Effect of Ownership Types on the Social Performance in Microfinance Institutions

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This master's thesis is carried out as a part of the education at the University of Agder and is therefore approved as a part of this education. However, this does not imply that the University answers for the methods that are used or the conclusions that are drawn.

Abstract

The purpose of this thesis is to look at the effect of ownership type on the social performance in microfinance institutions (MFIs). First, I look at the theory concerning microfinance institutions, ownership and social performance. Then I will perform three different tests. First a t-test is used, then a probit regression with control variables, and finally a robustness check. I look at how two different ownership types affects six social performance variables. I will focus on nongovernmental organizations (NGOs) and shareholder firms (SHFs). Three of the social performance variables are often used when measuring social performance, and three of them are quite new when measuring social performance. The data contains 478 MFIs from 77 different countries in the period 1996 to 2012. To generate the results, both simple bivariate regression and multivariate regression is applied. The null hypothesis used, states that NGOs are more socially oriented than SHFs. The results from the study show that only the variable percentage of female clients and average loan size is significant in all three tests. This may indicate that NGOs has a higher percentage of female clients and a lower average loan size than SHFs. For the rest of the variables it is not possible to say that there is a significant difference between NGOs and SHFs, this because these variables where not significant in two of three tests. The results show some divergence against paradigms in the industry. However, there are both studies and theory that support these findings.

Acknowledgements

The thesis completes the final part of my master degree in economics at the University of Agder. The aim of the thesis is to learn how to apply scientific methods in an applied research. It has been a challenging process, but at the same time I have learned a lot.

Seven years ago, I visited a microfinance institution in Ecuador. I immediately found this very interesting, and since then I have wanted to learn more about microfinance. When writing a master thesis, I felt this was a perfect opportunity to learn more. Microfinance is a relevant topic today with an increase in number of microfinance institutions every year.

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ABBREVIATIONS:

MFIs	Microfinance institutions
SHFs	Shareholder firms
NGOs	Nongovernmental organizations
NBFIs	Non-bank financial institutions
COOPs	Cooperatives
EAS	East Asia and Pacific
ECS	Europe and Central Asia
LCN	Latin America and Caribbean
MEA	Middle East and North Africa
SAS	South Asia
SSF	Sub-Saharan Africa
OSS	Operating self-sufficiency ratio
ROA	Return on assets
PAR	Portfolio at risk
USD	United States dollar

1 Introduction

"But we have created a society that does not allow opportunities for those people to take care of themselves because we have denied them those opportunities."

Muhammad Yunus

Microfinance can be defined as supplies of loans, savings, credit, insurance, and payment services to people that are relatively poor (Copestake, 2007). It gives people that do not have access to traditional services an access to low-cost short-term financial products (Balkenhol, 2007). Microfinance as we know it today emerged in the 1970s, when pioneers like Grameen Bank started issuing small loans to women (CGAP, 2006). The microfinance industry is growing fast, with an increase in more borrowers almost each year since 1999 (CGAP, 2009a). As the microfinance industry has grown, the scope of organizational forms in the industry has become broader. The most dominating organizational forms are NGOs, SHFs and COOPs, that all have different structures and incentives (Hansmann, 1996).

Even though most of the MFIs have an equal goal to improve the welfare of the poor, they do not have an equal way on how to best achieve this goal (Schreiner, 2002). MFIs have two objectives to achieve; financial sustainability and outreach to the poor. How the MFIs achieve the dual objective can be affected by the type of ownership. (Mersland & Strøm, 2010). These two objectives often conflicts, and there might be a trade-off between these to objectives (Armendariz & Morduch, 2010). When trying to achieve the financial goals, there is a risk that they will loose sight of the social goals. That instead of improving outreach to poorer customers, the MFIs focuses on making higher profits (Mersland & Strøm, 2010).

Some believe higher profits lead to lower outreach. Others think the commercialized MFIs are better in serving the poorest because of their profit motives that makes them more efficient and wanting to look for new markets for their products (Mersland & Strøm, 2010). Earlier, SHFs where considered more profit oriented than NGOs, and that NGOs cared more about reaching the poorest. However, there has been observed NGOs that has the same economic rationalism as profit-oriented banks. In addition, many SHFs have the same social mission as NGOs, and are not only concerned about making profit. Hence, as Mersland & Strøm (2008) mention, the difference between types of ownership may not be as clear as expected.

Growth in MFIs is much due to the insistence on financial sustainability. But for most practitioners and funders it is important to also reach the poor, provide quality services, and improve clients' lives. Hence, both financial and social performance is important. Many funders and financial institutions are therefore seeking after more ways to measure social performance in addition to measure financial performance. The increasing interest in social performance tries to shed more light on how the lives of poor people are being affected by financial services. Donors, foundations, individuals and government put money in microfinance because they have a belief that microfinance help poor people. MFIs should therefore be able to report on how or whether they achieve the promised goals (CGAP, 2007).

There is a supply challenge in the microfinance market, and hence there is a need for more knowledge about factors that influence the social performance of microfinance suppliers (Mersland, 2009a). Financial indicators have been developed over many years, and most of them are precise in both their measurement and in what they mean. Social performance is fairly new, and it is therefore a difficult process. For most social performance indicators they are naturally less straightforward. The result has been a much larger set of indicators than what was preferred. Over the last few years there has been important, but separate attempts to integrate the assessment of social performance into the regular management system of financial institutions (CGAP, 2007). More and more tools have been developed to support MFIs in improving their social performance (Lapenu, Bruyne & Verhagen, 2008).

Because the MFIs mission primarily is to reduce poverty, the main objective of this study is to look at how types of ownership affect different social performance indicators. I want to see if it is true that NGOs reach more of the social performance goals than what SHFs do. Since there also are discussions off how well the different social performance measures really are, and many attempts in finding new and improved measures, both three "old" and three "new" measures will be used. I will also look at the correlation between the old and new variables.

The following chapters are structured as follows. The next chapter will be an overview of the microfinance industry. Chapter 3 presents the theoretical framework of the study and hypothesis formulations. Then, chapter 4 is a presentation of variables used. Chapter 5 contains data and research methodology. In chapter 6, the data analysis and findings are presented. Chapter 7 concludes the thesis.

2 Microfinance

2.1 Types of Ownership

In the microfinance governance literature there is an essential topic about whether the performance in MFIs is explained by the type of ownership. There are a various types of organizations in the microfinance sector. This, among others, could be banks, NBFIs, and NGOs (Barth et al., 2012). The intrinsic difference between SHFs and NGOs lies in who controls the organization and who that receives the profit from it (Mersland, 2009b).

NGOs are the pioneers in the microfinance industry. They are usually the first to start offering services to the poor in a specific region or to a specific segment in the population. Most NGOs obtain funds from donations and commercial borrowing (Barth et al., 2012). NGOs are not allowed to distribute profits to persons that have control over the firm. All of the residual earnings must instead be retained and devoted to finance services that the organization is meant to provide. Since a NGO has this constraint over the distribution, the NGO has no owner. There is no person who has a share in both controlling the firm and in residual earnings (Hansmann, 1996).

In contrast to NGOs we have SHFs. In a SHF, shareholders are controlling the organization, and they decide who receives profits (Mersland, 2009b). SHFs can be divided into NBFIs and Banks. NBFIs and Banks are comparable, but with some differences (Barth et al., 2012). Banks can both be publicly owned and privately owned. They are formal, for-profit financial institutions and are normally regulated by central banks. They offer any type of financial services like lending, savings accounts, deposit taking, payment services and money transfers. NBFIs are, like banks, often for-profit institutions, but their funding structure is very different. They rely much more on debt and donations, since most of them are not allowed to take deposits. NBFIs provide similar services as banks, but are licensed under a separate category. This separation could be due to lower capital requirements, limitations on what they offer of financial services (some NBFIs cannot provide saving accounts), or supervision under a different state agency (Barth et al., 2012).

2.2 Micro Products and Services

The products and services most MFIs offer differs from normal bank loans because of the type of clients they serve (Barth et al., 2012). Micro services are services to low-income clients. The main financial services that MFIs provide is credit services, this is something all

MFIs offer. But also savings, insurance and payment services are offered by many MFIs. Which type of financial services that are provided depends on the objectives the MFIs have, the demands of its target market, and the structure of the institution. In addition to financial services, many MFIs offer social and development services. Development services could be skills training and basic business training. Social services could be health care, education, development of self-confidence and literacy training (Ledgerwood, 1999).

Micro credit

MFIs provide credit, and this must be successfully designed so they meet the clients' needs (Ledgerwood, 1999). Lenders in MFIs take small, repeated loans that are unsecured and on short term (Barth et al., 2012). It is possible for the clients to both have individual or group-based loans. Individual loans are given to individuals who have some kind of assurance of repayment and some level of security that they will repay the loans. Group-based loans are either loans given to groups that sub-loan forward to their members, or a loan that are given to individuals that are members of a group that guarantee for each others loans (Ledgerwood, 1999).

Micro savings

Low income clients in MFIs can and do save. Offering saving accounts to the clients can be a highly valued service since many of the poor do not have reliable places to secure their money or an option to earn return on their savings. Compulsory saving is when borrowers as a condition of receiving a loan has to save an amount of the loan, sometimes as a percentage and sometimes as a nominal amount. Voluntary savings are savings that are not an obligatory part of accessing credit services. This is saving after borrowers and non-borrowers needs (Ledgerwood, 1999).

2.3 Social Performance of MFIs

The Social Performance Task Force has a consensus about the following definition for social performance:

> *Social Performance is the effective translation of an institution's social goals into practice in line with accepted social values; these include sustainably serving increasing numbers of poor and excluded people, improving the quality and appropriateness of financial services, improving the economic and social conditions of*

clients, and ensuring social responsibility to clients, employees and the community
they serve (CGAP, 2007, p. 3).

Social performance is in the microfinance industry commonly defined as the ability an MFI has to effectively translate the institutions social goals into practice. It means that an MFI should not do any harm, and that it is proactive in fulfilling its mission. Do no harm means that the client should not be worse off after the intervention of a MFI due to before. This includes avoiding client indebtedness, not adding unnecessary administration burdens on the clients, and stop transferring risk to the clients. The social goals are outlined in the organizations mission and vision (Leonard, Linder, Faris, Lal & Meggs, 2009). Social performance indicators help MFIs to specify data to collect so they over time can assess and track how well they are achieving its mission (SPTF, 2012).

2.4 Growth of MFIs

Donors give billions of dollars to support the expansion of microfinance programs. This due to a "win-win" proposition that says that the MFIs that follow the good banking principles, will also alleviate the most poverty. When eventually achieving financial sustainability, MFIs will be able to grow without donor money. These MFIs will then be able to serve more poor people than MFIs getting subsidies (Morduch, 2000). An MFI that can cover its costs can also grow, thus serving more and more clients. Therefore there is almost a unanimous consensus that financial sustainability is a crucial measurement of the success of MFIs (CGAP, 2007).

Today there are more than 400 sustainable institutions that report to the leading source for market data, called the Microfinance Information eXchange (MIX). The microfinance industry is growing fast, with an increase in more borrowers almost each year since 1999 (CGAP, 2007). Christen et al. (2004) report about 500 million persons served, mostly with savings account. Microcredt Summit reported in their 2006-meeting about 100 million borrowers (Mersland, 2009b).

Table 2.1 below, shows an overview of the total number of borrowers every other year from year 2001 until 2013. We see that for every year there is a little increase in number of MFIs reporting their numbers. In December 2013, there was reported that 211.1 million borrowers where reached. There is also an increase in number of borrowers for every second year. Total number of poorest borrowers has been increasing each year for several years, except in 2013. But in terms of percentage of the total number of poorest borrowers, there has not been an

increase every year. The total number of poorest borrowers that are women has been quite stable with a percentage slightly above 80 percent for most years. In 2013, it was 82.6 percent of the poorest clients that where women.

