UNIVERSITEIT GENT

FACULTEIT ECONOMIE EN BEDRIJFSKUNDE

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Sources of finance, objectives and activities of microfinance organizations

Masterproef voorgedragen tot het bekomen van de graad van

Master of Science in de Toegepaste Economische Wetenschappen

Jasmina Devinck

onder leiding van

Prof. Dr. Koen Schoors

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Jasmina Devinck

Table of Content

List of tables

1. Introduction

1.1 What is microfinance?

Microfinance is a very broad term that refers to "financial services for poor and low-income clients offered by different types of service providers"[1]. In practice, the term is mostly used to refer to loans and other basic banking services to the poor who are excluded from the traditional commercial banking system, provided by so called microfinance institutions (MFIs). The microfinance movement is a large and growing movement. In 2010 alone an estimated 105 million people received a microloan in developing countries. 80% of those borrowers were women and 70% of borrowers came from rural areas. In 2010 the number of borrowers increased with 12%[2]. This growth has attracted significant interest from many different groups. From investors to policy makers, from academic researchers to NGOs. But as the interest grows, so do the discussions. And although a lot of research has already been conducted, many important questions remain unanswered. This has divided the field into true believers of microfinance and skeptics. Success stories from institutions like the Grameen bank from Bangladesh or BancoSol from Bolivia often seem conflicting with the stories of many institutions continuously struggling. The lack of complete data often poses a problem for researchers and the optimal research design of randomized studies often comes with expensive data collection and is limited to case studies. However these difficult circumstances should not hold researchers back to tap into this topic and further research the promising attributes that microfinance may offer.

1.2 Introduction to the research question

Since microfinance has become a very broad movement a lot of different parties with different goals have entered the market and their motivations are very diverse. This often leads to heavy debates about 'wrong' and 'right' and 'good practices' and 'bad practices'. Some say that institutions are easily swayed by promises of profit and lose sight of their development goal while others argue that focusing too much on poverty alleviation undermines efficiency and endangers financial sustainability. But how the goals of the MFI

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[1] http://www.microfinancegateway.org/p/site/m/template.rc/1.26.12263/
[2] Statistics are originally from the MIX market database and were consulted on
http://www.convergences2015.org/en/Article?id=555

influences its decision making and their performance is not clear. Therefore the goal of this thesis is to find an answer to the following research question: How do the mission and the goals of microfinance institutions influence their financial decisions and their performance in both financial sustainability and outreach?

2. Overview of the literature

2.1 Goals of a microfinance institution

2.1.1. What is the main objective of microfinance?

Overall, one could say that the main idea behind microfinance is poverty alleviation. The main activity is to provide financial services to the poor who have little or no access to commercial bank services. Mr. Muhammed Yunus, founder of the Grameen Bank in Bangladesh and recipient of a Nobel Prize in 2006 is often referred to as the founding father of microfinance. As an economist at the University of Chittagong in Bangladesh, he developed the idea of providing loans to the part of the population that is too poor for the traditional banking system. His belief is that through providing banking services to the poor, microfinance would be able to lift millions out of poverty. Empowerment of the lowest class in society and the involvement of women are key to this theorem. His ideas were refreshing and seemed to propose a sustainable answer to the pressing problem that is poverty. They were received with a lot enthusiasm worldwide.

2.1.2. The microfinance promise

Today, the opinions on the microfinance theory are very diverse. True advocates of microfinance raise the argument that it proposes a win-win situation: good microfinance institutions that follow the principles of good banking will also be those that alleviate the most poverty (J. Murdoch, 2000). On the one hand the microfinance system benefits the poor by helping them out of poverty and on the other hand the MFIs would benefit. Helping the poor would not cost them money and may even generate a profit. The use of subsidies (for example money from donors or government aid) would not be necessary and could even be harmful. If this win-win situation would always be the case, then it would be enough for microfinance institutions to follow the principles of good banking and the microfinance mechanism would do its work. An MFI would be successful by solely perusing the goals any good bank would pursue. If the proposition is indeed true then poverty alleviation would follow right behind. However, the proposition is a lot more complicated than it sounds at first. It relies on a lot of empirical assumptions and relations that might not always occur in reality or cannot be generalized to any situation. Up until today there is no clear empirical evidence that

microfinance can live up to these win-win expectations. A lot of MFIs do not succeed in reaching financial sustainability and a lot of them are still heavily subsidized. The MicroBanking Bulletin performed a survey in 1998 within organizations that target the poorest borrowers. They concluded that they only succeed at generating 70% of their full costs.[3] On the other hand, in the financially self-sufficient programs the average borrower has a loan size of around $430 (in comparison with an average loan size of $100 in a poverty alleviation oriented program). These numbers were reported in the paper 'The Microfinance Schism' (J. Murdoch, 2000).

2.1.3. Does this promise live up to reality? Why (not)?

These findings lead us to assume that the win-win situation is not always possible in reality. Moreover it is argued that a win-win situation does not occur but that microfinance institutions are faced with an important trade-off between on the one hand maximizing poverty alleviation and on the other hand striving towards a financially sustainable organization. This implies that MFIs have multiple goals to pursue and choices to make.

Before we further discuss this possible trade-off, we first take a look at the logic behind the win-win proposition and the arguments of the true microfinance believers. In the paper "The Microfinance Schism" by J. Murdoch this proposition in carefully examined and its underlying supporting arguments are discussed. The most important ones are discussed here.

High interest rates

According to this paper the most important condition for microfinance to be a win-win is that households need credit, but not necessarily cheap credit (J. Murdoch, 2000). It aims at providing financial services to the poor, who wouldn't have access to credit otherwise. The price of this credit (in the form of the interest rate) is generally known to be high. This is logically justifiable since high costs have to be covered with only a small loan size. Only when these high costs can be covered by the borrowers themselves, the MFIs can be financially self-sustainable. Empirical evidence shows that in many cases charging very high interest rates does not erode the demand the for credit. Most MFIs have a 95% repayment rate

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[3] The targeted organizations had an average loan balance of less than $150 dollars or less than 20% of the GNP per capita.

and many customers return for new loans[4]. These previous facts would defend the first argument. However, we need to be cautious when we draw conclusions. Although these interest rates might be bearable for poor households who are able to start up lucrative businesses, they may not be bearable for the most vulnerable and underserved poor population. It would be unjust to evaluate the interest rates based on aggregate demand instead of looking at 'what kind of people we serve at what kinds of interest rates'. This could lead us to conclude that the first condition for the win-win already proposes a problem for a part of the group of people that microfinance wishes to reach. The poorest people in the direst situations might not have the possibility to get a loan because their self employment activity will not yield a return that is high enough to pay the interest rates. Therefore, institutions might have to make a decision on how high their interest rates are going to be. It is possible that they decide to sacrifice financial sustainability to serve the poorest of the poor.

Scale

The second argument why an MFI that follows good banking principles would have a bigger outreach is the argument of scale: When an MFI is financially sustainably and not subsidized it has access to private funding and does no longer rely on the often very limited donor funding or subsidies from governments. In this way it would be able to grow and to reach more people. The problem with this argument is that solely privately funded MFIs will often focus on the groups of people that generate sufficient revenues, leaving out the poorest of the poor. Serving extremely poor people often comes at a higher cost. For example because of the smaller loan sizes or because they sometimes are harder to reach. It is important that we don't only consider the breadth of the outreach into account but also the depth. Depth can be defined as "clients' poverty level or other social preferences such as the percentage of women reached" (R. Mersland and R. Oystein strom, 2007). This means we should not only consider the number of people that are helped by microfinance to cross the poverty line but we should also consider the income distribution below the poverty line. Rather than considering the number of people helped other measures could be proposed. We could for example refer to Watts measure of the "average exit time" (Morduch, 1998). This measure is distribution sensitive and thus takes the income distribution under the poverty line into account.

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[4] Consultative Group for Assistance to the Poorest (CGAP), (1996). Microcredit interest rates. CGAP Occasional Paper, No.1, August.

Subsidies and donations

A third argument is the argument against subsidies. Subsidies in microfinance are a much discussed topic and the opinions are very diverse. On the one hand, the proponents of the win-win proposition claim that subsidies are not necessary and do more harm than good. Indeed, lessons need to be learned from past failures. There have been cases where subsidies have led to disaster stories (Adams, Graham and von Pischke, 1984). The possible reasons for these failures are numerous.

First, subsidization is said to reduce efficiency. However, empirical research has shown that in reality this is much more nuanced. Some studies show that subsidization may even have a positive effect on efficiency but that it depends on the level of subsidization. By providing liquidity to improve human and physical capital of the MFI and thus its efficiency. On the other hand, too much subsidization could lead to moral hazard and a lack of incentives for the MFI to continuously improve its operations. Proponents of subsidization argue that it is possible to anticipate the decline of efficiency by installing appropriate control mechanisms. Installing the appropriate incentives for the management to replace the profitability objective is key. For instance it is necessary that the MFI keeps to strict budget constraints and sets itself stretch performance objectives. If the MFI is able to install these, than it can be argued that the problem of efficiency can be controlled. However, we would like to like to point out that the study that came to these conclusions (M. Hudon, 2011) only used the measure of donated equity and did not consider operational subsidization. However, we believe that this influences the effect strongly. In our opinion it is important to make a distinction between different kinds of subsidies. There are subsidies in the form of capital and there are subsidies to cover operational expenses. We argue that the second one is more harmful to the efficiency. It makes MFIs dependable on subsidy funding in the long run because the incentives to strive for an operationally efficient organization are no longer existent.

Secondly, the use of subsidies would have a negative effect on access to commercial financial markets. Financial sustainability is claimed to be a necessary condition for an MFI to create leverage. However, in the paper by Murdoch it is argued that is a misconception. He states that it is not self-sustainability that is incompatible with commercial financing, but that the inability to limit the perceived riskiness of an MFI often poses a problem. This stems more with economic logic. As banks are reluctant to lend money to a poor borrower without collateral, they will also be reluctant to lend to the microfinance program in itself without guarantees. This problem is not insuperable. A good example comes from the Grameen bank

that sold bonds with guarantees from the government successfully while the interest rates charges to the clients were subsidized.

