could also increase. For instance, say that a household in Bangladesh earned 1848,15 taka and say that 70 percent of their income was consumed. The consumption quote is thus  $0,7*Y$  ( $Y$ =income). Next fill the amount of income into the formula,  $0,7*1848,15=1293,705$ . This means that the total value of the consumption before taking a loan was 1293,705 taka. Now, assume that the consumption quote stays the same for after receiving the loan as before receiving a microcredit loan, thus  $0,7*Y$ . The total value of the consumption after receiving a microcredit loan will then be as following:  $0,7*4267=2986,9$  taka. The values for income, for before receiving microcredit and after receiving microcredit, are based on data from table 6. From these figures it should be clear that the increase in consumption is  $((2986,9-1293,705)/1293,705)*100\%=130,88\%$ . It must

be stressed that the increase in consumption is based on assumptions which can differ from reality, thus the increase in consumption should be regarded with caution.

Nevertheless, the study of Jahur and Quadir states that the RDS does have a significant impact on the income level of their borrowers. Bearing the economic “the more, the better” theory in mind, households could decide to consume more when income rises (*ceteris paribus*).

#### **5.4 Investing in income generating (productive) activities and in non-income generating (non-productive) activities**

Income and consumption are two variables which affect each other (Imai, 2010). A decreasing total value of income will be accompanied by a decreasing total value of consumption. Imai’s and Azam’s study (2010) concerning the question whether Microfinance Institutions (MFI’s) increase the member’s income has resulted into interesting conclusions. According to the results of Imai’s and Azam’s study, microcredit loans seem to significantly increase household income (Ibid). According to Imai’s and Azam’s study, one should split up the microcredit loan into two parts (Ibid). One part will be the share of the loan spent on income generating (productive) activities and the other part will be the share of the loan spent on non-income generating (non-productive) activities (Ibid). Imai’s and Azam’s study has found that the positive effect on the total loan is to be completely associated with the income generating activity (Ibid). These findings are consistent with Hoque’s findings (Hoque, 2004). Hoque states that for microcredit to have a significant effect on the reduction of poverty, the microcredit loans have to be used for productive purposes (Ibid). Imai’s and Azam’s study goes further; *it states that the non-productive component tends to reduce household income per capita* (Imai, 2010). A reason for this could be that non-productive activities, such as consumption, have no returns. Thus money will only exit the household’s wallet, meaning that the household will have less money left to spend on income generating activities.

Imai’s and Azam’s study concludes that the effect of microcredit loans on the income is very modest (Ibid). *A 100 percent increase of net change of total loan raises household income per capita only by 0,51% to 0,54% on average (ceteris paribus) (Ibid). However, 100% increase of net change of productive loan raises household income per capita by 0,69% to 1,09% on average (ceteris paribus) (Ibid).* These figures suggest that for microcredit to have a significant effect on the reduction of poverty, the microcredit loans have to be used for productive purposes.

Imai and Azam also suggest that the non-income generating activities are positive and significant when one looks at food consumption (Ibid). Income generating activities however are non-significant, when one looks at food consumption (Ibid). This suggests that microcredit loans partly (bear the non-income generating activities in mind) have a positive and significant effect on food consumption (Ibid). Imai’s and Azam’s study argues that a

*100% increase of net change of total loan raises household food consumption per capita by 0,52% to 1,02% on average (ceteris paribus) (Ibid). On the other hand, 100% increase of net change of non-productive loan increases household food consumption per capita by 0,74% to 1,11% on average (ceteris paribus) (Ibid)*

It must be stated that non-income generating activities have no returns, thus in the future the borrower will get into troubles concerning the repayment of his loan. In order to secure future repayment of the loan one should invest in income-generating activities. Income-generating activities can secure future income as well as future consumption. This has already been stated by Hoque.

## **5.5 Conclusion**

According to the text in chapter five, one could conclude that microcredit programs increase the member's income and consumption. Rahman, Jahur, Quadir, Imai and Azam all agree that microcredit institution do have a positive effect on the member's income and consumption. It should be stressed that the foregoing findings also point out that for microcredit to have a significant effect on the reduction of poverty (thus the increase of income and consumption), the microcredit loans have to be used for productive purposes. In the future the consumption will be able to increase due to the returns of the investments (ceteris paribus).

## Chapter 6

### The average payback period

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#### 6.1 Introduction

Poor people who receive a microcredit loan usually have no collateral. That's why many microcredit institutions (e.g., the Grameen Bank) lend microcredit loans to groups of poor people. *The group based microcredit program allows borrowers who cannot provide collateral, to form their own group where members are mutually liable for each other's repayments although loans are provided to individuals* (Abdullah, 2011). Since Micro Finance Organizations (MFO's) agree not to take any legal action against defaulters, the only instrument they have against loan defaulters is joint liability, where if any member is unable to repay, other group members cannot borrow unless they assist in repaying defaulters debt (Ibid). Based on the quote above it can be concluded that the repayment process of groups should be easily conducted. If a group member has problems with repaying his loan, other members would suffer disadvantages from this. That's why other group members will help the group member who cannot repay his loans. This way joint liability should lead to a successful repayment process. This chapter will analyse the following subquestion: "What is the average payback period of microcredit loans?"