Year	Total number of institutions reporting	Total number of borrowers	Total number of poorest borrowers	Total number of poorest women
2001	2 186	54 932 235	26 878 332 (48.9%)	21 169 754 (78.8%)
2003	2 931	80 868 343	54 785 433 (67.7%)	45 242 725 (82.5%)
2005	3 133	113 261 390	81 949 036 (72.4%)	68 933 027 (84.1%)
2007	3 552	154 825 825	106 584 679 (68.8%)	88 726 893 (83.3%)
2009	3 589	190 135 080	128 220 051 (67.4%)	104 694 115 (81.7%)
2011	3 703	195 014 970	124 293 727 (63.7%)	102 749 643 (82.7%)
2013	3 725	211 119 547	114 311 586 (54.1%)	94 388 701 (82.6%)

Table 2.1: The growth of total borrowers in MFIs for the last years

Source: Microcredit Summit Campaign, The Annual Microcredit Summit Campaign Reports.

2.5 Debates Regarding the Microfinance Industry

A very hot topic regarding MFIs has been the issue of social impact. The question is about what beneficial effect microfinance has created to the poor that they are supposed to alleviate and serve. However, it has been a difficult question to answer, because microfinance has been evaluated on its financial performance, and not on its social impact. There has for a long time been very little measure of social impact. However, a few years ago, there was a shout of a need to determine what value microfinance has made to the society. The debate has been focused on whether the microfinance should measure their social impact or their social

performance. And while this debate has continued, numerous of institutions have already come up with social performance measures (ECLOF, 2012).

A recurring subject of debate in the microfinance sector is the potential conflict between economic and social objectives (Gutierrez-Goiria & Goitisolo, 2011). Many lenders started to look after ways to make profits on loans they where offering, by shifting from non-profit organizations to commercial enterprises. Which resulted in the poor people getting harmed (Yunus, 2011). Like mentioned in the introduction, microfinance is considered a "double bottom line" sector, with both a financial side and a social responsibility. It is widely believed that MFIs have a positive social impact, however, there are some cases where MFIs looses their social orientation in the process when they become larger (Gutierrez-Goiria & Goitisolo, 2011). Mexico`s Compartamos Banco and Bolivia`s BancoSol are two examples. They both converted from non-profit to for-profit enterprises so they could broaden their business models. In 2007, shareholders of Compartamos Banco went to the stock market and sold their shares at a shockingly high price, which made some of them instant millionaires. The main reason for the high price was that Compartamos charged very high interest rates from the clients, and this resulted in very high profit (CGAP, 2009b). In Banco Sol different owners struggled to maintain control. Here some owners where pushing hard for faster profits while other owners where pushing to maintain Banco Sol`s microfinance identity (Mersland, 2009b).

There has until the last years, also been debates about the likelihood of becoming self-sufficient while working with small amounts of money and people with limited income. The critics claimed that MFIs took advantages of subsidies and external support and that this is what enables them to work and their feasibility. Today, sustainability is unquestionably possible. Now the debates focuses on what kind of measures must be taken to achieve sustainability (Gutierrez-Goiria & Goitisolo, 2011). Surveys show that MFIs that target the poorest borrowers only generate revenues to cover 70% of their full costs (Morduch, 2000). For MFIs to maintain low interest rates, it's not always possible to remain financially self-sufficient. It's complicated to provide lots of tiny microloans to the poor, and therefore it is often an expensive business. Many MFIs need government and international donor funds. Even with high repayment rate, it can be hard to be self-sustainable (Bateman, 2010).

2.6 Microfinance Failures

There are several scandals that are threatening the reputations of MFIs. Microfinance has been held up for decades as a "miracle cure" for global poverty reduction. "Everyone" was talking about the endless of opportunities in lending out small loans for the world´s poorest people. However, by 2010, new studies began to challenge the promise of microfinance. There where rapidly growing crises in the microfinance industries (Provost, 2012).

High interest rates

Surveys show that in Africa it is common with a 100% interest rate, and in Mexico it can exceed 200% (NRK, 2010). It is common with interest rates of 100% or higher, and interest rates under 30% a year are rare (Armitstead, 2012). Compartamos Banco charged very high interest rates. Without including the 15% tax paid by clients, the annualized interest rate on loans was above 85%. This resulted in an annual return on 55% on shareholders` equity (CGAP, 2009b). Hugh Sinclair, a British author and microfinance veteran, discovered that the microfinance sector is dominated by profiteers and not by "saints". In unregulated markets where there is minimal client protection, MFIs charge the poor with whatever interest rate they could get away with, and this arises problems for the poor. With very high interest rates, it is very hard to generate enough money to be able to repay the loans. Sinclair says that there is a need for a more comprehensive reform. He wants a regulatory framework that shows how the loans benefit the clients, as well as their full costs (Armitstead, 2012).

The fact that MFIs charge very high interest rates is an example of poverty penalty, this because the poor has to pay high interest rates to enter the credit market. In order to achieve greater social welfare, the work of intermediation should be done with the lowest possible cost. If the banks` interest margin is low, then also the social costs of financial intermediation should be low, given the MFIs social mission (Cuéllar-Fernándes, Fuertes-Callén, Serrano-Cinca & Gutiérrez-Nieto, 2016). In Brennpunkt`s documentary on NRK TV, there is said that it is the sky-high interest rates the poor are struggling with. Nurul Kabir, editor in chief New Age Magazine, follows the micro lending market close, and says that there is big money to earn. A recognized Korean economist, professor Ha-Joon Chang, believes that the high interest rates lead the poor into a debt trap. He believes that the poor do not come out of poverty when they have to pay a 30-100% interest rate. So although microfinance has been regarded as a success, Chang thinks that everything must be examined again (NRK, 2010).

Harassments and suicides

Several agents pressure and harass borrowers that cannot repay their loans. Some say that borrowers kill themselves because they cannot repay high-interest loans (Moll, 2011). In Andhra Pradesh in India there are some scandalous news about lenders who are being encouraged by loan officers to commit suicide to get out of debt. The loan officers do this because the borrowers are covered by insurance. There is an obligatory life insurance sold with the microloans, and this may be the incentive to why over-indebted borrowers are being pressured to take their own life (Dobusch, Mader, & Quack, 2013). Internal documents from The Associated Press say that employees verbally had harassed over-indebted borrowers, forced them to pawn their valuable items, encouraged other borrowers to humiliate them and where sitting outside their homes to publically shame them. Also, in some cases, staff where physically harassing defaulters (Business Insider, 2012). In the Brennpunkt documentary, it is being told about MFI agents who visit borrower both day and night when they have problems repaying their loans. The MFI agents make them sell their things and their house to get money, threaten to put them on the street and harasses them. The MFI agents are not leaving the house until they have got their money, this result in borrowers who borrow from loan sharks to pay their instalments. Because the borrowers get scared, they do as the MFI agents say (NRK, 2010).

Corruption

The low competition in the microfinance market, let lenders earn significant profits by providing loans, savings accounts, and related services. Organizations that become for-profit publicly traded corporations make a few executives and early investors very wealthy. Critics say this could undermine the poverty-fighting purpose these programs have. When microfinance grow too much and too fast, this could be because the providers coming in are only interested in gaining profits. Some say that high loan-default rates and corrupt officials, who exploit lending for personal benefits, are a problem in Africa's MFIs. Yunus has also criticized the industry (Moll, 2011). The reputation of the industry has declined so badly that Muhammad Yunus in a meeting to officials in the United Nations said, *"We created microcredit to fight the loan sharks; we didn't create microcredit to encourage new loan sharks"* (Armitstead, 2012).

Microloans are more beneficial to borrowers living above the poverty line

From different studies it seems that microloans are more beneficial to borrowers that lives above the poverty line than for borrowers living below the poverty line. The reason is that the borrowers with a higher income are willing to take risks, like investing in new technologies, and this is more likely to increase income flows. On the other hand, poor borrowers rarely invest in new technology; instead they tend to take out conservative loans that protect their subsistence. Vijay Mahajan, who is the chief executive of Basix, an Indian rural finance institution, concludes that microcredit seems to do more harm than good to the poorest borrowers. Microloans reduce the cash flow to the poorest of the poor. One reason could be the high interest rates that are charged. If the poor clients are not able to earn a greater return on their investments than the interest they have to pay, the result will be that they become poorer of microcredit, and not wealthier (Karnani, 2007).

2.7 Importance of Social Performance Today

More than ever before, there is a broad agreement that social performance is important to help MFIs in achieving their social mission (CGAP, 2013a). Social performance of investments has become a topical issue in discussions. Social objectives are intentionally pursued and honored (Lapenu et al., 2008). Investors are agreeing that there is a need for action. Microfinance investors are now openly discussing responsible investments; this includes balancing returns and how to reduce the risks of market saturation and over-indebtedness. The heated debates and investors efforts are signaling maturity and investors` wish to move beyond the crises to concrete actions, which will make the sector more responsible (CGAP, 2013b).

There have been some reservations about the need of social performance measures. If there really is a need for a new set of reporting standards and if it is even possible to standardize measures for social performance. Opponents believe that the high demand among the poor for services and that they are relative price insensitive, are enough sufficient proof that microfinance services are socially useful. Thus, the additional assessments will therefore be unnecessary. However, a high demand does not automatically indicate that there is an increase in people`s conditions. One reason why people come back could be due to spiralling indebtedness, meaning that they borrow money to pay back other debts (CGAP, 2007).

There are new challenges in the microfinance sector. A growing microfinance industry and new partnerships that are emerging are resulting in an increasing competition and a financial pressure. This evolving context increases the exposure to risks, and as a consequence, there is no guarantee for the double bottom line of microfinance anymore. There is also a real risk of mission drift (Leonard et al., 2009). In the future, one can expect that there is a decrease in the resources for development assistance from public donors. Yet, there will be a growing interest for microfinance for the private social investors. To report if MFIs have managed the objectives in the double bottom line, it would then be important for them to have similar financial and social objectives. It could also be possible to improve the understanding of possible trade-off between the economic and social returns on investment (Zeller, Lapenu & Greeley, 2003).

There has, for the last decade, been emphasis on the financial performance. However, advocates of social performance have argued that it is important with social indicators to keep MFIs focused on their clients and is a key building block for the MFI as an institution. Social indicators will also help MFIs to assess their social results internally and to report to their external stakeholders, especially to donors and investors. If an MFI know how it is performing on its social bottom line, it can help to guide the MFI towards its social mission (Coleman & Rogers, 2009).

2.8 Ways to Measure Social Performance

Variables that have been used when measuring social performance before are now being replaced or improved by other variables that hopefully are better measures. Researches have used different measures, however "social stakeholders", rating agencies, etc. are now searching for new and better variables.

Social performance variables used in different research papers

There is not one widely accepted measure for measuring social performance in MFIs. Outreach can be defined in terms of several indicators. Some examples are the percentage of female clients, the percentage of rural clients or the average loan size (Balkenhol, 2007). Table 2.2 below, gives an overview of some papers and the social performance indicators that researchers have used when researching social performance. As we can see from the table, all of the papers use variables that are considered as "old" variables.

Papers	Social performance variables
Hartarska (2005)	• Average loan size • Number of current borrowers
Hartarska and Nadolnyak (2007)	• Average loan size • Number of current borrowers
Mersland and Strøm (2008)	• Percentage of women reached • Average outstanding loan per client • Number of clients served
Cull et al. (2009)	• Average loan size • Percentage of women borrowers
Mersland and Strøm (2010)	• Average loan size • Gender bias: women or men • Main market of lending: rural, urban or both • Lending to groups or individuals
Hermes et al. (2011)	• Average loan size • Average savings balance • Percentage of women borrowers
D'Espallier et al. (2013)	• Average loan size • Percentage of women borrowers • If MFI operate in rural area (dummy)
Serrano-Cinca and Gutiérrez-Nieto (2014)	• Average loan size • Percentage of women borrowers • Percentage of rural borrowers

Table 2.2: Social performance variables used in different research papers

The emerge of new social performance indicators

If the MFIs have common social indicators, it will be easier for them to compare their social performance and objectives against other MFIs. It will also make it easier for investors and other stakeholders to compare social performance across MFIs in the same country, by region, by context, or by services (Coleman & Rogers, 2009). The non-profit organizations, the MIX and the SPTF, have developed 11 indicators to be used to measure the social performance of

MFIs. These 11 indictors are used to collect social performance data from MFIs around the world and to offer a platform for benchmarking and analysis (The MIX).