As a third argument, opponents of subsidies say that funds will dry up in the future. However, since it is credible that poverty alleviation will remain a big concern for governments as well as donors, it is reasonable to argue that subsidies will remain available for effective and innovative microfinance programs.

Other arguments raised against subsidies are that subsidized credit does not often end up in the right hands because of the influence of powerful political groups, that microfinance should have as little government involvement as possible and that subsidization would limit the mobilization of savings in MFIs (Murdoch, 2000).

2.1.4. The microfinance trade-off

It is clear from the discussion above that there are numerous arguments that lead us to conclude that the microfinance promise needs to be critically examined. The reality for many institutions is still that this promise is unfulfilled. This does not mean that microfinance in itself is not a powerful tool to fight poverty nor that it cannot be self-sustainable in any way. It means that every microfinance bank is put before important choices. Empirical studies show that there is indeed a trade-off for MFIs between serving the poorest and profitability (R. Cull, A. Demirgüc-Kunt and J. Morduch, 2007). "Because providing credit to the poor in many cases is a very costly activity, focusing on outreach may […] conflict with the financial sustainability of MFIs." (N.Hermes, R. Lensink, A. Meesters, 2011). There are different facts that challenge an MFI and make its activities expensive.

First of all, micro banks face high transaction costs when lending on such small scale. This expense is partially solved by the high interest rates that are charged to clients. However, there are situations where this is impossible (for example: when an MFI lends money to the most poor the loans are often so small in size that the costs cannot be recovered with reasonable interest rates). This is the first part of the trade-off: the MFI needs to decide if it wants to pursue complete financial sustainability and profitability or if it is willing to sacrifice this in favor of helping the poorest people.

The second reason for the trade-off is the determination of the riskiness for a potential borrower and the monitoring after the loan has been granted. Since most of the loans are used to start up activities in the informal sector it's hard to exercise control. The innovative microfinance system has found ways to work around this problem. For example the use of

group lending, introduced by Grameen bank in Bangladesh (J. Murdoch, 1999). Through this system there is peer selection and peer monitoring within the group of borrowers. Although this system does not resolve the selection problem completely it has already proven its good use in many MFIs worldwide.

The third reason for the microfinance system to be expensive is the unavailability of collateral. However, in reality this appears to be only a minor problem. Since most MFIs are able to report repayment rates of (on average) 95%[5], the cost of defaults on loans remains rather limited. The problem is also partially solved through the previously mentioned system of group lending. Different borrowers are made responsible for each other's loans and when one of them defaults, the others are held responsible to pay up. Another solution is the substitutes that MFIs use for the collateral. In Grameen for example 0.5 percent of every unit borrowed goes into an emergency fund that provides insurance in case of default, death or other circumstances (J. Murdoch, 1999).

To further address the previous three problems, microfinance has been very innovative in designing mechanisms to resolve their main challenges. For example: dynamic incentives are used to increase repayment rates. This means that the loan is granted in small parts over time and that these parts get bigger over time when the repayment schedule is kept. This allows the MFI to reduce their risk. Another example is the structure of repayment, used as a tool to enhance correct repayment. In contrast to the practices in normal banks the repayment of a microcredit usually starts almost immediately after the receipt of the loan. The loans are also repaid in small parts often on even daily or weekly basis. Although this possibly drives the operational costs, MFIs find that it enhances repayment (J. Murdoch, 1999).

The use of the mechanisms is widespread in MFIs and although there are numerous examples of success through these mechanisms in case studies, clear empirical evidence of overall success is not available. Policies are very often organization-, region- or country specific which makes it hard to make conclusions on global scale.

The fourth reason for microfinance to be costly is maybe the most underestimated one. Information asymmetries challenge MFIs in many ways. One the one hand there is an asymmetry between the institution and its borrowers. These are likely to be larger than in commercial banks because of the characteristics of borrowers (for example: it is often very hard to determine what the money of the loan is used for). Information asymmetries also occur between MFIs and their financial sources (being investors as well as donors and

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[5] http://www.grameenfoundation.org/what-we-do/microfinance-basics

governments). Information frictions play an important role in the costs of finance in emerging economies because of weaker regulation and less well-established institutions. The difficulties with raising the necessary amounts of money may restrict growth (M.J. Garmaise and G. Natividad, 2010). Costs related to information asymmetries are hard to quantify, however researchers need to be aware of their existence and continue MFIs to innovate and optimize their policies and practices to reduce them. A more recent development to help reduce this problem is the startup of independent rating agencies. Through a screening process that is specialized to the different goals, challenges and critical issues of an MFI the riskiness and possible profitability can be assessed (L.A. Beisland and R Mersland, 2011).

Although these innovations are backed up by case studies (Jonathan Bauchet, Cristobal Marshall, Laura Starita, Jeanette Thomas, and Anna Yalouris, 2011; R. Hartungi, 2007) and anecdotal evidence, empirical evidence shows that microfinance remains challenged and that important choices concerning outreach and financial sustainability have to be made by every MFI. One of the most comprehensive studies on this topic is from Cull et al. (R. Cull, A. Demigrüc-Kunt and J. Murdoch, 2007). In a study concerning 124 MFIs in 49 countries they evaluate if and how financial self-sufficiency is related to outreach. To do this, they divide their sample into different types of institutes based on their technique of loan distribution. They find 'individual-based lenders', 'solidarity group lenders' and 'village banks' (for the precise definition of each category we refer to the paper). The study suggests that individual-based lenders are most profitable but the fraction of poor borrowers in their loan portfolio is smaller. This finding supports the trade-off hypothesis. In a more recent study (N.Hermes, R. Lensink, A. Meesters, 2011) on outreach and efficiency the authors describe how recent developments are influencing this trade-off. On the one hand competition amongst MFIs is rising in several countries. This puts additional pressure on interest rates and cost efficiency. More and more commercial banks are starting to become interested in providing microfinance. This could possibly lead to a shift away from the poor, hard to reach and often not so profitable parts of the population. On the other hand, institutions might be able to improve their efficiency through recent technological innovations like the use of cell phones or internet. The recent liberalization of the financial markets in several developing countries and the installment of regulations could also be a huge step forward towards more stability for microfinance.

Although the trade-off issue is of great importance, there is still a lack of rigorous testing. Studies often remain inconclusive due to relatively small samples or due to the fact that

results cannot easily be generalized to other parts in the world (N. Hermes *et al.*, 2011). The issue has brought division in the microfinance movement, especially in policy circles. There is a hefty debate going between so called welfarists and institutionalists.

Welfarists are convinced that the outreach goal of microfinance should always remain its main goal while institutionalists stress the importance of sustainability and efficiency for microfinance institutions. Both parties raise good arguments and offer good insights in the pros and cons of microfinance. However, because this debate is often so hefty both parties often argue beside the point. Neither of these camps is able to proof their point totally and scientifically. As it is with so many matters, I believe the truth in this case is somewhere in the middle. More recent literature has offered interesting insights to show that sustainability and outreach could indeed be compatible and even complimentary (J. Murdoch, 2005; R. Cull *et al.* 2008; E. Rhyne 2008). E. Rhyne describes outreach and sustainability in microfinance like Yin and Yang: "They are two sides of a whole, each incomplete without the other. This view emphasizes that reaching the poor and sustainability are in large measure complementary, and particularly that sustainability serves outreach. Only by achieving a high degree of sustainability have microfinance programs gained access to the funding they need over time to serve significant numbers of their poverty-level clients." (E. Rhyne, 1998).

In her paper 'The Yin and Yang of microfinance: Reaching the Poor and Sustainability' the author compares microfinance with a mathematics problem of dual maximization (outreach and sustainability). There is not one absolute solution to this problem; it depends on how much we value one or the other. The dual maximization approach also entails that there is a maximum possibility curve. If an MFI is near to (or on) that curve then there is a direct trade-off between outreach and sustainability. However, if an MFI is not then there are possibilities to improve both outreach and sustainability. The results from a previous study (B. Christen, B. Vogel, E. Rhyne, 1995) are helpful in explaining this further. The study was conducted in 11 leading MFIs and found microfinance programs that were sustainable at every poverty level of their clientele. This could be a good indication that it is indeed possible to run a self sustainable MFI amongst the poorest of the poor. Even more important is the finding that in well-performing MFIs there was no correlation between the poverty level of clients and the financial viability of the institution. The author doesn't deny that it is more challenging to run a sustainable program with very small loan sizes and often in rural areas, often sparsely populated. However, if we find evidence that it is possible to run MFIs in less favorable settings so efficiently that clients from every poverty level are able to cover the cost (like in the 1995 study from B. Christen *et al.*), we should further analyze and research their practices.

At the same time it would be valuable to research cost structures and delivery methodologies of MFIs claiming that their outreach goal is the reason they cannot achieve sustainability. If they are inefficient and receive subsidies, then these subsidies really serve to cover their operational costs. Their concern for the poorest could become an excuse to avoid difficult improvements (E. Rhyne, 1998). If MFIs are efficient but not capable of letting their poor clients cover their costs of loans, then the received subsidies can be considered as the subsidization of interest rates. The debate can then be reduced to the question if subsidization of interest rates for the poorest clients is desirable or not.

I think it is important to note that even though there may be some empirical evidence of the existence of a trade-off in the majority of MFIs, it is important for them to constantly innovate and optimize their efficiency. Constantly looking for new solutions will be more beneficial to both outreach and sustainability goals than debates that are mainly based on ideology and anecdotes rather than scientific evidence.

Mission drift

It is clear from the previous discussion that MFIs are faced with many decisions. Many institutions start out in the ideology that they want to strive to alleviate poverty, however evidence is found that when MFIs mature and grow, they start focusing more and more on serving clients who are looking for bigger loans. (R. Cull, A. Demigrüc-Kunt and J. Murdoch, 2007). Because these larger loans put the MFI in a more comfortable position to cut costs and make the organization profitable, it may be tempting for MFIs to focus on other groups of lenders. Therefore it is very important that the MFI has a clear vision on what it aims to do and keeps that vision in mind with every decision it makes. Otherwise, the organization could easily drift from its mission.