*In 2002, an innovative World Bank project, Financial Services for the Poorest, extended micro-credit to the poorest of the poor, who couldn't qualify for conventional micro-credit programs (such as beggars, sex workers, or household help). The project was initially piloted in 18 districts covering 20 Upazilas (subdistricts) in Bangladesh, reaching 60,000 of the poorest people. Around 12,500 borrowers received job skills training to become gainfully employed. Most of them are now gainfully employed* (World Bank). The government of Bangladesh replicated the project, of the World Bank, all over Bangladesh (Ibid). Results have shown that the repayment rate of these loans has been more than 95% (Ibid). This implies that the poor are able to repay their microcredit loan.

#### 6.2 The repayment schedule of the Grameen Bank

The Grameen bank works with a repayment schedule which states that the borrower has to repay his loan within 50 weeks (Grameen Bank). This means that the borrower has to pay weekly instalments, for 50 consecutive weeks. *It had earlier been thought that the poor would not be able to find remunerative occupations. In fact, Grameen borrowers have successfully done so. It was thought that the poor would not be able to repay; in fact, repayment rates reached 97 percent* (Ibid). This implies that the poor (as already has been stated in section 6.1) are able to repay their microcredit loans.

The Grameen Bank is the leading Bank as regards to microcredit. It provides credit to the rural poor and because its founder Yunus Muhammad is also the founder of microcredit targeted to the rural poor, it is fair enough to assume that the average payback period of microcredit loans is 50 weeks. Off course there will be other banks that deviate from the

payback period of 50 weeks. But for now it will be enough to assume that the payback period of microcredit loans is 50 weeks. This way there will be some room for future research.

The payback period which is used by the Grameen Bank is less than a year, which is quite short. After these 50 weeks, the borrower has repaid his entire loan. This is quite impressive. Microcredit loaners are considered to be a very risky target group, but as the results of the Grameen Bank state, they do not seem to be a risky target group.

### **6.3 Conclusion**

From the text in section 6.1 and 6.2 it can be concluded that the poor are able to repay their loan. The Grameen bank is the greatest bank in providing microcredit to the poor. Given the previous statement it will be enough for this paper to assume that the payback period of microcredit loans is 50 weeks. The Grameen Bank uses a repayment schedule which is based on 50 weekly instalments.



## Chapter 7

### Conclusion

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The research question of this paper is as following: “What is the effect of microcredit on the welfare in the narrow sense of rural households in Bangladesh?”. The findings in this paper have shown that microcredit programs can have a significant effect on the welfare of poor households in Bangladesh.

Microcredit programs reach the poor; this can be read in chapter three. But there is still room for improvement, since many of the poorest people do not participate in microcredit programs. Microcredit programs succeeded in reducing their members’ vulnerability. This way the members were prevented from falling in further poverty.

In chapter four, one could read that there are analyses which give different results concerning the subquestion of chapter four. This paper will give an advice which will satisfy answering this subquestion, since there are not any leading results which can answer the question with 100 percent accuracy. The advice is that for microcredit to have a significant effect on the reduction of poverty, the microcredit loans have to be used for productive purposes.

Chapter five has shown that microcredit programs increase the members’ consumption and income. Again, the advice of Hoque comes into play. Microcredit programs can have a positive effect on members’ income and consumption, but in order to achieve a sustainable consumption pattern in the future one should invest in income-generating activities. Income-generating activities can secure future income as well as future consumption.

From chapter six, one is able to derive that all the prejudices towards the poor about not being able to repay a loan are refuted. Grameen bank members have reached repayment rates above the 90% as well as the BRAC members. The average payback period is 50 weeks, which implies that the rural poor are able to repay their microcredit loan in short time.

The foregoing findings show that microcredit programs can have a positive effect on the welfare of its members. MFI’s should however coordinate their programs with high supervision in order to make sure that the borrowers spend their loans on income-generating activities. Thus the essence of the conclusion is that microcredit programs can have a positive effect on the welfare in the narrow sense of its members, if the borrower spends its loan on income-generating activities.

## Epilogue

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Making my first paper in the Utrecht School of Economics was very exciting, but mostly very laborious, difficult and annoying. I have had many times where I had to struggle with finding the right information or writing the right text, but thanks to my study supervisors and my mother, I have finished it.

I have learned that writing a paper can be very demanding and especially when things do not work out as I had planned. I have also learned that it is important to stay focused on what you want to achieve and that if you do stay focused, you can achieve your goals. Overall, I think that writing this paper has helped me to develop my academic skills as well as my general knowledge.

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