The non-profit organization CERISE, have tried to improve the social performance management by creating indicators to measure social performance that are equal for everyone. The Social Performance Indicators Initiative (SPI) was launched in 2002. The intention is to develop a conceptual framework for defining social performance in the MFI sector, to find out which dimensions and elements to use when measuring social performance (Zeller et al., 2003). The SPI tool evaluates four dimensions of social performance; these are outreach to the poor and excluded populations, adaption of products and services for target clients, improving economic and social benefits for the clients, and corporate social responsibility towards the clients, the staff, the community and the environment (Lapenu et al., 2008).

In 2005, CGAP together with the Argidius Foundation and the Ford Foundation brought together over 30 leaders from different social performance initiatives to share their experiences. The reason was to optimize a further improvement on social performance tools. After two years of work, it resulted in the Social Performance Task Force (SPTF). The Task Force are promoting a stronger industry focus on social performance by adopting a common definition, coordinating different initiatives, and creating a common reporting format (CGAP, 2007).

The SPTF launched the Universal Standards for Social Performance Management in year 2012. The universal social standards are created by and for people in the microfinance sector to help them achieve their social goals. It is a global, collaborative effort to aggregate various social performance initiatives into one document, and thus create the universal standards. The manual with the Universal Standards includes "standards" of what the institution should achieve. Experts working in the field have agreed that these standards are essentials for institutions that try to achieve social goals (SPTF, 2012). The universal standards contain 21 standards divided into six broad categories of activity. Each of the 21 standards is specified by a set of corresponding "essential practices" that must be fulfilled to meet the universal standards. When financial institutions have engaged with the standards, they improve and become better in achieving their social mission (CGAP, 2013a).

3 Theory and Hypothesis Formulation

3.1 The Trade off

The trade off is much discussed in the microfinance literature. There are two objectives to achieve for MFIs; outreach to the poor and financial sustainability (Mersland & Strøm, 2014). The social performance they want to reach is to try to contribute to development and poverty reduction by reaching more clients and poorer clients. The financial performance they try to reach is to be financially sustainable and become independent from donors (Barth et al., 2012). There should be a clear policy that is consistent with its social goals, on the desired level of returns. The institution is engaged with funders whose expectations for financial returns are aligned with the institutions social goals (SPTF, 2012).

Most of the microfinance lenders pursue both financial and social performance, and therefore they can get obvious implications for the governance system (Barth et al., 2012). How the MFIs achieve the dual objectives of microfinance differs after type of ownership. Some policy makers claim that shareholder ownership is better, this because it can reduce costs, attract commercial funds, and benefit from corporate governance systems (Mersland & Strøm, 2014). The two goals often conflict. There could be a trade-off when MFIs have this dual mission, because it is costly to serve the poor. When there is a trade-off between social and financial performance, the bad performance on one, can be justified by better performance on the other. Clients, employees and investors all have very different interests, and the trade-offs between financial and social performance therefore makes microfinance governance extra challenging. It is more difficult to control an organization with dual objectives than one with only a profit objective (Barth et al., 2012).

There is a global campaign called The Smart Campaign where the purpose is to unite microfinance leaders around a common goal. This goal is to keep clients as the driving force of the industry. The Smart Campaign tries to help the MFI to continue being both socially focused and financially sound. The Smart Campaign works with microfinance leaders to give MFIs tools and resources to deliver transparent, respectful and prudent financial services to each client. Smart Microfinance is protecting the clients, businesses and the industry as a whole, and help MFIs practice good ethics and smart business (The Smart Campaign, 2014).

3.2 Moral Hazard and Principal-Agent-Problem

Moral hazard is when an individual will change its behaviour because its not totally exposed to its consequences. Ledgerwood (1999) define moral hazard as "the incentive by someone (an agent) who holds an asset belonging to another person (the principle) to endanger the value of that asset because the agent bears less than the full consequence of any loss" (Ledgerwood, 1999). If both the principal and the agent are utility maximizers, then often, the agent will not always act in the principals' best interest. It is mostly impossible that the agent will make optimal decisions from the principals' viewpoint for zero cost. There will be some monitoring and bonding cost, both non-pecuniary and pecuniary. There will also be some divergence between what the agent decides and the decisions that would maximize the principals' welfare (Jensen & Meckling, 1976).

The principal (the MFI) don't know much about what the agent (the borrower) are using the loan to, or if he will repay the loan. Therefore, to reduce the agency cost, the MFIs make costly screening and selection processes, and they will monitor and follow up the customers. MFIs also use group guarantees for neighbours, families and friends when they select and monitor the clients, this to reduce the cost of adverse selection and moral hazard (Mersland, 2009b).

Banks monitor borrowers on behalf of the depositors. The depositors have a difficulty to determine precisely how the banks manage their money. Owners of SHFs don't share profit with their depositors. They only share losses with them, and they therefore have pecuniary incentives for an opportunistic behaviour, including risky lending. An organization without owners (NGO) will have fewer incentives to exploit depositors, and the agency cost correlated to symmetric information will then be minimized (Mersland, 2009b).

Donors, who play a major role, are influencing the ownership structure in MFIs. They don't know exactly how the MFIs use the money they receive from them. Although there are some monitoring schemes, there will still be a risk that MFIs distort the use of donations. Therefore, donors prefer contracting with NGOs since they have no owners (Mersland, 2009b).

3.3 Agency Theory

What separates the ownership types is who controls the organization and who receives profit (Hansmann, 1996). Depending on who owns an enterprise, different costs may occur

(Mersland, 2009a). Agency cost occurs from the separation of ownership and control, and from the collective decision-making. So whether the ownership is a SHF or a NGO, different costs will arise (Mersland, 2009b). If there is a separation between ownership and control, managers may act in their own preferences or may fail to maximize the firm value. Thus, the agency cost of outside ownership is the lost value from managers maximizing their own utility instead of the firms' value (Berger & Patti, 2006). Fama and Jensen (1983) write about separation of "ownership" and "control". Most organizational forms have a contract structure that limits the risks undertaken by most agents, this by specifying fixed promised payoffs or incentive payoffs tied to specific measures of performance. Separation of decision management and residual risk bearing is a characteristic of NGOs.

Often there can be different opinions regarding the firm`s policies and programs when many persons share ownership of a firm. There can be different opinions about what are the most effective means for achieving the shared goal (Hansmann, 1996). Shareholders want to increase the risk, and debt holders want to decrease the risk since the extra risk do not give them any additional returns. In microfinance, there is also a conflict between those who provide funds with a social motive, like non-commercial investment and donations, and those that provide commercial funds. Boards in microfinance face a more difficult task than corporations, this because they have to find the right balance between all the different interests (Barth et al., 2012).

Incentive problems between owners and managers in NGOs may be clearer than in SHFs. However NGOs could reduce adverse selection of customers and avoid moral hazard, because they are better able to tap into local information networks. Not every SHF run according to the shareholder value model, this because they might be committed to reach the poor. If this is true, we would expect that NGOs perform as good as SHFs (Mersland & Strøm, 2009b). Since NGOs lack owners with a financial stake in their operations, NGOs are often considered to have weaker structures. This will lead to lower financial performance than for SHFs. Conversely, NGOs are assumed to be more effective in reaching poor customers than what SHFs are. According to this, NGOs should have a lower financial performance but have a higher social performance than SHFs (Mersland & Strøm, 2009b).

The MFI`s choice of board and CEO characteristics, might be a consequence of the outreach measures that the MFI follows. The choice of outreach is the MFI`s choice of business model,

or its choice of market conditions it is facing (Mersland & Strøm, 2009a). In the microfinance field the information asymmetry between the board and the CEO is likely to be large (Mersland & Strøm, 2009b). An internal auditor in the MFI who reports directly to the board will provide the board with independent and objective assessments on the MFIs operations. As a result, both financial and social performance should be improved (Mersland & Strøm, 2009b). Ownership shared between different owners is likely to have different opinions regarding policies and strategies. Owners of SHFs consist of a group of heterogeneous profit seeking investors. Therefore, there will be an increase in the cost of collective decision making when they are to align their preferences. Many NGOs have transformed into SHFs, an assumption is that they also have relative high cost of collective decision-making. However, policy advocates recommend the inclusion of profit minded investors as a counterweight to domination by the original NGO, to improve monitoring and decrease agency cost (Mersland, 2009b).

In all markets, there exist market imperfections. The microfinance sector is a market where market failures exist due to lack of competitions and substantial informational disadvantages (Mersland, 2009b). According to Hensmann (1996) non-profit enterprises are able to operate successfully in more imperfect markets, like markets where most MFIs operate. This could be because NGOs are better at modifying the costs that comes from the market contracts (Mersland & Strøm, 2008). The customers in MFIs pay the price of limited competition. High interests on loans, low interests on savings, under-consumption or no consumption at all of banking services, are all some of the price customers face due to low competition. In rural areas, and generally where MFIs exists, there is usually a lack of competition. Additionally, clients have limited bargaining power against the provider of micro financial services. The limited competition results in lack of incentive in streamlining the operations. If all else is constant, SHFs will have a stronger incentive than NGOs to exploit their customers, this because owners in SHFs have the right to appropriate the organizations profits (Mersland, 2009b).

The first goal an MFI has is to reach poorer clients of the population. The second goal is to have financial sustainability. Governance is about achieving corporate goals (Mersland & Strøm, 2009b). There is an expectation that non-profit organizations, as NGOs, are trustworthy in supplying output of promised quality. For-profit organizations, like SHFs, have an incentive to offer cheaper output with lower quality in order to increase their profits. In a

non-profit organization patrons without pecuniary incentives elect the board, there are therefore argued that the controlling function of the board is lower. Some boards are even self-perpetuating (Hansmann, 1996). Proofs from the history have shown that a large group of firms, like nonprofit hospitals, have survived without having owners with pecuniary incentives to control management. Therefore there must be other mechanisms to ownership control that makes the managers work hard. Competition, public regulation, legal and moral constraints, incentive pay aligned with owners` interests, and the management labor market are other mechanisms that are often mentioned (Mersland, 2009b).

3.4 Institutional Isomorphism

In firms' initial stages of their life cycle, they have a large diversity in approach and in form. However, when a firm becomes well established, there is a drive towards homogenization. As a result of the activities of a diverse set of organizations there is an emergence and structuration of an organizational field. Once the field is established, there is a homogenization of the organizations and of the new entrants as well. An organizational field is where there is a production of similar services or products. When disparate organizations in the same type of business are in an actual field, there emerge powerful forces that make them become more similar to one another (DiMaggio & Powell, 1983).

Institutional theory argues that formal legitimacy is the main objective of organizational change. This means that organizations adjust their internal characteristics in order to conform to expectations that the key stakeholders in their environment have (Ashworth, Boyne & Delbridge, 2005). Isomorphism is the concept that best capture the process of homogenization. It is a constraining process that forces one unit in a population to look more alike other units that face the same set of environmental conditions (DiMaggio & Powell, 1983).

There are three forces that pressures towards institutional isomorphism. Mimetic isomorphism is that organizations may copy or imitate other organizations activities, systems or structures. There is a desire of innovations that enhance the legitimacy, especially under conditions of uncertainty. Coercive isomorphism is when the government, regulatory or other agencies exerts external pressures to adopt the structures of systems or rules that they favor. These are often associated with legal requirements and different regulations. Normative isomorphism describes the effect and influence that professional standards and the professional

communities have on the organization. It captures the way organizations are expected to conform to standards of professionalism and how organizations adopt systems and techniques considered to be legitimate (Ashworth et al., 2005).

3.5 Empirical Literature

There have been done some other researches about ownerships effect on performance. Mersland and Strøm did a research about whether the superiority on performance of shareholder owned MFIs is empirically supported. They tested five dimensions of performance: cost, depth, breadth, length and scope. What they found is that there are minimal differences between shareholder owned MFIs and non-governmental MFIs. They found that SHFs and NGOs perform equally well (Mersland & Strøm, 2008).