2.1.5. Financial goals versus non-financial goals

When we evaluate microfinance systems the question arises as to what criteria we should use based on their goals. There is no consistency in the current literature. Deciding on these measures raises an essential question: "Is microfinance about providing banking services to the unbanked, or is microfinance a development intervention that concerns itself with the attainment of long-term sustainable responses to high levels of poverty?" (M. Korth, R. Stewart, C. Van Rooyen and T. De Wet, 2012). From the point of view of banking institutions

that just want to serve the part of the population that doesn't have access to the commercial banking system measures of sustainability, profitability, breadth (the number of clients they serve), different types of costs, the scope of the outreach etc. are appropriate. But the goals of most MFIs go further. They want to serve the purpose of poverty alleviation. According to them, access to credit for the poor will not only have the effect of increased financial wealth, but will in the long run also has a positive effect on for example health and education. The theory how the improvements would occur is known as the microfinance theory. This theory states that the access to credit will lead to increased investments. These investments can include productive assets, health and nutrition improvements and expenses for education. Those investments then help the poor lift themselves out of poverty. Because the impacted households become more financially resilient, the risk to return to poverty is reduced also (M. Korth *et al.,* 2012). In reality, the situations are often more complex. Little rigorous testing has been done to see what factors strongly influence (either positively or negatively) this causal chain. The difficulty with scientific evidence for non-financial impact is that it requires a control group. The randomized research design is difficult to execute and often very expensive. The existent randomized studies are limited to case studies and cannot be generalized easily on a global scale. However it is meaningful to look at these studies with a broader view and compare results from different continents and from different institutions. In the paper 'Latest Findings from Randomized Evaluations of Microfinance' the authors give an overview of these randomized studies. Impact studies in India and Morocco don't show significant improvement in either health, education of female empowerment (Jonathan Bauchet, Cristobal Marshall, Laura Starita, Jeanette Thomas, and Anna Yalouris, 2011). In the paper: 'Microfinance: Development intervention or just another bank' the authors make an overview of studies that research the impact of microfinance on education and health and nutrition in sub-Saharan Africa. In three out of nine studies there was a significant positive effect on education. For nutrition and health expenses there are a few studies that stress the importance of lending to women, since the positive effects are more likely to occur when women are granted a loan (S.Doocy, S. Teferrab, D. Norellc and G. Burnham, 2005; Y. Shimamura and S. Lastarria-Cornhiel, 2009).

The evidence from these kinds of studies often remains inconclusive and results need to be handled with care. Generalization from findings in certain MFIs or certain geographical areas is often unjustified because of very specific influencing factors. However, if microfinance claims to be a powerful instrument for poverty alleviation it should be able to pass the test of

non-wealth impact studies. MFIs who claim that lifting the poor out of poverty is their main goal should not be satisfied with numbers of breadth of outreach but should look further at the conditions and influencing factors for the different causal effects of the microfinance theory to occur.

2.2 Financing and ownership

Due to the promising prospects for microfinance, many different people got involved over time. Institutions can be owned and/or controlled by private investors, NGO's, governments, donors, etc. Because the providers of financing are not automatically the owners of a fund we want to make a clear distinction between the two. This is particularly important in microfinance where money from donors (that is often not accompanied with ownership and control) still plays a significant role.

2.2.1 Ownership

The different types of ownership in microfinance are generally categorized in three large categories: There are the Shareholder-owned Firms (SHFs), Non-profit organizations (NPOs) (often also called non-governmental organizations NGOs) and cooperatives (COOPs). Policy advocates argue openly that a shareholder structure is the best ownership structure for an MFI because they believe that SHFs deliver superior performance. This is the result of the ability of a SHF to be organized and operate as a proper bank: they can be regulated by banking authorities, accept deposits, have a large range of services, be independent from donors, attract private equity capital and have better corporate governance because of the private ownership (R. Mersland and R. Oystein Strom, 2007). Also, NPOs are often constrained from accepting deposits and delivering other financial services because they don't have a full bank license. Although these raised arguments appear to be reasonable, consistent superior performance from SHFs over COOPs and NPOs is not found in reality.

In finance, many ownership theories try to identify and explain the different costs that occur with different ownership structures. Here we will discuss two of the main theories: the agency theory and the theory of ownership of enterprise.

The agency theory

Most research on ownership structures starts with the agency theory. According to this theory there are agency costs that occur when the ownership and control over a company are not exercised by the same person (or group of people or legal entity). This is often the case for MFIs. For example, large NGOs are not the actual owners of the funds they manage. The goal is to optimize the ownership structure and give the right incentives to the involved parties in order to minimize these costs. For microfinance in particular, this would mean that SHFs would be more efficient since the owners have more incentives to keep an eye on the organization and on the decisions from the managers. (Jensen M.C. and Meckling W.H., 1976).

The theory of ownership of enterprise

This theory builds further on the agency theory and states that there are different kinds of agency costs. First, there are the 'market based contracts' costs, costs that occur because of a company's contracts with stakeholders like employees, customers etc. and secondly 'practice of ownership' costs which occur between the management and the owners. As argued in the agency theory, SHFs could do a better job in minimizing the 'practice of ownership' costs due to their financial incentives to keep control over the institution. However NGOs might have an advantage when it comes to 'market based contracts' because they might be closer to customers. (H. Hansmann, 1996).

These theories offer interesting insights, however they remain inconclusive about the end result of the influence of ownership on the MFI's performance.

Even though the topic of ownership could contain many answers to questions that remain for microfinance, no profound research has been conducted. In many studies the ownership structure is a control variable, but very few studies research the topic in itself. An interesting exception is the previously mentioned study by R. Mersland *et al.* (Note that in this study the authors divide the ownership structures in only two categories: NGOs and SHFs). They place the problem of the microfinance trade-off in the context of ownership. Based on six performance measures of social benefits for clients from MFIs, provided in a previous study (M. Schreiner, 2002), they compare the different ownership structures. The first important measure here is depth, defined as "clients' poverty level or other social preferences like for instance the percentage of women served" (R. Mershland *et al*., 2007). The authors find no significant difference for the different ownership structures, so they can conclude that

ownership does not necessarily determine the depth of the outreach. Another, often debated measure is cost. As previously mentioned many parties argue that NGOs are less efficient and incur higher costs. This hypothesis is not supported by the empirical data from this study. There are no significant differences in operating expenses or equity costs. The breadth (measured by the number of clients) is significantly higher for SHF, as is their scope (number of types of financial contracts supplied). The question remains of course if these similarities (and differences) are in fact delivering proof for the trade-off and for the differences in decisions between the different ownership structures. The answer we get from this study would be no. The empirical results do however prove that the difference in regulation of these types of organizations influences these measures. For example, since NGOs are not regulated as banks, they cannot offer services to depositors. This not only influences the scope of their product offering but also their financial structure. In the past we have seen that microfinance has been dominated by non-profit and combined ownership, rather than pure investor ownership (Cull *et al.,* 2006) while policy makers continue to advocate the shareholder structure. But since there is no clear scientific evidence that one ownership type performs better on all levels than others, I believe that there are no clear reasons to believe that different ownership types could not co-exist. These different ownership types may result in different ways of operating and a different emphasis in their management, policies and practices. They may serve different types of customers (not necessarily different in poverty level but also different in other social measures like villagers versus city dwellers), they may be motivated by other goals and they may have completely different views on what the microfinance landscape is supposed to look like. In the end they might fulfill different needs, but I strongly believe that these differences are beneficiary to the microfinance system.

2.2.2. Financing

The list of different types of finance providers in microfinance seems to be endless and it is hard to create a clear overview and categorize these different types. There are many meaningful ways to make distinctions between different financiers. If we look at the balance sheet of an MFI we can find three financial sources: capital, debt and deposits (if the legal status of the MFI allows it to collect deposits). Also important is the off-balance sheet funding: many MFIs receive donations and subsidies from donors or governments to cover their operational costs (see *supra page 6*). The origin of these resources also plays a major

role. The motivations and goals of different funders might have a big influence on the operations and the focus of an MFI. The most common resources are private investors, governments and donors.

The first important distinction we should make is what the funders expect for their money. First of all there are investors who invest in an MFI, with the expectation of having a future return on their investment. They can do this through providing capital and being the holders of shares in return or through providing loans. These are for-profit funders.

Secondly there are non-profit funders. They donate the money but don't expect a financial return in the future. Their main interest is poverty alleviation. They can provide financing by providing capital. The possible realized return (through the interest payments of borrowers) is then used as self-financing for the fund. They can also provide so called 'soft-loans'. These loans have a low interest rate, sometimes they are even interest free. Only the amount borrowed has to be repaid.

Of course there are many financiers that have objectives that lie in between. They value the so called 'Double bottom line': on the one hand they want to invest their money and expect a return but they are willing to accept a lower return because of the social engagement towards poverty alleviation of the MFI. They are so called social investors.

Each of these categories of funders has very different characteristics that could be influential to important traits of the MFI. For example: Is the MFIs main goal to serve the poorest people? Does the MFI strive to financial self-sustainability or profitability? Does the MFI operate in the most efficient way? Etc.

The balance sheet

The balance sheet of an MFI gives a good insight into what mix of finance it uses. As mentioned before we can find three main categories of financing sources on the passive side: capital, debt and deposits. The issue of an optimal capital structure has been studied intensively in the corporate finance literature. However, applying the conclusions to lending institutions and more in particular, microfinance lending institutions would lead to the wrong conclusions.

On the one hand because these institutions are run in a completely different environment. For example, next to the traditional capital and debt financing, MFIs can also receive grants. Although this is 'free money' for the MFI, it is argued that it may be destructive for the

efficiency and sustainability. Also, influential factors for the capital structure of firms that operate in the western world are very different in developing countries (for example: tax considerations, potential bankruptcy costs, transactions costs, agency costs etc.).

On the other hand, what an 'optimal' structure is determined differently for the MFIs. The poverty alleviation goal of MFIs often leads them to make decisions that don't seem optimal financially (for example focusing on small loans which drives costs). So the measures we use to evaluate the capital structure should be different from the ones we find in traditional research. The literature on this subject for MFIs is not profound and is often restricted to a certain geographic area. An interesting exception is a recent study where the author researched how the capital structure of an MFI could improve its efficiency and sustainability, both crucial measures to evaluate an MFIs performance (V. L. Bogan, 2012). In the paper she uses two main theories on the link between the capital structure of an MFI and outreach, sustainability and efficiency.

The first one is the life cycle theory. According to this theory most MFIs start as NGOs, with a clear social goal and funded with grants and soft loans. As the institution grows private debt and capital become available, although it might be still be restricted by for example guarantees. In the last stage traditional financing methods like traditional equity and loans become available. Although there is empirical support for the life cycle theory (T. Farrington, J. Abrams, 2004) other studies have shown that other important factors can influence this lifecycle and shape the funding structure. One of the most important influences is regional variation. Due to differences in regulatory environment, macroeconomic factors, and patterns of saving and lending MFIs are facing different realities. This reflects itself in the capital structure. In Latin America for example, MFIs have succeeded in becoming well regulated institutions that can mainly rely on market funding while NGO structures still dominate in the Middle East, North Africa, Eastern Europe and Central Asia (T. Farrington, J. Abrams, 2004). This considerably changes the way that the MFI can operate and deliver its services to its clients and in the end turn into an efficient organization.

The second theory is the profit-incentive theory. In contrast with the first theory it states that an MFI should use commercial funding sources in all its stages to achieve the 'microfinance promise' (This theory is discussed in detail in section 2.1.2 'the microfinance promise'.).

The empirical analysis in this paper, based on balance sheet information, leads the author to conclude that both the size and the capital structure are related with the MFIs performances. As expected, asset size has a positive effect in terms of sustainability and outreach. Grants (as a percentage of assets) have a negative effect to sustainability. The author also finds evidence of the negative effect of grants on operational self-sufficiency while there is no notable effect on the outreach. (V. L. Bogan, 2012).

A recent report from the Microbanking Bulletin (R. Sapundzhieva, 2010) focused on debt financing within MFIs. Debt is a very important source of finance: from 2007 to 2010 debt was one-third of the total funding of MFIs. The report shows that the amount of debt financing varies strongly between regions and between the different legal statuses of the MFIs. When we look at the top twenty countries with most amount outstanding debt we can conclude that most debt is used in South Asia and in Latin America and the Caribbean. These are the more mature regions when it comes to microfinance. This evidence supports the previously mentioned life cycle theory as the access to debt financing is proof of access to commercial funding in the more mature MFIs in these regions. The report also taps into the sources of these loans. The biggest funders are the financial institutions (38%) followed by funds (22%) and development finance institutions (19%). With regard to the pricing of debt the report shows clearly that the goals of the funders are strongly reflected in price: governments and DFIs provide the cheapest funding, while financial institutions charge the highest rates.

As mentioned before, gaining thorough insight in who exactly provides what kind of finance is complicated. From the balance sheets we can make conclusions about the capital structure but it's is not possible to see on the balance sheet if there was capital donated or if there were soft loans granted. Additional information is necessary. From reports we can get general information about financing trends. But in my opinion, research about the link between the funding and the success of the institutions should be performed on larger scale, with regional differences in mind.

2.3 Macroeconomic differences

Most research on microfinance has been focusing on the institution itself. It focuses mainly on micro-institutional determinants of success like funding structure, legal structure, distribution systems, product range, etc. MFIs are compared with each other in the hope of discovering 'best practices' that could lead to success in financial sustainability as well as in outreach. However, one major factor seems to be ignored in this comparison: the macroeconomic context. If we compare MFIs and not take into account the context they operate in, we could wrongfully reject practices from MFIs that operate in challenging economic conditions.

Let's take for example two of the most renowned institutions: the Bank Rakyat Indonesia (BRI) and the Grameen Bank from Bangladesh. They were leading institutions in the development stage of microfinance (1980-1997). Both these banks have been studied and compared extensively in terms of their funding, structure and practices. However, they both operated in very different macro environments: The GDP growth in Indonesia had an average of 5.0% in that period while in Bangladesh the average GDP growth was only 1.7%. In our analysis we need to account for this difference because we need to be able to determine what part the success of the institutions was due to institution specific practices and what part was due the macroeconomic environment (C. Ahlin, J. Lin and M.Maio, 2011)

Understanding the impact is also valuable for potential investors. As mentioned before they can value both financial return as social impact so they cannot ignore the macroeconomic context as major determinant of the success of the MFI. The basic idea behind microfinance is still to provide access to finance for the people that don't have access. Evidently, it is not the purpose of a macroeconomic analysis to target the most successful regions and start up institutions there. The first reason why it is important is to make the analysis of MFIs more accurate and enable comparison. Secondly, the analysis could be taken a step further and researchers could analyze which characteristics and practices are best suited for what region. For example, it could be that for profit banks who work with individual loans perform better in Latin America, but that NGOs who work with group lending have more success in East Asia and the Pacific. The possible underlying reasons are numerous: macroeconomic conditions, demographics, the sectors in which the microloans are invested in, cultural differences, etc.

The impact of the macroeconomic context on the performance of MFIs is not as simple as it would appear at first sight. On the one hand we could expect MFIs to flourish when the economy does: there are more opportunities to start up a small business and existing small businesses are growing and thus increasing their demand for finance, default rates drop because of the success of the businesses. The incomes from the households are rising, leading them to be more confident, spend more money and be more willing to take more risk by investing capital in a business venture. (C. Ahlin, J. Lin and M.Maio, 2011)

On the other hand, logical arguments can be raised that microfinance would not do better in growing economies. First of all, as the loans are especially suitable for small startup companies, it is possible that microfinance thrives in countries with a large informal economy. As the economy of a country grows, existing companies and institutions do to, squeezing out the smaller, often informal businesses. Secondly, a growing economy offers more wage-earning opportunities, lowering the incentive for people living in poverty to take the risk of starting up their own business venture. And thirdly, there is a possible effect on defaults rate. As borrowers are no longer fully dependent on the MFI, this can weaken their motivation to pay back their loan and maintain their relationships with the institutions. And last, an economic growth may lead consumers to substitute the products they buy locally for products of higher quality, often imported.

The last option there is, is that the macro environment has no effect on an MFI's success, because they operate in very small, segmented markets. (C. Ahlin, 2010)

In the previously mentioned study by C. Ahlin, these three hypotheses are researched. Not only does the author take economic growth into consideration, she also accounts for the differences in the courses of development: some economies have a larger unofficial economy while others have a more institutionalized economy, with often larger companies in the manufacturing business. A larger unofficial economy could possibly be associated with more successful MFIs since more people will depend on them for small business loans, while in a more institutionalized growing economy more wage earning opportunities are present.

The study shows that MFIs perform better in terms of sustainability, growth and repayment rates in faster growing economies. However, as hypothesized there is a difference in the type of development. For MFIs in countries with large industrial-led growth it's harder to grow and recover loans (C. Ahlin, 2010). So, although the majority of the performance of an MFI is not explained by the environment it is working in, it is however an important factor that we need

to account for in a cross-regional analysis of MFIs and it may lead us to conclude that there are different 'best practices' for different regions.

3. Data and empirical approach

3.1 Description of the used database

For this study we used the MIX market database with information collected by the Microfinance Information Exchange, a non-profit private organization that wants to make valuable information about MFIs available to investors as well as academics. The database contains data from approximately 2000 MFIs worldwide. Our dataset contains information from annual data for the year 2011. In order to be able to draw conclusions about regional differences, we drew a random stratified sample of 142 institutions based on the region where they are active. The six regions that MIX market marks are the Middle East and North Africa, Africa, Eastern Europe and Central Asia, South Asia, Latin America and The Caribbean and East Asia and the Pacific. No other restrictions were used.

All financial information is converted to USD. We controlled for outliers: All data points that lie further than three standard deviations from the medium of the sample were winsorized to the point of three standard deviations.

In addition to the MIX market information we used the mission statements of each of the MFIs in the sample to learn about their focuses in doing business.

3.2. Independent variables

3.2.1 Main Focus

This key independent variable in our analysis is the main focus of the MFI. In order to gain information about what the main goals and motivations of the MFI are, we read their mission statements and categorized them into three main categories: 'development', 'development and financial sustainability' and 'financial'. We categorized as follows: if the mission statement of the MFI stated that their goal was to help the poor, alleviate poverty and support development we categorized the focus as being: 'development'. If the mission statement mentioned poverty alleviation but at the same time also mentioned striving to financial sustainability then the focus was categorized as being: 'development and financial sustainability'. And finally, if the mission statement did not mention poverty alleviation or development goals but did mention financial success or shareholder value, the focus was categorized as being 'financial'.

In addition, we also noted if the mission statement mentioned that the organization would focus especially (or solely) on women.

The 'main focus' variable is analyzed with the use of two dummies. The omitted category is 'financial focus'. The 'focus on women' variable is analyzed with the use of a dummy. The omitted category is 'no focus on women'.

3.2.2. Region

As mentioned before, our dataset also contains information on the region where the MFI is active. The sample contains 15 MFIs from Middle East and North Africa, 30 MFIs from Africa, 20 MFIs from Eastern Europe and Central Asia, 21 MFIs from South Asia, 36 MFIs from Latin America and the Caribbean and 20 MFIs from East Asia and the Pacific. In the regression we analyze region with 5 dummies. The omitted category is the region 'East Asia and the Pacific'.

3.3 Intermediate variables

3.3.1 Financial decisions: capital structure and funding

The use of donations and donated equity

An important measure in de funding structure of an MFI is the share of donated funds. We make a distinction between donated equity and operational donations. As mentioned before in the literature review it is argued that donations in the form of equity and donations to cover operational expenses may have very different effects on the operational efficiency and, in the long run, the financial sustainability of the MFI. For donated equity we calculated the share of donated equity in the total equity (Donated Equity/ Equity). For other donations we calculated the total amount of donations to the total amount of assets (Donations/ Total Assets).

The use of debt

The use of debt is a very important capital structure decision. To measure this we use the debt to equity ratio (Debt / Equity). In this ratio the total debt of an MFI is considered to be the total of liabilities. Because 'debt' also includes the deposits from clients, we calculated a separate measure 'borrowings to equity' to account for this (Borrowings / Equity). We also use the capital to asset ratio (Capital/ Assets).

The use of deposits

A possible important funding source of MFIs is the deposits of clients. We use the measure of the total amount of deposits to total assets (Deposits / Total Assets). We also calculated the net stable funding ratio by dividing the total amount of deposits from clients by the total loan portfolio. (Deposits / Loans). The linking ratio between these two variables (Loans / Assets) is also analyzed.