Hartarska (2005) studied how governance mechanisms affect performance of MFIs in Central and Eastern Europe. By holding institutional, macroeconomic, and MFI-specific factors constant, he examine how management remuneration, board independence and diversity, and external mechanisms of control are affecting performance. The results where that the performance where not affected by these known government mechanisms. Also, there were different factors that had different effects on outreach and sustainability. An important result from this study is that the microfinance board is very important. Associated board members impact differently on performance due to different weight on outreach and sustainability by various groups of stakeholders. Microfinance boards with larger proportions of unassociated directors achieve better results. Therefore it should be independence of the microfinance board (Hartarska, 2005).

And in 2007, Hartarska and Nadolnyak made a study about whether the regulated MFIs achieve better sustainability and outreach than the non-regulated MFIs. They look at the differences in performance between regulated and unregulated MFIs, to establish whether the performance or the MFIs are improved by regulatory involvement. Results from this study show that regulation did not have an impact on either the social or the financial performance in MFIs. But what they found is that outreach is affected by level of deposits (savings) (Hartarska and Nadolnyak, 2007).

This may indicate, as Mersland mentioned in one of his paper, that similar to banking markets, a mixture of different ownership types is probably what is best for microfinance

customers (Mersland. 2009b).

3.6 Hypothesis

As mentioned in the introduction, NGOs where earlier considered more social oriented than SHFs, and SHFs where considered more profit oriented than NGOs. However, there are many discussions and research if this really is the case. There have been observed NGOs that are as profit-oriented as SHFs, and many SHFs that have the same social mission as NGOs. The difference between types of ownership may not be as clear, and I want to examine this. As hypotheses, I state that the NGOs have a higher social performance than SHFs. For the t-test and the probit model, I have therefore chosen these six hypotheses that I will test for:

$$H_{A1}: Compared\ with\ SHFs, NGOs\ have\ more\ female\ clients$$
$$H_{A2}: Compared\ with\ SHFs, NGOs\ have\ more\ rural\ clients$$
$$H_{A3}: Compared\ with\ SHFs, NGOs\ have\ a\ lower\ average\ loan\ size$$
$$H_{A4}: Compared\ with\ SHFs, NGOs\ have\ a\ higher\ transparency$$
$$H_{A5}: Compared\ with\ SHFs, NGOs\ have\ a\ higher\ clients\ retention\ rate$$
$$H_{A6}: Compared\ with\ SHFs, NGOs\ have\ a\ lower\ staff\ turnover$$

The null hypotheses, that we want to reject, will then be:

$$H_{01}: Compared\ with\ SHFs, NGOs\ does\ not\ have\ more\ female\ clients$$
$$H_{02}: Compared\ with\ SHFs, NGOs\ does\ not\ have\ more\ rural\ clients$$
$$H_{03}: Compared\ with\ SHFs, NGOs\ does\ not\ have\ a\ lower\ average\ loan\ size$$
$$H_{04}: Compared\ with\ SHFs, NGOs\ does\ not\ have\ a\ higher\ transparency$$
$$H_{05}: Compared\ with\ SHFs, NGOs\ does\ not\ have\ a\ higher\ clients\ retention\ rate$$
$$H_{06}: Compared\ with\ SHFs, NGOs\ does\ not\ have\ a\ lower\ staff\ turnover$$

For the t-test we test if the means for the two groups are equal (null hypothesis) against that the means for the two groups are not equal (alternative hypothesis). This can be written:

$$H_0: \mu_1 = \mu_2$$
$$H_A: \mu_1 \neq \mu_2$$

Where μ_1 and μ_2 are the means of the two ownership types.

For the probit model we test the significance of a coefficient to test if the parameter is significantly different from zero. The focus will be on the social performance indicator. The

null hypothesis is then that the coefficient that represents the social performance indicator, β_1, is equal to zero. The alternative hypothesis will then be that the coefficient, β_1, is not equal to zero. This can be written:

$$H_0 : \beta_1 = 0$$
$$H_A : \beta_1 \neq 0$$

4 Presentation of Variables Used

4.1 Independent Variable

Type of ownership is the independent (explanatory) variable. I use ownership as an independent variable to see if the type of ownership has an effect on the social performance in MFIs. As mentioned in the abstract, I will focus on to types of ownership, NGOs and SHFs, where SHFs consists of Banks and NBFIs. This means that the independent variable has one dummy variable. If the MFI is a NGO, it takes value 0. If the MFI is a Bank or NBFI, it takes value 1.

4.2 Dependent Variables

There are numerous of variables we can choose to look at regarding social performance. All the performance variables relate to each other, and all have some kind of impact on the performance for MFIs. The social performance variables I have chosen are variables I find meaningful to look at after reading and learning about MFIs. To measure social performance in this thesis, I will look at both old and new variables. I will look at six variables, where three of them are "old" and three are "new". These variables measure different aspects of social performance. The old variables measures depth of outreach, in terms of what type of clients is getting the financial services. The new variables are measuring various aspects of the microfinance institution.

Old variables

Outreach indicators are both qualitative and quantitative. They are good measures for scale of outreach, and good proxies for depth of outreach. Depth of outreach is what type of clients that are reached and their poverty level (Ledgerwood, 1999). For the old variables I will focus on the outreach in terms of depth. I will look at three proxies for the depth of outreach that have been used by several researchers for many years. Section 2.9 showed a table of various measures used in different papers, and as we saw, several researchers have used these three measures. The variables I have chosen as "old" variables are percentage of female clients, percentage of rural clients, and average loan size.

Female clients

Women have not always been the centres of attention in microfinance. There was little interest in women in the first attempts to provide credit in developing countries. However, this

attitude has changed during the three last decades and now more MFIs have become interested in serving women (D`Espallier et al., 2013). Women are of special interest for MFI's because they almost always make up the poorest segments of society. The women often have fewer economic opportunities than what men have. They also have been excluded from financial services due to many reasons. One reason is cultural barriers that restrict the women to their home, which makes it difficult for them to access financial services (Ledgerwood, 1999).

There are three main arguments for why there in the resent years has been an enthusiasm for women; these are gender quality, poverty reduction, and MFI efficiency. Microfinance is often considered an effective tool to promote women`s empowerment. Men have, more often than women, repayment problems, so a higher repayment rate by women should improve MFIs efficiency (D`Espallier et al., 2013). A report shows that women in developing countries are the poorest of the poor. Thus, gender could be an indicator to assess if MFIs are being faithful to their poverty-reduction mission (Armendáriz & Szafarz, 2011).

Some commercial banks don't want to lend to women or mobilize deposits from them. This because the banks have a conception that woman is unable to control the household income (Ledgerwood, 1999). However, loans to women are more highly valued by the society (Balkenhol, 2007). It is claimed that there is a greater benefit in the household and in the community when there is an increase in women`s income relative to an equivalent increase in men's income (Ledgerwood, 1999). The Grameen Bank has increased its proportion of women from 44 % in 1983 to 95 % in 2001. International organizations like Women`s World Banking (WWB), Microcredit summit, USAID and the World Bank has driven the idea that microfinance should target women. (D`Espallier et al., 2013).

Since women almost always make up the poorest segments of society, the percentage of women as a proxy for depth of outreach will be used. We would here expect that NGOs have a higher percentage of female clients than SHFs.

Rural clients

Most of the MFIs have an objective of poverty reduction and would therefore often like to focus on the poorest segments of the population. In many countries there are numerous of people that do not have admission to financial services. The poorest of the poor are perhaps

not economically active, or that small business operators do not qualify for formal financial sector services (Ledgerwood, 1999). Rural clients are typically poorer than people in urban areas (Balkenhol, 2007). By offering services in rural areas, it could be possible to reach a larger number of poor households. In addition, rural areas are often isolated from markets, this often due to lack of infrastructure, which can make it difficult to produce and deliver goods (Ledgerwood, 1999).

The percentage of rural clients has a large and significant effect on outreach and a negative effect on the financial score (Balkenhol, 2007). Some fear that profit motives could lead MFIs to abandon rural populations that live in isolated and climatically harmful conditions. Some may instead focus on the urban populations that are less risky. Urban populations are closer to economically active commercial centres that provide the dual advantages of low-cost service delivery. If shareholders or donors were insisting on increasing the lending volume and outreach, there would be a pressure to make larger numbers of loans without proper screening. This could result in a decrease in new clients, increase in repeated and larger loans and an exclusion of the poor (Bhatt & Tang, 2001).

Since rural clients are typically poorer than people in urban areas, another factor for depth of outreach that will be used is the percentage of rural clients. We would here expect that NGOs have a higher percentage of rural clients than SHFs.

Average loan size

Across different MFIs that are operating in different regions, they use average loan size as a proxy for poverty, and this is an increasing empirical popularity (Armendáriz & Szafarz, 2011). Average loan size is directly linked to poverty alleviation (Périlleux & Szafarz, 2015). The smaller the average loan size is, the greater is the depth of outreach. Small average loan sizes are often being advertised by MFIs as an important indicator concerning the outreach, and as a strengthening signal for their main mission (Armendáriz & Szafarz, 2011). MFIs reach the really poor only when the loan size is very small. However, even the poorest loan clients tend to increase their average loan size over the years as they improve their ability to repay (Balkenhol, 2007).

The notation of poverty with average loan size could be dated back to Bolivia`s Bancosol. Bancosol deviates from its mission by serving larger loans to wealthier clients for the sake of

self-sustainability, and this at the expense of deviating resources away from the poor who request smaller loans. Because of this, average loan size has become the most widely used proxy in quantitative studies. Some MFIs, like Bancosol, may prioritize self-sustainability at the expense of their mission concerning poverty-reduction or outreach maximization (Armendáriz & Szafarz, 2011).

Mission drift is a phenomenon where MFIs are increasing their average loan sizes by reaching out to wealthier clients, and this is not because of progressive lending reasons or for cross-subsidization reasons. There arises a mission drift when an MFI reach out to unbanked individuals that are wealthier while they at the same time crowd out clients that are poor. This appears when the announced mission is not aligned with the average loan size minimization in a MFI. Unbanked wealthier clients costs less relative to poor clients, this because they typically request larger loan size. When the MFIs have fewer clients and larger loan sizes per client, the transaction costs will be lower (Armendáriz & Szafarz, 2011).

Average loan size is a prime outreach measure. There is an expectation that the lower the loan, the higher is depth of outreach (Mersland & Strøm, 2009a). As a proxy for depth of outreach, the average loan size could therefore be used. We would here expect that NGOs have a lower average loan size than SHFs.

New variables

The old social performance variables may have some weaknesses and therefore may not be the most optimal variables to use. Because of this, many search after new and better ways to measure social performance and tries find social performance indicators that are broadly available. As mentioned in the abstract, I have decided to look at three "new" measures as well that are not typically used when measuring social performance. Transparency (with respect to interest rates), clients` retention rate, and staff turnover are three important areas of social performance that previous research has not examined to a large extent before. These three measures, among others, are measures that "social stakeholders", rating agencies etc. considers important. As written in section 2.8, The MIX and SPTF have eleven indicators for measuring social performance. Transparency, clients' retention rate and staff turnover are all mentioned in these eleven indicators.

It is especially important to look at whether ownership has anything to say in relation to these three because the clients' satisfaction should be more in focus. In the end, it is the customers that should be satisfied. As mention below, when it comes to transparency, interest rates are often too high, which does not benefit customers in any way. It is therefore essential in pricing to have a well-functioning market, efficiency, healthy competition, and better prices. Regarding clients retention rate, it is important with satisfied customers. A MFI should therefore have the welfare to the client as a goal. Concerning staff turnover, an employee that is committed to the organization and has a good working relationship with the customer, could positively impact the quality and then positively affect the satisfaction of the customers.

Transparency

Interest rates charged by MFIs have more recently been an indicator for social performance. With an ever-larger proportion of MFIs moving into for-profit organizations, higher interest rates could mean higher returns for the shareholders (Rosenberg, Gaul, Ford & Tomilova, 2013). To have a well-functioning market, efficiency, healthy competition, and better prices for millions of people, it is essential with transparency in pricing. However, a non-transparent pricing is common in the microfinance industry. This makes it possible to generate high profits by lending to the poor, and makes it a serious market imperfection (Waterfield, 2008).