3.3.2. Legal Status

MFIs can be legally organized in many different ways. The MIX market database marks six different types of organizations: Banks, Credit Unions/Cooperatives, Non-bank financial institutions (NBFIs), Non-governmental organizations (NGOs), Rural banks and finally the category 'Other' where all the types of originations are grouped that do not fit any other category. We analyze the legal status with five dummies. The omitted category variable is 'Bank'.

3.4 Dependent variables

3.4.1 Financial sustainability and profitability

Financial performance

We use different measures for the financial performance of the MFI.

First of all, we evaluate the operational self-sufficiency. It is calculated by dividing the financial revenue by the sum of the financial expenses, the impairment loss and the operational expense. Thus: Operational Self Sufficiency = (Financial Revenue / (Financial Expense + Impairment Loss + Operating Expense). The outcome is a percentage and shows how much of the costs (operational, loan loss and financial) are covered by the financial revenue. A percentage lower than 100% shows that the MFI is not able to cover the costs. This measure is often used in other microfinance studies.

Secondly, we use return on assets (ROA) to assess the overall performance of the MFI. This measure is widely used as performance measure for companies and financial institutions.

Loan quality

Also meaningful to analyze is the performance of the MFIs in terms of loan repayment.

We use the write-off ratio which is calculated by dividing the total write-off in that year to the loan portfolio. The total write-off is the amount of loans that are recognized not to be collectable any more. The amount is then deducted from the loan portfolio and/or the

impairment loss allowance. We also use the loan loss rate. This is calculated with the next formula: Loan loss rate = (Write-offs - Value of Loans Recovered) / Loan Portfolio. This is a measure of the actual loss on the loan portfolio.

3.4.2 Outreach

Evaluating how an MFI performs in terms of outreach and development is much more challenging. In the literature there is much more debate as to what variables are most important when it comes inducing poverty alleviation. We use different variables to cover different aspects of outreach.

The first, most widely used variable is the average loan balance per borrower / GNI per capita. In my opinion, it is very important to account for the differences of the value of money through dividing the loan size by GNI per capita. Although this measure is the most common one, it remains an imperfect indicator of the poverty level of the clients served. For example, small loan sizes could also indicate that the loans are more used as consumer credit, which is not at all beneficial for development and poverty alleviation. Despite this argument we decide to use this variable because it is the best indicator available.

The second variable used in the yield on the loan portfolio. This can be measured in nominal as well as real terms. The yield is calculated by dividing the interest and fee incomes from loan portfolio by the loan portfolio. To convert this measure to real terms we correct for the inflation rate for the year 2011 in the particular country.

The third measure we use is the percent of female borrowers.

3.5 Control variables

In our study, we control for the size of the MFI by using the ln (assets) as a control variable. We also control for the age of the MFI by using the ln (age in years) in our regressions.

In the diagram below you can find an overview of the different variables used in our analysis. The possible relations we research are indicated with arrows.
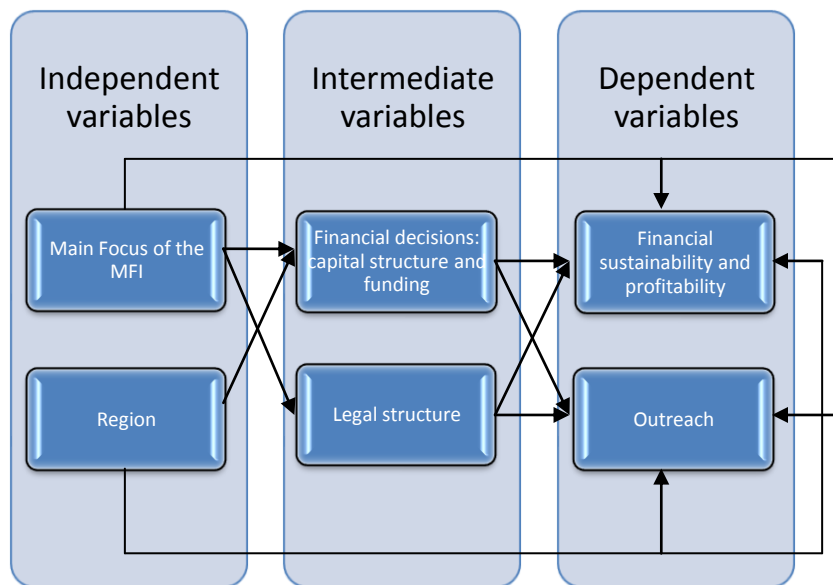
3.6 Descriptive statistics

Table 1 is a crosstab with the variables *main focus* and *legal structure*. The largest group of institutions, 46.48%, has its main focus on development. 25.35% have a double focus and 13.38% are focused on financial goals. The remaining 14.79% have missing data for their focus. From this table we can also see that *NGO*s are the largest group of institutions, followed by *NBFIs*. We can see that the choice of legal structure is influenced by the main goal, however we cannot make statements about significant correlation since the number of observations in each category is too small.

Table 1: Crosstab for the main focus and the legal structure

		Bank	Credit Union / Cooperative	NBFI	NGO	Other	Rural Bank	Total
Missing	**Number**	1	5	7	7	0	1	21
	Percentage	4,80%	23,80%	33,30%	33,30%	0,00%	4,80%	14,79%
development	**Number**	1	8	16	37	2	2	66
	Percentage	1,50%	12,10%	24,20%	56,10%	3,00%	3,00%	46,48%
development and financial sustainability	**Number**	6	5	11	11	2	1	36
	Percentage	16,70%	13,90%	30,60%	30,60%	5,60%	2,80%	23,35%
financial	**Number**	4	4	8	2	0	1	19
	Percentage	21,10%	21,10%	42,10%	10,50%	0,00%	5,30%	13,38%
Total	**Number**	12	22	42	57	4	5	142
	Percentage	8,50%	15,50%	29,60%	40,10%	2,80%	3,50%	100,00%

In table 2 you can find the basic descriptive statistics for our numeric intermediate and dependent variables. From this table we learn that donated funding accounts for a substantial

amount within total funding, the mean of the donated equity is 17%. We can conclude that institutions have very high leverage with high debt to equity ratios; however the standard deviations for debt measures are very high, so the results are very spread out.

From this table we can also see that the average institution in our sample is operationally self-sustainable and has a positive (however very small) return on assets. There is a good performance in repayment of the loans as only 2% of the loans are written off and the loan loss rate is 1% on average. The loans size remains small with a mean of 70% from the GNI per capita of the country where the loan is given. Interest rates are high with a mean of 21%. In our sample 64% of all loans go to women.

Despite of the fact that microfinance is a sector in full development, the average age in our sample is 17 years. The average size, measured in assets, is very high, but we note that this number is bound upwards by the larger institutions as the median of this measure is only $5.161949.00.

Table 2: Minimum, Maximum, Mean and Standard Deviation of the used variables

Descriptive Statistics (after winzorizing)					
	N	Minimum	Maximum	Mean	Std. Deviation
Donated Equity to Equity	112	0,00	1,00	0,17	0,28
Donations to Assets	118	0,00	0,13	0,01	0,03
Debt to Equity	121	0,00	42,10	4,52	6,16
Borrowings to Equity	115	0,00	34,76	2,12	4,03
Capital to Assets	121	0,01	1,00	0,35	0,25
Deposits to Assets	121	0,00	1,24	0,27	0,33
Deposits to Loans	136	0,00	3,81	0,46	0,71
Loan Portfolio to Assets	125	0,15	1,39	0,77	0,19
Operational Self Sufficiency	122	-0,12	2,60	1,19	0,42
Return On Assets	117	-0,22	0,16	0,02	0,07
Write-off Ratio	109	0,00	0,12	0,02	0,03
Loan Loss Rate	120	-0,08	0,11	0,01	0,03
Average Loan Balance Per Borrower / GNI Per Capita	126	0,03	4,34	0,70	0,94
Yield On Loan Portfolio (in real terms)	115	-0,13	0,78	0,21	0,17
Percentage of Female Borrowers	120	0,12	1,00	0,64	0,27
Age in years	122	2,11	60,61	16,81	10,61
Assets	125	40.727,00	1.057.895.465,00	56.630.735,34	170.988.306,39

4. Method of analysis and hypotheses

The aim of our regressions is to find an answer to our research question: 'How do the mission and the goals of microfinance institutions influence their financial decisions and their performance in both financial sustainability and outreach?' We can split this question into two main parts: first, the influence of the main focus of the MFI on the financial decisions it makes and second, the performance in both financial terms as well as outreach. For our models we use OLS regressions. The results are reported in tables 3 to 7.[6]

4.1 The main focus of the MFI and financial decisions

When studying the financial decisions of the MFI we first look at the use of donated money. We hypothesize that institutions that focus on financial goals will use less donated money than institutions that focus on development. We also hypothesize that younger and smaller institutions will use more donated money than older and bigger organizations according to the lifecycle theory. At the same time we want to check for regional differences and differences between MFIs with different legal structures.

Secondly, we will analyze the use of debt in the capital structure. We hypothesize that institutions that are more focused on financial goals will use more debt for several reasons. First, debt might be more easily accessible to institutions that claim openly to strive for financial sustainability. It would be logical that lenders are more trusting towards institutions that put financial security first. Also, it is possible that institutions with financial goals will be more motivated to optimize the capital structure by using the advantages of leverage. We think that institutions that focus most on development might make less optimal capital structure decisions, and this could be translated in less debt.
As we analyze possible regional differences we hypothesize higher debt ratios in the regions South Asia and Latin America and the Caribbean, according to the Microbanking Bulletin (see *supra page 18.*). These are the regions where the microfinance movement is more mature. This would then also be in line with the life cycle theory. We also hypothesize a positive relationship between the age and/or size of the MFI and the use of debt.

Concerning the use of deposits the effect could go both ways. On the one hand, MFIs who focus on development could be more motivated to offer deposit services to clients since

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[6] The standard deviations are not reported in these tables for practical reasons. They are available on request.

studies show that it induces better management of personnel finances (J. Bauchet, C. Marshall, L. Starita, J. Thomas, and A.Yalouris, 2011). On the other hand, there is the effect on the funding costs. Using deposits could lower funding costs and thus motivate the more financial oriented MFIs. However, lowering funding costs with deposits is not attainable for every institution. Since the development of a branch network to accommodate deposits is very expensive, it could have the opposite effect. It strongly depends on the size of the MFI if they can benefit from economies of scale. At the same time we want to check for regional differences and differences between MFIs with different legal structures.