Transparency in MFIs states if the interest rate is transparent according to the rating agency. A study done by the Andhra Pradesh Mahila Abhivruddhi Society 31 (APMAS), shows that most of the members they where interviewing did not know about the effective rate of interest, method in how they are calculating the rate, or any other loan operational charges. This was due to their inability to understand the information they got from the MFIs, or due to lack of transparency in MFIs. Many of the members are illiterate and need financial help, and therefore just do whatever they are required to get a loan (Augsburg & Fouillet, 2010). There need to be a priority of transparency in MFIs so there could be established a stable microfinance environment. Transparency in the MFIs will help the MFIs to take the appropriate setting of priorities. With low transparency, there is unlikely that MFIs are honest of what are people`s best interests (Augsburg & Fouillet, 2010).

An institution should fully disclose cost and non-cost information, and provide accurate and timely information. They should also communicate with the clients in an easily understandable way (SPTF, 2012). As mentioned in The SPI tool, social performance

indicators should measure the degree of transparency (Zeller et al., 2003). The money gained from profit, will in a NGO stay in the institution and is used to fund additional services and benefits for clients. For a SHF that gains profit, the profit can end up in the pockets of private shareholders. Since the poor have limited options in getting other credit and has a low bargaining power, they can charge extreme interest rates (CGAP, 2009b).

More transparency and a greater focus on social performance could make actual social performance better (CGAP, 2007). High interest rate makes it more difficult for the poor to repay loans. When they cannot repay their loans, it can result in over-indebtedness, suicides etc., as mentioned in section 2.7. As a new variable for social performance, transparency will therefore be used. We would here expect that SHFs have higher interest rates than NGOs.

Clients retention rate

Client retention was rarely discussed or measured in the 1980s and 1990s. The last years, MFIs have started to understand that client retention have an impact on the institutions viability. A MFI, who has the welfare to the client as a goal, will want to look at the retention performance. Clients' retention is if the customers keep coming back to the MFI. When a loan is paid back, the client can choose to renew the loan immediately, this is a case of client retention. If the customers think the services are helping them, they will come back and continue the use of microfinance services (Waterfield, 2006).

The institutions should monitor the clients' retention rate and satisfaction by client characteristics, and they should understand why clients exit the institution. The products that the institutions design should be appropriate to what the clients need and should not harm the clients. Before they disbursing a loan, they should conduct an appropriate client repayment capacity. The clients should be treated fair and respectfully (SPTF, 2012).

If clients retention rate signals that clients are pleased with the services and get a good value from borrowing, then clients retention rate is a positive social indicator (Rhyne, 2011). The MIX and SPTF has client retention rate as their 11th indicator category to measure the social performance of MFIs (The MIX). In the SPTFs universals standards, clients retention rate is in one of the quantitative indicators of the six dimensions (SPTF, 2012). Therefore, as a new variable for social performance, we could use clients retention rate. We would here expect that NGOs have a higher clients retention rate than SHFs.

Staff turnover

Staff turnover is the rotation of workers between firms, jobs and occupations, and from employment and unemployment. They, who are more likely to leave and most mobile, are the smartest and most talented employees. With a loss of key employees it can negatively impact the quality and innovation of services, and this can affect the satisfaction of the customers. An employee that is enthusiastic and loyal creates a good working relationship with the customers (Abbasi & Hollman, 2000).

There is a high staff turnover in the microfinance industry. The monitoring and collection costs are higher than for other types of credit. There are a large number of small customers and a need for more information about the costumers, and this requires more staff to serve them. All this makes the microfinance industry having high administrative costs (Augsburg & Fouillet, 2010). Employees should be hired for both their commitment to the institutions social goals and for their ability to carry out social performance related job responsibilities. Employees should be trained and evaluated by the institution on both social and financial performance responsibilities that are related to their job. An institution should monitor the rate of employee turnover and understand why they exit, this to correct the institutional problems that lead to dissatisfaction and employee turnover (SPTF, 2012).

An increase in the staff turnover has a negative effect on the MFIs. A high turnover rate negatively affects the productivity, performance levels, consistency and moral in MFIs. It is costly with high staff turnover due to expensive costs in the requirement and replacement process and talent movements to other MFIs or to other sectors. This may lead to a negative affect on the client`s satisfaction and retention towards the MFIs (Almugahed, 2011). Thus, as a new variable for social performance, we could use staff turnover. We would here expect that NGOs have a lower staff turnover than SHFs.

4.3 Control Variables

There are many factors, in addition to ownership, that can have an impact on the social performance in MFIs. I therefore include some control variables that may impact the social performance as well, to see if these makes a change in the conclusions. By adding some control variables to the research, we can reduce the risk of attributing explanatory power to independent variables that in reality is not responsible for the behaviour in the dependent variable.

Contextual factors must be considered when analysing performance indicators. These factors, and others, are all influencing performance indicators. The performance indicators must be put in the context of where and how the different MFIs are operating (Ledgerwood, 1999). I have decided to look at three control variables regarding the firm. These are age of the firm, size of the firm and regions the MFIs operate in.

In addition, it may be important to look at some financial variables as control variables as well. This because of the dual objectives that MFIs have, and that there always exists a tradeoff between the financial and social performance. The book, *The Economics of Microfinance* (2010), defines five financial ratios for evaluating and comparing microfinance performance, which are often used as financial ratios. I will focus on three of them; operating self-sufficiency, return on assets and portfolio at risk.

Size of the firm

There could be that the size of the firms impacts the social performance in MFIs, this due to economies of scale. Economies of scale indicate increased efficiency when the firms increase in overall size of their operations. This means lower costs per unit produced when total units produced increase. For microfinance institutions, this measures cost savings when the size of its loan portfolio increases, in terms of both number of loans and the overall value of loan portfolios. If there exist an economy of scale, larger institutions would manage to offer microfinance services at a lower cost (interest rate) to customers than smaller institutions (Zacharias, 2008).

Age of the firm

Another variable that can impact the social performance is the maturity of the institutions. Young institutions expansion costs may not correspond with the revenues and should therefore not be compared to institutions that are more mature (Ledgerwood, 1999). When institutions are in their maturity stage, they are able to offer loans with lower rates than market interests rates, and are financially profitable at the same time. In the maturity stage, institutions are improving the efficiency and outreach. This can be done by either finding new client segments or by expanding geographically (Flosbach, 2015).

Region

Geographical context is another variable. Latin America, Asia or Africa, may not be equal due to different performance indicators (Ledgerwood, 1999). The regions where the MFIs operate in can have different result when we look at ownership and social performance. To see if there are different results between regions, we can look at the different regions where MFIs operate in. I have chosen to divide the regions into six, after how the dataset are divided. The six regions are East Asia and Pacific (EAS), Europe and Central Asia (ECS), Latin America and Caribbean (LCN), Middle East and North Africa (MEA), South Asia (SAS), and Sub-Saharan Africa (SSF). In the dataset there are 77 different countries.

Operating self-sufficiency

The first financial variable is the operating self-sufficiency ratio (OSS). This variable measures in which degree the operating revenues are covered by the operating costs in MFIs. Most of the revenues come from interest and fees from borrowers. We can write the formula as:

$$OSS = \frac{Operating\ revenue}{Financial\ expense + loan\ loss\ provision\ expense + operating\ expense}$$

It is measured in percent and a value of 100 % indicates full operational self-sufficiency. If the value is less than 100 %, it means that the institution rely on continued outside funding to be able to maintain its current level of operation. With a value above 100%, an institution is able to continue the present operation without needing extra subsidies, and is then "self-sufficient" (Armendáriz & Morduch, 2010).

Return on assets

The return on assets (ROA) is the second financial variable I will look at. Return on assets is one of the most common measures of profitability. It reflects how profitably in the institution deploys its assets (CGAP, 2009a). In other words, ROA measures how well an institution uses its total assets to generate returns, and we can write it as:

$$ROA = \frac{Net\ operating\ income - taxes}{Average\ assets}$$

(Armendáriz & Morduch, 2010).

Portfolio at risk

The third financial variable I will use is the portfolio at risk (PAR). This can be written as:

$$PAR(30days) = \frac{Portfolio\ at\ risk\ (after\ 30\ days)}{Gross\ loan\ portfolio}$$

Portfolio at risk can be explained as "the value of all loans outstanding that have one or more installments of principal overdue more than a certain number of days" (Armendáriz & Morduch, 2010). When a full or partial payment is past due date, the whole outstanding loan balance is higher than normal risk of nonpayment. PAR is the standard measure of portfolio quality in banking, and 30 days is a common breakpoint in MFIs (CGAP, 2009a).

5 Data and Research Methodology

5.1 Dataset

For the research question, I have quantitative data from Merslands Database. This contains 478 MFIs from 77 different countries, from period 1996-2012. Five rating agencies have produced the reports the dataset contains from; they are MicroRate, Microfinanza, Planet Rating, Crisil and M-Cril. The MFIs in this dataset only include rated MFIs that have agreed to let the reports from the rating agencies become publicly available. This means that there is a sample selection bias in this dataset. The percentage of missing values in the dataset range from 0% to over 70%, and this may influence the significance of result from the regression. For the variables in dollar, they have been annualized and dollarized using official exchange rates at the given time (Mersland, 2011). In the dataset, ownership types are divided into six types: Banks, NBFIs, NGOs, COOPs/Credit Union, State, and other. SHFs represent 33.98% of the MFIs, where 4.89% is Banks, and 29.09% is NBFIs. The majority of MFIs are NGOs represented with 51.13% of the MFIs in this dataset. The rest of the ownership types do not represent that many percentages, and I will not take these into account in this analysis.

5.2 Econometric Models

I will use the statistical software Stata to test if type of ownership has an impact on the social performance in MFIs. I am going to use simple bivariate regression for one independent variable and multivariate regression for several independent variables. First a regular t-test for the different hypothesis will be used. After adding some control variables, probit analysis will be used. I will also perform a robustness check.

Simple bivariate regression

Simple bivariate regression is when changes in the dependent variable, Y, are explained by changes in one single explanatory variable, x. It can be written as:

$$Y_i = \beta_0 + \beta_1 x + \epsilon$$

The equation can be used to find the values of the parameters or coefficients, β_0 and β_1. It also gives the line that best fit the data (Brooks, 2008).

For the simple bivariate regression with one independent variable, the following six regressions can be written:

$$Ownership_i = \beta_0 + \beta_1 femaleclietns + \epsilon$$

$$Ownership_i = \beta_0 + \beta_1 ruralclients + \epsilon$$
$$Ownership_i = \beta_0 + \beta_1 averageloansize + \epsilon$$
$$Ownership_i = \beta_0 + \beta_1 transparency + \epsilon$$
$$Ownership_i = \beta_0 + \beta_1 clientsretentionrate + \epsilon$$
$$Ownership_i = \beta_0 + \beta_1 staffturnover + \epsilon$$

Multivariate regression

Multivariate regression is used to examine the effect of all the explanatory variables together with the explained variable. It is more valid to have more than one explanatory variable at the same time in a regression equation. The following equation can be written:

$$Y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_2 x_2 + \cdots + \beta_i x_i + \epsilon$$

Where $t = 1, 2, \ldots, T$ (Brooks, 2008).

The six multivariate regression models with six control variables, will then be:

$$Ownership_i = \beta_0 + \beta_1 femaleclients + \beta_2 Size + \beta_3 Age + \beta_4 Region + \beta_5 OSS + \beta_6 ROA + \beta_7 PAR30 + \epsilon$$

$$Ownership_i = \beta_0 + \beta_1 ruralclients + \beta_2 Size + \beta_3 Age + \beta_4 Region + \beta_5 OSS + \beta_6 ROA + \beta_7 PAR30 + \epsilon$$

$$Ownership_i = \beta_0 + \beta_1 averageloansize + \beta_2 Size + \beta_3 Age + \beta_4 Region + \beta_5 OSS + \beta_6 ROA + \beta_7 PAR30 + \epsilon$$

$$Ownership_i = \beta_0 + \beta_1 transparency + \beta_2 Size + \beta_3 Age + \beta_4 Region + \beta_5 OSS + \beta_6 ROA + \beta_7 PAR30 + \epsilon$$

$$Ownership_i = \beta_0 + \beta_1 clientsretentionrate + \beta_2 Size + \beta_3 Age + \beta_4 Region + \beta_5 OSS + \beta_6 ROA + \beta_7 PAR30 + \epsilon$$

$$Ownership_i = \beta_0 + \beta_1 staffturnover + \beta_2 Size + \beta_3 Age + \beta_4 Region + \beta_5 OSS + \beta_6 ROA + \beta_7 PAR30 + \epsilon$$

Here, Y_i is the dependent variable that takes value 0 or 1. Ownership is the dependent variable and the social performance variables and the control variables are the independent variables. We want to model the probability of ownership being a NGO or SHF. This is affected by some independent variables, that is the social performance variables and the control variables.

5.3 Unpaired Sample T-test for one Independent Variable

An unpaired sample t-test is appropriate to use whenever we want to compare the means of two different groups. The t-test checks if the means of two groups are statistically different from each other. When we look at the means, we may see that there is a difference, but if it is a reliable difference is more difficult to see. The t-test is measuring the difference between the groups, and compares this with the difference that is within the group. In addition to look at the difference between the means for two groups, we have to judge this relative to the spread or variability of their scores. The t-test can therefore be written as:

$$t = \frac{difference\ between\ group\ means}{variability\ of\ groups}$$

To find the top part of the formula, we find the difference between the means, $\bar{X}_T - \bar{X}_C$. For the bottom part of the formula, we have to take the variance of each group and divide it by the number of units in each group. These two values are added together, and we then take the square root of this number. This can be shown as: $SE(\bar{X}_T - \bar{X}_C) = \sqrt{\frac{var_T}{n_T} + \frac{var_C}{n_C}}$

The final formula for a t-test will therefore be:

$$t = \frac{\bar{X}_T - \bar{X}_C}{\sqrt{\frac{var_T}{n_T} + \frac{var_C}{n_C}}}$$

There is a p-value for each t-value that tells if there is a probability that there is a real difference between the means. With a p-value equal to 0.05, there is a 5 % chance that there is no real difference (StatsCast: What is a t-test?, 2010 & Social Research Methods, 2006).

5.4 Probit Analysis for Several Independent Variables

A probit and a logit regression give very similar results, and it is therefore often preferences that decides if one use probit or logit. Probit follows a normal distribution, and has ticker tails than a logit distribution. While logit model often is used in health sciences, probit models are often used in more advanced econometric settings (Albright, 2015). Hence, I have decided to use probit regression.

A probit regression is appropriate to use when the response take only one of two possible values. In a binomial distribution, the response Y is binary, and this can only take two values, 0 and 1.

$$Y_i = \begin{cases} 1\ if\ the\ ownership\ type\ is\ a\ SHF \\ 0\ \ \ if\ the\ owership\ type\ is\ a\ NGO \end{cases}$$

(Rodrígues, 2007). The probit method predicts the probability that a certain event is observed, that it falls under a certain category of Y. An assumption is that the dependent variable follows a normal distribution (Gallani, Krishnan & Wooldridge, 2015).

The cumulative normal distribution gives rise to the probit model. The function for the cumulative distribution for a standard normally distributed random variable is

$$F(z_i) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{1}{2}(\frac{z_i^2}{\sigma})}$$

This function transforms the regression model so that the fitted values will be bounded between the 0 and 1 interval. The probit model is non-linear and is therefore more difficult to interpret than a linear probability model. The form of a probit function could be $P_i = F(x_{2i})$, where F represent the non-linear cumulative normal function (Brooks, 2008).

A generic probit model can be written as:

$$Y_i^* = x_i^T \beta + u_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \cdots + \beta_k X_{ik} + u_i$$

Where:

Y_i^* is a continuous real-valued index variable for observation i that is unobservable or latent

X_{ik} are regressor values for observation i

β_k are regression coefficients

u_i is a random error term for observation i

We can present the observable outcomes of the binary choice problem by a binary indicator variable Y_i, and this is related to the unobserved dependent variable Y_i^*. This can be written as:

$$Y_i = 1 \; if \; Y_i^* > 0$$
$$Y_i = 0 \; if \; Y_i^* \leq 0$$

Y_i is the random indicator variable that represents the observed realization of a binomial process. The probabilities are:

$$\Pr(Y_i = 1) = \Pr(Y_i^* > 0) = \Pr(x_i^T \beta + u_i > 0)$$
$$\Pr(Y_i = 0) = \Pr(Y_i^* \leq 0) = \Pr(x_i^T \beta + u_i \leq 0)$$

These binomial probabilities are represented in terms of the c.d.f. (cumulative distribution function) for the random variable u_i:

$$\Pr(Y_i = 1) = \Pr(Y_i^* > 0) = \Phi(x_i^T \beta)$$
$$\Pr(Y_i = 0) = \Pr(Y_i^* \leq 0) = 1 - \Phi(x_i^T \beta)$$

Where $\Phi(x_i^T \beta)$ is the c.d.f. for the standard normal distribution (Abbott, 2009).

5.5 Assumptions Regarding the Regressions

Most of the variables have percentage or are dummies, and this means that they take values between 0 and 1. Since most of the variables take a value that is bounded between 0 and 1, there will not be any outliers that we need to be concerned about. There are two variables with USD as a measure; these are average loan size and total assets. For these I generate new variables with the log, and by looking at the dataset this looks okay without any values that are really high. We therefore don't need to be concerned about any outliers here either.

It is important to have some variance in the dataset. The results are true observations, so all the results will have a meaning in the analysis and potentially outliers will therefore not bias the result. Only if they do not represent true observations (e.g. data error), outliers could bias the results.

Skewness and kurtosis

For the variables average loan size and total assets, we can look at the skewness and kurtosis, to see if they are approximately normal distributed. I take the log of these two variables.
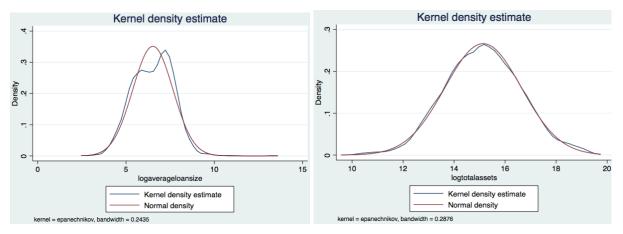
When there is an asymmetry in the distribution, the distribution will deviate in one of the directions, and the distribution is then skewed. There is a positive skew if the value is larger than zero. Then a high concentration of the values will be at the left side of the mean and more extreme values on the right side of the mean. With a negative skew, the value is less than zero with a high concentration to the right of the mean, and extreme values to the left of the mean. If there is no skew, and thus a normal distribution, the skewness will be equal to zero (Acock, 2012).

Kurtosis measures how thick the tails in a distribution are, the peakedness and shape. When there is a normal distribution, the kurtosis will be equal to three (in Stata). With a kurtosis value of less than three, the tails are too thick and hence the peak is too flat. If the kurtosis value is higher than three, the tails are too thin, and hence the distribution is too peaked (Acock, 2012).

	Mean	Skewness	Kurtosis
Log average loan size	6.5211	0.1216	3.6226
Log total assets	15.1402	0.0094	3.0153

Table 5.1: Skewness and kurtosis for average loan size and total assets

From table 5.1 above, we can see that for the variables average loan size and total assets, there is almost no skew and kurtosis. The little positive skewness means that there is a little higher concentration to the left of the mean and a little more of the extreme values to the right of the mean. The small positive kurtosis means that the distribution is a little more peaked and the tails are thinner than a normal distribution. We can easier look at this in a graph. The graphs 5.1 and 5.2 indicate that the two variables are approximately normally distributed.

Figure 5.1 and 5.2: Plots with a normal density line and a kernel density line for the variables average loan size and total assets

Errors

Two types of error can be made regarding the hypothesis. Type 1 errors are when we reject H_0 although it is true. This is termed by the level of significance. Type 2 errors are when we accept H_0 although it is false. This is not given by the level of significance, and is normally unknown.

$$\Pr(type\ I\ error) = Pr[reject\ H_0 | H_0\ is\ true]$$
$$\Pr(type\ II\ error) = Pr[accept\ H_0 | H_0\ is\ false]$$

(Thomas, 2005).

6 Data Analysis and Findings

In this part of the thesis, I will perform an unpaired sample t-test and a probit analysis to test for the difference between the two types of ownerships on social performance. I will analyze the results to see if there is a statistical significant difference. The two types of ownership are NGOs and SHFs, where SHFs consists of Banks and NBFIs. Then, as a robustness check to make the results more valid, I will perform a new probit test where the NBFIs are excluded from the analysis. I then compare the three tests for differences. Lastly, I see if there are some correlations between old and new variables.

6.1 Regression Results Using T-test

In this part, the results from the unpaired sample t-test are presented. I am going to deicide if I can reject or if I fail to reject the six null hypotheses presented in section 3.6. An independent t-test was run for each of the six dependent variables to determine if the means of the two groups (NGOs and SHFs) are statistically different from each other. We can then see if there is a difference between the types of ownership on the six social performances in MFIs.

When I perform the t-tests, I use three different significance levels of 1%, 5% and 10%. They are denoted by *** (1%), ** (5%) and * (10%). It is then possible to see at which significance level each variable are statistically significant, or if they are not significant at all. The group means are statistically different when the p-value is less than 1, 5 or 10 percent.

	Mean NGO (0)	Mean SHF (1)	Std.error NGO	Std.error SHF	t	p	Sig.
% Female clients	0.755	0.590	0.0130	0.0187	7.467	0.000	***
% Rural clients	0.488	0.405	0.0293	0.0378	1.746	0.082	*
Average loan size	937.5	1357.5	43.91	103.26	-4.204	0.000	***
Transparency	0.619	0.667	0.0533	0.0559	-0.615	0.540	-
Clients ret. rate	0.687	0.635	0.0174	0.0254	1.764	0.080	*
Staff turnover	0.211	0.213	0.0138	0.0151	-0.227	0.821	-

Table 6.1: Results from the t-tests between NGOs and SHFs, with significance levels

From table 6.1 we see that the group means for percentage of female clients and average loan

size is significantly different at a 1% significance level. The results show that NGOs have a statistical significantly higher percentage of female clients than SHFs, and that NGOs have a statistical significantly lower rate of average loan size than SHFs. This means that we can reject the null hypothesis that the group means between the two ownership types are equal for the variables percentage of female clients and average loan size, at a 1% significance level.

Percentage of rural clients and clients retention rate have group means that are significantly different at a 10% significance level. This means that NGOs have a statistically significant higher percentage of rural clients and a statistically significant higher clients retention rate than SHFs, even though the differences are not that large. This means that we can reject the null hypothesis that the group means between the two ownership types are equal for the variables percentage of rural clients and clients' retention rate, at a 10% significance level.

Transparency and staff turnover are not significant at any of the three significance levels. The difference between the two groups means are therefore not statistically significant. This means that we cannot reject the null hypothesis that the group means between the two ownership types are equal for the variables transparency and staff turnover.

6. 2 Effect Size

Effect size is used to assess the practical significance of a result. By computing measures of effect size, we are able to describe the magnitude of the effect of ownership. We can use Cohen`s d, which is the most common type, to find the effect size. The formula is:

$$Cohen's\ d = \frac{\bar{X}_1 - \bar{X}_2}{s^*}$$

Where

$$s^* = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

(stata.com).

A t-test´s effect size specify whether or not the difference between two groups´ average is large enough to have practical meaning, and whether or not it is statistically significant. Independent of whether the difference is statistically significant or not, it gives a concrete sense of whether a difference between two groups is meaningfully large (statwing.com). The

effect size allows measuring the size of mean differences to see how different they are. If the d-value is 0.2, there is a small effect, if d is 0.5 there is a medium effect, and if the d is 0.8 there is a large effect. With a d above 0.8, the means are likely to be very different (statisticslectures.com).