We also analyze the loans/assets ratio as linking ratio between deposits/loans and deposits/assets. We hypothesize that the ratio will be higher for institutions with a development focus.

4.2 The main focus and different types of performance

The second step in the research is analyzing the effect of the focus and the financial decisions on the performance. We want to find out if the focus of the MFI really has the effect of a better performance in the area focused on. Secondly, we are looking for evidence of the microfinance trade-off: we want to find out if better financial performance comes at the cost of the outreach and vice versa.

First, we analyze the financial performance. We hypothesize that institutions with their main focus on financial performance will do better on financial performance indicators. We hypothesize that they will have a higher Operational Self-Sufficiency and ROA. We hypothesize that the use of donations will have a negative effect on operational efficiency. We don't expect to see a relation with donated equity. We also hypothesize that there will be a negative relationship between the measures of outreach and the financial performance. At the same time we want to check for regional differences and differences between MFIs with different legal structures.

Concerning the quality of the loans, we hypothesize that institutions with a financial focus will have better repayment results. As argued in the literature, we expect a positive relationship with the percentage of female borrowers. (Y. Shimamura and S. Lastarria-Cornhiel, 2009)

Secondly, we analyze the outreach measures. We hypothesize that institutions that focus on development will do better on outreach indicators. We expect their financial decisions to be suboptimal for their financial performance, but will be beneficial for their outreach, supporting the trade-off hypothesis. Concerning the percentage of female borrowers, we hypothesize that institutions, who mention a focus on women in their mission statement, will have higher percentage of female borrowers.

5. Results and discussion

5.1 The financial decisions of MFIs

5.1.1 The use of donated money

In table 3 you can find the results of the regression with the dependent variable donated equity/ equity in the models 1, 2 and 3.[7] You can find the results for the regression with dependent variable donations / assets in model 4, 5 and 6.

As you can see there is no significant relationship with the main focus of the MFI in any of the models with both donated equity and donations, which is different from what we hypothesized.

We can conclude from the model 1 that *NGOs* and MFIs categorized under *Other legal structures* use significantly more donated equity compared to the omitted category of *banks* (on a 5% significance level). As hypothesized, there is a negative relationship between the *age* of the MFI and the donated equity (on a 10% significance level). Although the relationship is not significant in the other models and thus not very strong, this finding is in support of the life cycle theory.

From the models with donations/assets as dependent variable (4, 5 and 6) we learn that there is a significant negative relationship with the *size* of the MFI as hypothesized (on a 5% significance level). The larger the MFI is, the fewer donations it receives. This result is in support of the life cycle theory (see *supra. page 17*): Younger (and thus smaller) MFIs use more donated money in the start-up phase and as they mature traditional commercial financing becomes available.

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[7] The numbers of the models are given in the table on the third row.

Table 3: The effect of the focus on the financial decisions: donated money and debt

	Donated Equity/ Equity			Donations/ total assets			Debt/Equity			Borowings/ Equity			Capital/ assets		
	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta
model	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9
(Constant)															
development	,074	,107	0,020	,036	,028	,000	-0,183	-0,193	-0,181	-0,028	0,091	0,033	,048	,004	-,067
development and financial sustainability	,075	,022	-0,019	-,075	-,089	-,110	-0,265**	-0,242*	-0,243*	-0,137	-0,043	-0,049	,143	,044	,024
Credit Union / Coorperative	,192		0,145	-,210		-,312	-0,151		-0,138	-0,001		0,017	,053		0,031
NBFI	,118		0,110	-,146		-,175	-0,223		-0,177	0,030		0,013	,253		,223
NGO	0,617**		0,468*	-,093		-,177	-0,292		-0,154	0,229		0,312	0,533**		0,390**
Rural bank	,095		-0,029	-,130		-,118	-0,092		-0,033	0,002		0,081	,037		,071
Other	0,249**		0,157	-,092		-,111	-0,120		-0,049	-0,017		0,051	0,211**		,140
Middle East and North Africa		0,288*	0,140		,249	,235		-0,201	-0,176		-0,085	-0,114		0,636***	0,585***
Africa		-,100	-0,105		,252	,292		0,179	0,191		0,015	0,114		0,014	,115
Eastern Europe and Central Asia		-,232	-0,223		,050	,024		-0,038	-0,022		0,026	0,127		,224**	0,294***
South Asia		-,206	-0,292		,055	,053		0,063	0,101		0,268	0,303		-,061	-,060
Latin America and The Caribbean		-,094	-0,242		,130	,128		0,029	0,088		0,143	0,183		,284**	,254
ln (assets)	,103	-0,171*	-0,015	-0,336**	-0,256**	-0,348**	-0,003	0,154	0,109	0,082	0,082	0,186	-,160	-0,376***	-,275**
ln (age in years)	-0,192*	-,059	-0,062	-,007	,015	,055	0,002	-0,030	-0,046	0,021	-0,015	-0,070	-,064	-,083	-,072
R-squared	,227	,250	,331	,119	,151	,187	0,081	0,146	0,157	0,067	0,104	0,153	0,238	,450	,501
Adjusted R-squared	0,150	,175	,221	0,036	,071	,061	-0,004	0,067	0,029	-0,022	0,018	0,019	0,167	,399	,425

*Significant at 10%, ** Significant at 5%; *** Significant at 1%.

5.1.2. The use of debt

In table 3 you can find the results of the regression with dependent variable debt to equity in model 1, 2 and 3. The dependent variable is borrowings to equity in model 4, 5 and 6 and in model 7, 8 and 9 the dependent variable is the capital to assets ratio.

As hypothesized, the models 1, 2 and 3 show a significant negative relationship between the debt/equity and the focus of *development and financial sustainability*. Institutions that have this focus use significantly less debt in comparison to the omitted category *financial focus*. We note two possible reasons. It could be that these MFIs simply make different capital decisions and do not fully use leverage. Maybe because they don't want to use debt because of the added risk. Or it could be that debt financing is not so easily accessible for these institutions because lenders consider them to be too risky. However, in contrast to what we expected for the MFIs with *development focus*, there is no significant relationship for debt/equity for them.

Our hypotheses concerning the differences between regions and the differences for *age* and *size* are not supported for this ratio.

In contrast to our hypotheses, we find no significant relationship with our independent variables in models 4, 5 and 6 (borrowings/equity). The main explanation for the difference with the results from debt / equity is that deposits are not included in the borrowings, so we can conclude that previous results might also dependent on deposits usage. This is further analyzed in 5.1.3.

The last variable we use to analyze debt is the capital/ asset ratio. The higher the ratio, the lesser debt financing is used. We find no relationship between the focus of the MFI and capital usage. We do however find some significant differences in regions and legal structures. In model 8 and 9 we see that in the region *Middle East and North Africa* the institutions have a higher capital to asset ratio in comparison to the omitted region *East Asia and the Pacific* (on 1% significance level). In model 9 the region *Eastern Europe and Central Asia* also shows a significant positive relation with capital/assets (on 10% significance level).

With regard to legal structures model 8 shows higher capital usage for *NGOs* and *Other legal structures* in comparison with the omitted category *banks* (on 5% significance level).

We also find a negative relationship between the *size* of the MFI (measured in assets) and the capital usage in model 8 (on a 5% significance level). This is again possible evidence for the

life cycle theory. However the relationship does not appear in model 7 or 9 so it is not very strong.

5.1.3 The use of deposits

We used two main ratios to analyze the use of deposits in table 4. The first one: deposits to loans (also known as the net stable funding ratio) can be analyzed as a coverage ratio to measure how much of the loans are funded with deposit money. The second one: deposits to assets is a capital structure measure. An important link measure between these two measures: loan portfolio/ assets is also discussed.

In table 4 we can see that the regression with deposits to loans as dependent variable shows a clear relationship with the focus of the MFI (on 1% significance level in model 2 and on 10% significance level in model 1 and 3). It could be that the institutions focusing on development focus most on their lending activities instead of also focusing on deposits. Building out a branch network to facilitate deposits is time consuming and costly and could take away the focus from the poverty alleviation goal.

From model 1 we can also conclude that *NGOs*, *NBFIs* and *Other legal structures* have significantly less deposits to loans. This is a logical outcome since it is often not legally possible for institutions that are not regulated as a bank to receive deposits. The negative relationship is strongest for *NGOs* and *NBFIs*, as it still stands in model 3.

From model 3 we can conclude that *Africa* has a much higher deposits to loans ratios. This may be the result of the high number of SLAs (savings and loans associations) in Africa. As the name itself predicts these institutions only use savings do fund their loans, so no (or very little) external capital is provided.[8]

In model 5 the regression with loans/assets shows a significant positive relation with *development* and *development and financial sustainability* (on a 5% significance level). A possible reason for this relation is that these institutions focus their activities fully on loans and therefore apply a higher part of their assets for loans.

There are also significant relationships concerning the regions. In model 5 all regions have a significantly lower ratio than the omitted region category *East Asia and the Pacific* (on 10% significance level). In the full model 6, the regions *Africa* and *Eastern Europe and Central Asia* are still significant (on a 5% and 10% significance level). All legal structures have

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[8] http://www.ruralfinance.org/fileadmin/templates/rflc/documents/Pors__2011_pdf.pdf

significantly larger loan/assets ratios than the omitted category *banks*. This can be explained because of the wider variety of activities that banks do. All three models also indicate that there is a positive relationship between the *size* of the MFI and its loans/assets ratio.

In the models 7, 8 and 9 of table 4 we analyze the deposits to assets ratio. This capital structure measure is the product of the two previously discussed ratios. We find a strong negative relationship with the main focus *development*. As mentioned before, it could be that institutions striving for poverty alleviation focus solely on their loans programs instead of also offering broad deposit opportunities to clients. This decision however, could be suboptimal for the capital structure of the MFI and may drive funding costs. Although an extensive branch network might be very expensive, once established it might give the MFI a sustainable source of funding, and lower capital costs, if important economies of scales can be incurred. Also, another important argument is the evidence from recent studies that offering the opportunity to deposit and save money in a bank is also a very powerful development tool.