The results from the Cohen`s d effect results can be shown in a table:

	Cohen´s d-value	95% confidence interval	Effect results
% Female clients	0.7145	0.5210 – 0.9074	Quite large effect
% Rural clients	0.2601	–0.0333 – 0.5527	Small effect
Average loan size	-0.2749	–0.4036 – –0.1461	Small effect
Transparency	-0.0988	–0.4136 – 0.2164	Very small effect
Client retention rate	0.2955	–0.0350 – 0.6251	Small effect
Staff turnover	-0.0269	–0.2595 – 0.2058	Very small effect

Table 6.2: The Cohen's d-values with effect results

6.3 Regression Results Using Probit Analysis

This section shows the results form the probit regression. Here we can see if the probit regression gives different results than the t-test when we add some control variables to the regressions. For some of the variables there are a lot of missing values, therefore I generate new variables that indicate missing values for those variables. This is to get more observations in the analysis.

With a probit regression, I will check for the probability of being one of the two possible outcomes of ownership. Here the dependent variable is ownership, and is based on whether the type of ownership is SHFs and then takes value 1 or if the ownership is a NGO and takes value 0. Ownership is the binary response variable predicted by the model. The independent variables will be the six social performance variables. I run the analysis for these six social performance variables separately. I also add six control variables, three regarding the firm and three regarding the financial performance.

We use the probit probability model to estimate the direction and significance of different variables on type of ownership. If the coefficients are positive, an increase in the predictor

leads to an increase in the predicted probability. With a negative coefficient, an increase in the predictor leads to a decrease in the predicted probability. The coefficient will show if the variables have a positive or a negative effect on type of ownership, but since the model is not linearly, it does not say how much the effect is. A positive effect means that there is a higher chance of ownership being a SHF than a NGO. With a negative effect there is a lower chance of ownership being a SHF than a NGO. A given alpha level, P>|z|, determines whether or not the null hypothesis can be rejected. If it is less than alpha, the null hypothesis can be rejected and the parameter estimate is considered statistically significant at that alpha level. As with the t-test, I use three different significance levels, 1% (***), 5% (**) and 10% (*), to see at which significance level each variable are statistically significant, or are not significant at all.

Model 1

First I run the regression with percentage of female clients as the independent variable and six other variables as control variables. Number of observations are 789, and this is the number of observations in the dataset where all of the response and predictor variables are non-missing.

Table 6.3 below, shows that the coefficient, percentage of female clients, is negative. This means that there is a negative association between being a SHF and having female clients. This is statistically different from zero at a 1% level of confidence, which means that we can reject the null hypothesis that coefficient for percentage of female clients are zero. The odds of being a SHF are therefore lower if there are a higher percentage of female clients.

	Coeff.	Std.err.	(z)	P>|z|	Sign.
% Female clients	-2.325	0.438	-5.31	0.000	***
Total assets	0.132	0.047	2.79	0.005	***
Age	-0.026	0.008	-3.26	0.001	***
Region					
ECS	-0.691	0.192	-3.59	0.000	***
LCN	-1.570	0.185	-8.48	0.000	***
MEA	-1.400	0.275	-5.09	0.000	***
SAS	-1.156	0.261	-4.43	0.010	***
SSF	-0.199	0.102	-0.90	0.369	-
OSS	-1.004	0.233	-4.32	0.000	***
ROA	2.037	0.781	2.61	0.009	***
PAR30	-0.493	0.776	-0.63	0.526	-

Table 6.3: Regression result with percentage of female clients

Model 2

The next regression is with percentage of rural clients as the independent variable and the same six control variables as in the first model. Number of observations is 789.

Table 6.4 below, shows that the social performance coefficient, percentage of rural clients, is negative. Holding all other characteristics constant, percentage of rural clients is lower among SHFs than among NGOs, this although the p-value is above conventional significance level. Since the coefficient is not significant at any of the three levels, we cannot reject the null hypothesis that the coefficient for percentage of rural clients is zero. This means that we cannot reject that the odds off being a SHF are not affected by the percentage of rural clients.

	Coeff.	Std.err.	(z)	P>|z|	Sign.
% Rural clients	-0.778	0.620	-1.25	0.210	-
Total assets	0.170	0.047	3.64	0.000	***
Age	-0.027	0.008	-3.41	0.001	***
Region					
ECS	-0.470	0.185	-2.54	0.011	**
LCN	-1.479	0.182	-8.11	0.000	***
MEA	-1.462	0.277	-5.27	0.000	***
SAS	-1.162	0.253	-4.60	0.000	***
SSF	-0.089	0.217	-0.41	0.682	-
OSS	-0.968	0.227	-4.26	0.000	***
ROA	2.176	0.760	2.86	0.004	***
PAR30	-0.087	0.764	-0.11	0.909	-

Table 6.4: Regression result with percentage of rural clients

Model 3

Here, I run the regression with average loan size as the independent variable. I generate a new variable with the log of average loan size. Number of observations are 621.

Table 6.5 shows that the estimated coefficient for average loan size is positive, this means that there is a positive association between being a SHF and having a higher average loan size. This is statistically different from zero at a 1% level of confidence, which means we can reject the null hypothesis that coefficient for average loan size is zero. This means that the higher average loan size, the higher chance that type of ownership is a SHF.

	Coeff.	Std.err.	(z)	P>|z|	Sign.
Average loan size	0.4182	0.0733	5.71	0.000	***
Total assets	0.0075	0.0561	0.13	0.893	-
Age	-0.0424	0.0110	-3.86	0.000	***
Region					
ECS	-1.4289	0.2619	-5.46	0.000	***
LCN	-2.0507	0.2386	-8.60	0.000	***
MEA	-1.7562	0.3194	-5.50	0.000	***
SAS	-1.4523	0.4333	-3.35	0.001	***
SSF	-0.5783	0.2783	-2.08	0.038	**
OSS	-1.1756	0.2583	-4.55	0.000	***
ROA	2.2376	0.8897	2.52	0.017	**
PAR30	-0.0335	0.8330	-0.04	0.968	-

Table 6.5: Regression result with the log of average loan size

Model 4

I run the regression with transparency as the independent variable, and six variables as control variables. Number of observations are 789.

Table 6.6 shows that the estimated coefficient for transparency is positive. The odds of being a SHF are then higher if there is transparency in the institution. This is statistically different from zero at a 5% level of confidence, which means that we can reject the null hypothesis that coefficient for transparency is zero. The odds of being a SHF are therefore higher if there is transparency.

	Coeff.	Std.err.	(z)	P>|z|	Sign.
Transparency	0.938	0.473	1.98	0.048	**
Total assets	0.166	0.047	3.56	0.000	***
Age	-0.029	0.008	-3.59	0.000	***
Region					
ECS	-0.474	0.186	-2.55	0.011	**
LCN	-1.454	0.183	-7.96	0.000	***
MEA	-1.438	0.276	-5.21	0.000	***
SAS	-1.144	0.253	-4.51	0.000	***
SSF	-0.079	0.217	-0.36	0.716	-
OSS	-0.955	0.226	-4.23	0.000	***
ROA	2.192	0.755	2.90	0.004	***
PAR30	-0.079	0.764	-0.10	0.917	-

Table 6.6: Regression result with transparency

Model 5

The next regression is with clients retention rate as the independent variable and the same six variables as control variables. Number of observations is 789.

We see, in table 6.7, that the social performance coefficient, clients retention rate, is not significant at all. This means that we cannot reject the null hypothesis that the coefficient for clients` retention rate is zero, at any of the significance levels. Holding other characteristics constant, clients retention rate is lower among SHFs than among NGOs, this although the p-value is above conventional significance level. Thus, we cannot reject that the odds off being a SHF are not affected by the clients' retention rate.

	Coeff.	Std.err.	(z)	P>|z|	Sign.
Clients ret. rate	-0.014	0.850	-0.02	0.987	-
Total assets	0.141	0.048	2.96	0.003	***
Age	-0.028	0.008	-3.50	0.000	***
Region					
ECS	-0.458	0.186	-2.47	0.014	**
LCN	-1.480	0.185	-8.00	0.000	***
MEA	-1.369	0.277	-4.93	0.000	***
SAS	-1.105	0.252	-4.38	0.000	***
SSF	-0.056	0.218	-0.26	0.796	-
OSS	-0.922	0.228	-4.04	0.000	***
ROA	2.125	0.765	2.80	0.005	***
PAR30	0.001	0.765	0.00	0.999	-

Table 6.7: Regression result with client retention rate

Model 6

The last regression is with staff turnover as the independent variable and still the same six variables as control variables. Number of observations is 789.

Table 6.8 shows that the coefficient, staff turnover, is positive. Holding other characteristics constant, staff turnover is higher among SHFs than among NGOs, this although the p-value is above conventional significance level. Since the coefficient is not significant at any of the three levels, we cannot reject the null hypothesis that the coefficient for staff turnover is zero. Thus, we cannot reject that the odds off being a SHF are not affected by the staff turnover.

	Coeff.	Std.err.	(z)	P>|z|	Sign.
Staff turnover	0.818	0.752	1.09	0.276	-
Total assets	0.127	0.048	2.65	0.008	***
Age	-0.031	0.008	-3.87	0.000	***
Region					
ECS	-0.425	0.187	-2.27	0.023	**
LCN	-1.442	0.184	-7.86	0.000	***
MEA	-1.395	0.279	-4.99	0.000	***
SAS	-1.060	0.255	-4.16	0.000	***
SSF	-0.066	0.218	-0.30	0.763	-
OSS	-0.892	0.229	-3.89	0.000	***
ROA	2.258	0.774	2.92	0.004	***
PAR30	0.059	0.768	0.08	0.939	-

Table 6.8: Regression result with staff turnover

For the control variables in the six different tables, we see that SSF and PAR30 in table 1-6 do not have a significant impact at any of the three significance levels. ECS have a significant negative effect at a 5% level in table 2, 4, 5 and 6, and at a 1% level in table 1 and 3. ROA has a significant positive effect at a 1% level in table 1, 2, 4, 5 and 6, and at a 5% level in table 3. PAR30 is significant at a 1% level in all tables, with a positive effect in table 5 and 6, and a negative effect in the rest of the tables. Total assets have a positive significant effect at a 1% level in all the tables. For the rest of the variables they all have a negative significant effect at a 1% level. As we can see, most of the control variables have a negative effect, which means that when we take the control variables into account, most of them will result in a lower chance of being a SHF than a NGO.

6.4 Robustness Regression

Since NBFIs have some similarities to NGOs as well, we can exclude NBFIs and only look at Banks and NGOs in the robustness test. I therefore run the probit regression again, to see if the results will vary when NBFIs are excluded from the regression. After running the new probit regressions, I found that there are many similarities between the regressions with and without NBFIs, but also a few differences.

The similarities is that the variables percentage of female clients, percentage of rural clients, average loans size, and staff turnover all has the same direction and significance level as before; percentage of female clients still has a negative association and a 1% significance level, percentage of rural clients still has a negative association and is not significant at any

level, average loan size still has a 1% significance level and a positive direction, and staff turnover still has a negative association and is not significant at any level.

The differences are that transparency has a positive association in both regressions, however it goes from being significant to not significant. Clients retention rate are still not significant, however the direction changes from negative to positive.

6.5 Summary of the Tests

Table 6.9 below, shows the significance levels for the different tests I have done. It also shows the direction of the coefficients. The symbol "+" tells that it has a positive effect of being a SHF, while "−" tells that there is a negative effect of being a SHF. Number of symbols tells how significant the coefficients are, and 0 implies that the coefficients are not significant. From table 6.9, we see that only the variables percentage of female clients and average loan size are significant in all three tests. The rest of the variables are not significant in two of three tests.

	T-test	Probit test	Robustness test
% Female clients	− − −	− − −	− − −
% Rural clients	−	0	0
Average loan size	+ + +	+ + +	+ + +
Transparency	0	+ +	0
Clients retention rate	−	0	0
Staff turnover	0	0	0

Table 6.9: A summary of significance levels from the three different tests

Institutional theory can help explain why NGOs not always are more social than SHFs. Since the MFIs are operating in the same fields, they may become more alike, even though the types of ownership are different. Isomorphism may force one MFI to look more alike other MFIs who have the same set of environmental conditions. MFIs may have to be controlled under the same regulations or policies or they may try to copy other MFIs that do well, regardless of their ownership type. This can result in the dispersion into whether there are NGOs or SHFs who perform best in various socials Indicators.

Mersland et al. have mentioned that since there are many standardizations initiatives, the MFIs in the future may be more similar (Mersland, D'Espallier & Supphellen, 2012). An argument is that no single format for microfinance is likely to exist that simultaneously will satisfy all the different segments of the poor. There should be a wide array of financial choices. A plurality of microfinance programs needs to satisfy different developmental needs (Bhatt & Tang, 2001).

6.6 Correlations Between old and new Variables

We could also look at the correlation between the three old variables against the three new variables, to see if there are some correlations between them. The empirical correlation coefficient is defined as:

$$r_{xy} = \frac{\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2}\sqrt{\sum_{i=1}^{n}(y_i - \bar{y})^2}}$$

(Blæsild & Granfeldt, 2002).

The correlation makes us judge the strength of any linear association between two variables. The correlation coefficient can only take a value within a definite range of −1 and +1. If there is an exact positive correlation between the variables, the correlation value $\rho = +1$. If there is an exact negative correlation between the variables, the correlation value $\rho = -1$. If there is no correlation between the variables, the correlation value $\rho = 0$. The closer the correlation number is to −1 or +1, the stronger is the correlation (Thomas, 2005).

We would expect that MFIs with high percentage of female clients and high percentage of rural clients also have a higher transparency, a higher clients retention rate and a lower staff turnover. An MFI with high average loan size would we expect to have a lower transparency, a lower clients retention rate and a higher staff turnover. Table 6.10 shows the correlation results, where the signs +/− in brackets are the signs we expect to get.

	Transparency	Clients retention rate	Staff turnover
% Female clients	− 0.1281 (+)	− 0.0961 (+)	+ 0.3238 (−)
% Rural clients	− 0.1695 (+)	− 0.1063 (+)	− 0.2932 (−)
Average loan size	+ 0.1246 (−)	− 0.2859 (−)	− 0.0865 (+)

Table 6.10: Correlations between old and new variables

As we can see form table 6.10 above, percentage of female clients has a small negative correlation with transparency and clients retention rate, and a positive correlation with staff turnover. This means that a higher percentage of female clients would result in a lower transparency, a lower clients retention rate, and a higher staff turnover. This is the opposite of what we would expect.

For percentage of rural clients, there is a small negative correlation with transparency, clients retention rate, and staff turnover. This means that a higher percentage of rural clients would result in a lower transparency, a lower clients retention rate, and a lower staff turnover. The correlation between percentage of rural clients and staff turnover shows what we would expect, the other two shows the opposite of what we would expect.

The average loan size variable shows a small positive correlation with transparency, and a small negative correlation with clients' retention rate and staff turnover. This means that with a higher average loan size it would result in a higher transparency, a lower clients retention rate, and a lower staff turnover. The correlation between average loan size and clients retention rate is as expected, but the two others shows the opposite of what we would expect.

We can therefore conclude that some correlations are as expected and some are not. The reason why it diverges may be because social performance in MFIs is a very broad and divergent concept. There are so many ways in measuring social performance and I have only looked at six of them. Therefore it will almost be a coincidence if the correlations would be as expected or not. Furthermore, the correlations are not strong between any of the variables. So even if they show correlations as expected or not, small changes could change the correlation from being positive to negative, or the opposite. We could therefore not say that the correlations are significant.

7 Conclusion

In this thesis, I have examined the effect of two ownership types on six different social performance measures in microfinance institutions. MFIs are well known financial institutions established for helping unbankable people. Type of ownership differs in the MFIs, but I have focused on NGOs and SHFs in this research. MFIs have a dual goal in achieving both financial sustainability and outreach to the poor. Social performance has in recent years become a topical issue in discussions. More than ever before, there is a broad agreement that measuring social performance is important for MFIs to be able to achieve their social mission. Social performance indicators will also help MFIs measure their social results and to report to their external stakeholders.

I performed three different tests. First a t-test, then a probit regression with control variables, and finally I performed a robustness check that where excluding NBFIs. Only the variable percentage of female clients and average loan size is significant in all three tests, and this at a 1% significance level. This could indicate that NGOs, compared to SHFs, have a higher percentage of female clients and a lower average loan size. Since the rest of the variables are not significant in at least two of three tests, it is not possible to say that there is a significant difference between NGOs and SHFs for these variables. NGOs could therefore have a higher social performance on some variables, but it is not said that they have better social performance for all variables or in general. Institutional theory was one theory that can help explaining why NGOs not always are more social than SHFs. Isomorphism may force MFIs to look more similar to each other. In addition, as mentioned earlier in section 3.5, a mixture of different ownership types could be what is best for the customers in MFIs.

The results indicate that there are not clear differences between NGOs and SHFs. Even though NGOs had two social variables that indicate that they have a higher social performance than SHFs, this was not the case for all the variables. Since the numbers of social variables used are a very small percentage of number of social variables that exists, it is difficult to come with a general conclusion. To get a general conclusion if there is a difference between NGOs and SHFs in relation to social performance, many more variables should be examined. There are a lot of variables that could be tested and taken into account when analyzing social performance. Other social performance variables could have shown other results. I only looked at six variables, three that are often used to measure social performance

and three that have not been used that much. There is always someone who searches after new and better measurers. The three "new" variables I used are some examples of measures that could be used.

The data do have some selection bias since it contains data only from the rated MFIs that willingly have agreed to let the reports from the rating agencies become publicly available. In addition, there are some of the MFIs that do not have all the values we need. All the missing values in the dataset are something that could be a problem when researching. If we had all the values from all MFIs, maybe the results would have been different. The percentage of missing values may influence the significance of result from the regression.

When measuring social performance, there are a number of other variables that could be used. It is possible to extend in many different directions. For example, it could be interesting to concentrate on only new variables, and look at several more variables to see if some are more suited and easier for all MFIs to use.

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APPENDIX

A.1 Reflection paper

Brief summary of the main theme

In my master thesis I have studied how different types of ownership affect different social performance indicators in microfinance institutions. Microfinance is the provision of financial services to "unbankable" people. I looked at two different types of ownership, nongovernmental organizations (NGOs) and shareholder firms (SHFs). Where shareholder firms consists of non-bank financial institutions and banks. Then I looked at how social performance indicators changed after these two types of ownership, if one type had better social performances than the other. The six social performance indicators I looked at were percentage of female clients, percentage of rural clients, average loan size, transparency, clients retention rate, and staff turnover.

The results from the study showed that only the variable percentage of female clients and average loan size was significant in all three tests, at a 1% significance level. This could indicate that NGOs has a higher percentage of female clients and a lower average loan size than SHFs. For the rest of the variables there was not possible to say that there was a significant difference between NGOs and SHFs, this because they are not significant in at least two of the three tests. I also looked at if there where some correlation between old and new variables. I found that some correlations are as expected and some are not. The reason why it diverges may be because social performance in MFIs is a very broad and divergent concept.

As mentioned in the thesis, there are a lot of variables that could have been tested and taken into account when analyzing social performance. In addition, there where many missing values in the dataset that could be a problem when researching and getting valid results.

Internationalization

The unit of analysis in this thesis is ownership types in microfinance institutions. There is a large growth in the microfinance industry, and more clients every year. As the microfinance industry grow, there also is a growth in the scope of organizational forms in the industry, which has become broader. The most dominating organizational forms are NGOs, SHFs and COOPs, there also exists other types. They all have different structures and incentives. Even

though the main goal in the microfinance industry is to reduce poverty, there have over the years been many that try to earn profit in the industry.

Since there are many standardization initiatives that try to find the best ways to measure both financial and social performance. There may be that MFIs become more similar in the future. When there are more companies that occur in the industry, there will be more competition. With a higher competition in the microfinance industry, the customers will have more to choose from. Maybe this could result in cheaper and better product for the clients in the long run, because MFIs may have to compete with each other to get the customers. Then the business could be more cost effective.

Microfinance as an idea has existed for several decades, even before the ideology of development where thought off. The United Nations declared year 2005 as the year of microcredit. Microcredit became well known in 2006 when Mohammed Yunus and the Grameen Bank (founded in 1983) won the Nobel Peace prize. This made a change in the perception in how the world sees microcredit. It was now seen as poor people who were entrepreneurs, who have needed skills and expertise, but who need financial resources to initiate their own business.

(Source: http://changewebelievein.blogspot.no/2011/06/micro-finance-reflective-essay.html)

More and more people around the world know about microfinance, and many wants to help. However, as mentioned in the Brennpunkt documentary 30th of November 2010, after 35 years of microfinance, we have no evidence that microcredit reduce poverty. There is an increasing evidence of stories about families with problems. Families who get too big debt, families that get ruined when they get more capital. Instead there should be developed a model that gives people the means to income-building activities to get them out of poverty, instead of giving them debt.

Innovation

There are several different segments of the poor. Not everyone needs the same kind of product and services, and not everyone is equally poor. There should be a wide array of financial services that the poor could choose from. A variety of microfinance programs need to satisfy different developmental needs. Maybe MFIs could specialize against different types of segments, to optimize these. Having a mixture of different types of ownership that

specialize on different segments, is perhaps better than having only one type of ownership.

There is an expectation that clients who are getting services from the different microfinance institutions should start their own business to be able to earn money and then repay their loans. However, Thomas Dichter, an international development consultant, says that most people in the world are not entrepreneurs. All could not be Bill Gates, so why do we expect that the poor are any different? Most people want a stable economy and jobs, the same with the poor. They want security, not everyone will stand in the street and sell rice beside 20 others who also sells rice, and earn only small change.
(Source: Brennpunkt documentary 30th of November 2010).

One idea is that in addition to provide poor people with financial services, there should also be more focus in offering assistance to get education and to get out in the workplace. Then, for they who want to, could get a more "normal" job and in that way be able to earn money for a living.

Responsibility

Microfinance institutions often have a dual goal, which is to both achieve financial sustainability and outreach to the poor. For the last years, there has been discussion of what type of ownership benefits the poor. While some institutions try to reduce poverty, some institutions try to make as high profit as possible. This could be an ethical challenge since getting a higher profit may result in lower outreach to the poor.

The risk needs to be well managed so that investors, lenders and borrowers have confidence in the organization. If the risk is poorly managed, the institutions may not meet its objectives. The management can prepare for and try to minimize disasters and conflicts. By having a careful screening, monitoring and evaluation, a strong credit culture, and accurate reporting, they could have a successful risk management. For microfinance institutions, that mostly have both financial and social objectives, should have an informed risk calculation. The institution could then be able to assess new market opportunities and ensure that operations that already exist are constantly improved. They could also deliver competitive and effective goods and services to its customers.

(Source: http://www.microfinancegateway.org/topics/risk-management)

A competitive advantage for microfinance institutions is that there is not a market for financial services from before in rural areas. The size of the market for microfinance institutions is therefore quite large market since the market is all that don't have access to typical banking services. This is a market where they don't have an access to financial services. This is therefore a blue ocean opportunity for MFIs. Regular banks don't provide financial services to the poor, therefore there is not that much competition for MFIs that wants to start and provide financial services in rural areas for poor people. A competitive disadvantage for MFIs is that they charge higher average interest rates on their loans than regular banks. MFIs obtain almost all their revenues from lending.

(Source:http://www.ifc.org/wps/wcm/connect/6939b300459126418ac1bb9916182e35/MFIs+Serving+Very+Small+to+Small+Enterprises+in+LAC_Final_Latest.pdf?MOD=AJPERES)

Many customers in the microfinance industry cannot read and write. This result in many clients who signs on papers without knowing what it says. Many are desperate to get loans, and therefore do what they must to get it. The different institutions therefore have a responsibility over the clients. They must make sure that customers know what they are signing and that the institutions are not trying to trick them. More transparency in the organizations could be a start in making organizations responsible to customers.