(J. Bauchet, C. Marshall, L. Starita, J. Thomas, and A.Yalouris, 2011).

With regard to the regional differences we can see that there is no significant result for the region *Africa*. The effect of the higher deposits/loans and lower loans/assets have cancelled each other out. There is still a significant negative relationship for *Middle East and North Africa*, *South Asia* and *Latin America and the Caribbean* (on 1% and 5% significance levels). To a lesser degree, there is also a negative relationship for *Eastern Europe and Central Asia* in model 9 (on a 10% significance level).

Finally, the legal structure dummies show that *NGOs*, *NBFIs* and *Other legal structures* have significantly less deposits/assets (on a 1% and 10% significance level).

Table 4: The effect of the focus on the financial decisions: deposits

	Deposits/Loans			Loans/Assets			Deposits/Assets		
	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta
model	1	2	3	4	5	6	7	8	9
(Constant)									
development	-0,209*	-0,333***	-0,221*	,164	0,289**	0,222*	-0,218**	-0,320***	-0,199*
development and financial sustainability	-,029	-,079	-,050	,063	0,097**	,095	-,060	-,090	-,054
Credit Union / Coorperative	-,079		-,026	0,262*		,210	,029		,114
NBFI	-0,492***		-0,360**	0,410**		0,285*	-0,482***		-0,332**
NGO	-0,749***		-0,582***	0,711***		0,476**	-0,723***		-0,516***
Rural bank	-,144		-,132	0,232**		,089	-,048		-,083
Other	-0,203**		-,157	,153		,052	-0,159*		-,110
Middle East and North Africa		-,158	-,099		-0,053*	-,132		-0,406***	-0,345***
Africa		0,271**	,086		-0,435*	-0,399**		,092	-,106
Eastern Europe and Central Asia		,018	-,093		-0,313*	-0,289*		-,135	-0,234*
South Asia		-,169	-,178		-0,078*	-,133		-0,303**	-0,307**
Latin America and The Caribbean		-,217	-,187		-0,138*	-,228		-0,430***	-0,392**
ln (assets)	-0,192*	,007	-,125	,293	0,099***	0,243*	-,053	,134	,053
ln (age in years)	,042	,127	,100	-,047	-0,057**	-,065	,076	0,181**	,118
R-squared	,375	,295	,417	0,200	0,218	,262	,476	,365	,539
Adjusted R-squared	,319	0,231	,332	0,128	0,148	,154	0,429	0,307	,427

*Significant at 10%, ** Significant at 5%; *** Significant at 1%.

5.2. The performance of the MFI

5.2.1. Financial performance

We evaluated the financial performance of the MFI using the Operational Self Sufficiency (OSS) and the Return on Assets (ROA) in table 5. In addition we also analyzed the performance in the repayment of the loans.

Operational Self Sufficiency

When analyzing the Operational Self Sufficiency of the MFI we see that there is no effect in the direction that we hypothesized. There is only a very small positive effect on the OSS for the variable *development and financial sustainability*, only significant in model 3 (on a 10% significance level). This is not in line with our expectations as we expected the OSS to be higher in institutions that focus on financial goals; however this hypothesis is not supported.

When we look at the differences in legal structures, we only notice a few significant differences*: NGOs* have a higher OSS than *banks* (on a 10% significance level); however this relationship is not significant in the complete model 3. As regards the regional differences we can conclude that *Middle East and North Africa* have a higher OSS in comparison to the omitted category *East Asia and the Pacific* (on a 10% significance level). Size also has a significant positive effect on the OSS in models 1 and 5 (on a 5% significance level).

With regard to the effects of financial decisions we first analyze the *donations/ assets*. As hypothesized we see a negative relationship between the share of donations in the total assets and the Operational Self Sufficiency (on a 1% significance level) in model 4 and 6 of table 5. This is an important finding because it confirms what is argued in the literature that donations have a negative effect on how efficient MFIs operate. (M. Hudon & D. Trace, 2011; J. Murdoch, 1999; J. Murdoch, 2005). When we use the *donated equity/ equity* in model 7 of table 5, we note that there is no significant relationship. This clearly points out the differences between operational subsidization and subsidization in the form of capital. The first one clearly has negative replications for the efficiency of the MFI, while there is no such relation for donations given in the form of capital.

When we look at the usage of debt we note that there is a negative effect on the financial performance. Institutions that use more debt have a lower performance in OSS as seen in model 4. This means that instead of a positive effect of leverage, there is a negative effect.

This means that MFIs are unable to cover their costs and pay interest on their loans on a sustainable basis. This is possibly because the spread between the interest on their debt and the interest they receive on their loans is too small to cover their costs they make. It is also possible that this result is caused by deposits. MFIs incur high costs in building a branch network to collect deposits. This could also lead to a negative effect on OSS.

This result could have large implications for the financial decisions MFIs make.

Concerning the possible trade-off between financial performance and outreach measures, we find that there is a negative relationship between the *yield on gross loan portfolio* and the OSS in model 6 (on a 1% significance level). This is the reverse from what we hypothesized. We conclude from this that it doesn't mean that higher interest rates (so lower outreach) would lead to better operational coverage of costs. In the contrary, we even find evidence that higher interest rates are related to a lower OSS. It is also possible that there reversed causality here, being that it is when institutions have a low OSS they have to ask higher interest rates to compensate this.

Return on assets

When we look at the performance measure ROA (model 8 to 14 in table 5) we get similar results to the OSS models. In contrast to what was hypothesized there is no relationship with the goals. This means that whether an institution claims to strive towards financial goals does not influence the actual financial performance. There are several legal structures that perform better than the omitted variable *bank*: *Credit Union / Cooperative*, *NGO* and *rural bank*. The *size* to the MFI has a positive effect on the ROA, which proves that larger MFIs are able to exploit economies of scale (on a 1% significance level in model 8 and 10 and on 5% significance level in model 9). The results regarding the effect of *age* on ROA are inconclusive as they contradict each other in the different models.

There is no evidence found of a possible trade-off between the financial performance and outreach measures, in contrast to what was hypothesized. With regard to the financial decisions we find similar results to the OSS, being that *donations* have a negative relation with the financial performance (on a 1% significance level) in model 11 and 13. However, the same relation is not found when we use the donated equity measure. This proves that only operational donations have such effect on the financial performance. With regard to the use of debt: the ROA deteriorates with approximately one third as the debt to equity ratio goes up by one. This is similar to the result on OSS. There is a negative leverage effect.

Table 5: The effect of the focus and financial decisions on financial performance

	Operational Self Sufficiency							Return on assets						
	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std Beta	Std. Beta	Std. Beta	Std. Beta
model	1	2	3	4	5	6	7	8	9	10	11	12	13	14
(Constant)														
development	-0,023	0,007	-0,028	-0,079	0,118	0,079	-0,066	-0,005	-0,005	0,006	-0,046	0,087	0,076	-0,077
development and financial sustainability	0,205	0,231*	0,219	-0,001	0,204	0,141	0,075	0,183	0,116	0,154	0,019	0,232	0,133	0,119
Credit Union / Coorperative	-0,107		-0,150					0,349**		0,293*				
NBFI	0,175		0,043					0,181		0,067				
NGO	0,132*		0,031					0,495**		0,255				
Rural bank	0,030		0,055					0,245**		0,179				
Other	-0,023		-0,046					0,162		0,073				
Middle East and North Africa		-0,106*	-0,079						0,131	0,164				
Africa		-0,129	-0,048						-0,292*	-0,233				
Eastern Europe and Central Asia		0,015	0,061						-0,068	0,026				
South Asia		0,017	0,047						-0,062	0,002				
Latin America and The Caribbean		0,288	0,330						-0,087	0,002				
Donations / assets				-0,290***		-0,305***					-0,501***		-0,525***	
DonatedEqToEq							0,137							0,050
Debt to equity ratio				-0,268***		-0,276					-0,333***		-0,362***	
Deposits to total assets				-0,172		-0,090					-0,03		0,068	
Yield on gross portfolio (real)					-0,175	-0,296***						-0,027	-0,148	
Average loan balance per borrower / GNI per capita					-0,141	-0,110						-0,15	-0,129	
ln (assets)	0,043**	0,055	0,021	-0,025	-0,034**	-0,068	0,125	0,483***	0,204**	0,355***	-0,151*	-0,092	-0,176	0,179*
ln (age in years)	0,005	-0,166	-0,136	0,118	0,270**	0,137	-0,011	-0,224**	-0,102	-0,210*	0,12	0,364***	0,169*	-0,112
R-squared	0,097	0,167	0,198	0,202	0,102	0,292	0,046	0,160	0,184	0,230	0,392	0,140	0,490	0,080
R-squared adjusted	0,009	0,086	0,069	0,142	0,040	0,210	-0,005	0,080	0,106	0,110	0,345	0,080	0,431	0,030

*Significant at 10%, ** Significant at 5%; *** Significant at 1%.

Loan quality

When we look at the performance of the MFI in terms of the defaults on the loans in table 6, we see that there is a positive relationship between the write-off ratio and the focus on development and financial sustainability (in model 1, 2, 3 and 4) This is in line with our hypothesis, where we expected to see that MFIs with a financial focus would have higher repayment rates. When we look at the other dependent variable, loan loss rate, we see that the relationship is not significant (except for the result in model 8, on a 10% significance level). The difference between these last two measures is that the write-off ratio is based on how much the MFI estimates to lose, while the loan loss rate is based on the actual loss.

There are no significant differences in repayment between the different regions and legal structures. The size or the age of the MFI also doesn't have any influence.

As argued in the literature we hypothesized that the repayment ratio of women would be higher, but we see no significant relationship between the percentage of female borrowers and the write-off ratio or loan loss rate.

Table 6: the effect of the focus and the financial decisions on loan quality

	Write-off ratio						Loan loss rate					
	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta
model	1	2	3	4	5	6	7	8	9	10	11	12
(Constant)												
development	-0,029	0,012	-0,049	0,042	-0,031	-0,027	-0,023	0,007	-0,028	0,016	-0,082	-0,074
development and financial sustainability	0,285*	0,303**	0,292***	0,311**	0,237	0,235	0,205	0,231*	0,219	0,221	0,127	0,129
Credit Union / Coorperative	0,014		0,037				-0,107		-0,15			
NBFI	0,259		0,243				0,175		0,043			
NGO	0,253		0,327				0,132		0,031			
Rural bank	0,029		0,124				0,03		0,055			
Other	-0,033		0,019				-0,023		-0,046			
Middle East and North Africa		-0,068	-0,077					-0,106	-0,079			
Africa		0,019	0,091					-0,129	-0,048			
Eastern Europe and Central Asia		0,15	0,213					0,015	0,061			
South Asia		0,038	0,029					0,017	0,047			
Latin America and The Caribbean		0,35	0,327					0,288	0,33			
Percent of female borrowers				-0,025		-0,07				0,078		0,022
Yield on gross portfolio (real)					-0,076	0,175					0,178	0,175
Average loan balance per borrower / GNI per capita					0,173	-0,104					-0,153	-0,145
ln (assets)	-0,001	-0,044	0,019	-0,029	0,022	0,014	0,043	0,055	0,021	0,087	0,13	0,135
ln (age in years)	0,062	-0,07	-0,048	0,004	0,049	0,046	0,005	-0,166	-0,136	-0,059	-0,003	-0,007
R-squared	0,129	0,177	0,222	0,082	0,107	0,111	0,097	0,167	0,198	0,056	0,094	0,093
R-squared adjusted	0,034	0,088	0,082	0,027	0,04	0,032	0,009	0,086	0,069	0,001	0,03	0,015

*Significant at 10%, ** Significant at 5%; *** Significant at 1%.

5.2.2 Outreach

Loan size

In table 7 we find the results of the regressions for the outreach measures. For loan size we hypothesized that the loan would be smaller for institutions that focus more on development because they would target poorer families than financially focused institutions. In model 2, 4 and 5 this hypothesis is confirmed (on a 5% significance level). The institutions with main focus *development* have smaller loan sizes in comparison to the omitted category *financial.* We also note that this relationship does not stand for institutions focusing on *development and financial sustainability.* With regard to the legal statuses, in model 1 we can see that all these legal structures have significantly smaller loan sizes than the omitted category *bank*, with *NGOs* and *NBFIs* having the most negative standardized betas. There are no significant differences between the different *regions* and *age* also has no influence on loan size. We do see an effect from the *size*: the larger the MFI, the bigger the loan size (on a 1% significance level).

Concerning the possible trade-off we hypothesized that smaller loan sizes would result in a lower OSS and/or lower ROA, however this hypothesis is not supported.

Interest rates

In our models for interest rates (6 to 10 in table 7) we find that MFIs focusing on *development* and *development and financial sustainability* have higher interest rates than the financially focused MFIs. This is in contrast to what we hypothesized: we expected institutions with a development goal to have lower interest rates to help their poor clientele. However, here we see the opposite. It is possible that these institutions are forced to ask higher interest rates to make up for higher costs due to smaller loan sizes and possible inefficiencies. We can conclude this because despite the significantly higher interest rates, they do not perform significantly better in either the OSS or ROA.

There are no significant differences between the different legal structures and the different regions. We also see that bigger and older MFIs ask lower interest rates. This shows that MFIs can benefit from economies of scale, so that they can ask lower interest rates to their clients.

The trade-off hypothesis is also not supported with the interest rates. There is no significant effect from ROA and OSS on the interest rates.

Focus on women

The last outreach measure we analyze is the percentage of female borrowers. As we can see in model 12 and 13 of table 7, MFIs focusing on outreach also have a higher percentage of female borrowers in comparison with financially focused MFIs (on a 5% significance level). We also see some differences in regions: in comparison to the omitted category *East Asia and the Pacific,* the regions *Middle East and North Africa* and South *Asia* have a higher percentage of female borrowers while *East Europe and Central Asia* has a lower percentage. (On 5% and 1 % significance levels).

There are no significant differences for legal structures. From model 11, 13 and 14 we can conclude that larger MFIs have fewer female borrowers than smaller MFIs. Our hypothesis that when MFIs openly claim to focus on women they would have a higher percentage of female borrowers is supported in model 14 (on a 10% significance level).

Table 7: the effect of the focus and financial decisions on the outreach measures

model	Average Loan size/ GNI per capita					Yield on loan portfolio					Percentage of female borrowers			
	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta	Std. Beta
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
(Constant)														
development	-0,183	-0,250**	-0,028	-0,278**	-0,271**	0,241*	0,216*	0,182	0,253*	0,260**	0,163	0,297**	0,298**	0,114
development and financial sustainability	0,002	-0,030	0,219	-0,002	-0,005	0,292**	0,269**	0,244*	0,314**	0,333***	-0,050	0,108	0,098	-0,040
Credit Union / Coorperative	-0,294*		-0,15			-0,160		-0,105			-0,177		-0,258*	
NBFI	-0,566***		0,043			0,090		0,158			-0,095		-0,226	
NGO	-0,608***		0,031			-0,076		0,094			-0,049		-0,214	
Rural bank	-0,229**		0,055			-0,016		0,068			-0,041		-0,170	
Other	-0,213**		-0,046			0,042		0,092			-0,035		-0,070	
Middle East and North Africa		-0,076	-0,079				-0,148	-0,117				-0,249**	-0,267**	
Africa		0,152	-0,048				-0,017	0,097				-0,177	-0,197	
Eastern Europe and Central Asia		0,084	0,061				0,034	0,094				-0,327***	-0,338**	
South Asia		-0,195	0,047				-0,258	-0,220				0,284**	0,294**	
Latin America and The Caribbean		-0,145	0,330				0,111	0,149				-0,201	-0,206	
Return on assets				-0,150					0,007					
Operational self sufficiency					-0,103					-0,111				
focus on women														0,187*
ln (assets)	0,298***	0,392***	0,021	0,422***	0,407***	-0,276**	-0,229**	-0,251*	-0,193**	-0,170*	-0,289**	-0,131	-0,200*	-0,234**
ln (age in years)	-0,01	0,060	-0,136	-0,042	-0,022	-0,135	-0,241**	-0,191*	-0,198**	-0,204**	-0,062	-0,132	-0,096	-0,056
R-squared	0,351	0,339	0,198	0,272	0,255	0,190	0,263	0,305	0,151	0,163	0,154	0,407	0,440	
R-squared adjusted	0,286	0,273	0,289	0,232	0,215	0,111	0,192	0,195	0,107	0,120	0,069	0,347	0,346	

*Significant at 10%, ** Significant at 5%; *** Significant at 1%.

6. Conclusion

The first part of our research question is how the mission and the goals of microfinance institutions influence their financial decisions. We conclude that the use of donations and donated equity is not determined by the focus of the MFI. Institutions who claim to focus on financial sustainability don't use less donated money than institutions that don't. This is a first indication that there is mission drift in the opposite direction: institutions that claim to strive towards financial sustainability use the same portion of donated money. We can also conclude that NGOs and institutions in the category of 'other legal structures' use more donated equity. Institutions with the double focus use less debt than the financially focused institutions. However, there is no effect when the borrowings/equity ratio is the dependent variable. This leads us to conclude that this result is mainly caused by differences in the usage of deposits. NGOs and institutions in the category of 'other legal structures' have a higher capital to asset ratio.

For deposits we conclude that institutions who focus on development use fewer deposits than institutions that focus on financial goals. Also, NGOs and NBFIs use fewer deposits.

We find evidence in support of the life cycle theory. The older and larger an institution, the less it depends on donated money.

The second part of our research question focuses on the effect of the mission of the MFI and its financial decisions on the performance.

The main focus of the institution doesn't influence the performance in financial measures and there is no difference in loan quality. This leads us to conclude that there is indeed mission drift, but in the opposite direction: institutions that claim to pursue financial goals don't perform better financially.

The main focus does influence the outreach measures. For loan size, we find that institutions focusing on development have smaller loans. However, these institutions ask higher interest rates on these loans. The institutions compensate the higher costs that come with the small loans by raising their interest rates significantly. If this would cause more poverty alleviation is not clear. There is a danger the high interest rates could suffocate the borrowers and exclude the most vulnerable and underserved people from loan programs, because they often don't have the possibility to start up immediate lucrative businesses.

Another influential factor for an MFI's performance is their financial decision making. The use of donations has a strong negative effect on the operational efficiency and consequently on the MFI's return on assets. However, the same effect does not occur with donated equity. We can conclude that operational subsidization has a negative effect, because it does not stretch the MFI to improve their efficiency.

A negative effect is noted with the use of debt. This leads us to conclude there is no positive leverage effect for microfinance institutions. The costs of microloans cannot be covered by the spread between the yields on their loans.

In addition, we analyzed the possibility of a trade-off between outreach and financial sustainability. In contrast to other studies we found no direct evidence of an immediate trade-off between outreach and financial sustainability. When an MFI performs better in one of the two, it does not come directly at the cost of the other.

With regard to women, we conclude they are more often targeted by MFIs who focus on development. We also see differences between the regions: there are more female borrowers in the Middle East and North Africa and in South Asia, while there are fewer female borrowers in Eastern Europe and Central Asia. In contrast to what is argued in the literature, lending to female borrowers has no effect on the repayment rates.

7. Limitations and recommendations for future research

Although this research was carefully prepared, we are still aware of its limitations and shortcomings.

First of all, the variables that were used to measure outreach are imperfect. For example, we are aware that loan size is not a perfect indicator of the poverty level of the people which were granted the loan. Also, smaller loans might be used as consumption loans instead of business loans, which eliminates the positive development effects. It would be better to research the poverty level of clients helped, and more importantly, the effect of the loan on those clients. However, this information was not available to us.

Secondly, the main focus of the institution was derived from the mission statement. These statements were often very limited and are definitely influenced by the image the institution wants to build. The true focus of the MFI might be different, hereby influencing our results in many ways. A further analysis, possibly with depth interviews and a closer analysis of the MFI would offer more insight in the goals and focus of the institution.

For future research it would be interesting to study possible interaction effects of different legal structures, regions and financial decisions on the performance of the MFI. An analysis of the effects of financial decisions on the cost structure could also offer interesting insights in the drivers of efficiency and financial return.

For the question if the loans of an MFI eventually lead to development and poverty alleviation additional research is needed. It needs to be analyzed weather these loans have the desired effect of increased income. The randomized study design is an ideal research design for these effects studies, because of the advantages of a control group.

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