Determinants of Social Performance of Microfinance Institutions in Pakistan

Submitted By

Hina Yunus

11/MBA/PIDE/2012

Supervised By

Dr. Attiya Yasmin Javid

Department of Business Studies

PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS

FINAL APPROVAL

This Thesis Title

Determinants of Social Performance of Microfinance Institutions in Pakistan

By
Hina Yunus

Has been approved
For the Pakistan Institute of Development Economics, Islamabad

External Examiner: ______________________________________
Dr. Abdul Rashid
Associate Professor
International Islamic University, Islamabad

Supervisors: ____
Dr. Attiya Yasmin Javid
Head, Department of Economics
PIDE, Islamabad

Head of Department: _____________________________________
Dr. Usman Mustafa
Head, Department of Business Studies
PIDE, Islamabad

CERTIFICATE

It is certify that Miss Hina Yunus has carried out all the work related to this thesis under my supervision at the department of management sciences,

Pakistan Institute of Development Economics Islamabad

Supervisor:

Dr. Attiya Yasmin Javid
Head, Department of Economics
PIDE, Islamabad

Submitted Through:

Dr. Usman Mustafa
Head, Department of Business Studies
PIDE, Islamabad

ABSTRACT

The determinants of social performance of microfinance institutions in Pakistan, Average Loan Size, Number of Active Borrowers, and Operational Self-sufficiency of twenty five MFI's are estimated for the period; 2005 to 2012. The Pooled OLS estimation technique is applied. The Average Loan Size, Number of Active Borrowers, and Operational Self-sufficiency are used for the proxy of Social Performance that captures the depth of outreach breadth of outreach and operational self-sufficiency respectively. The explanatory variables which are used as determinants are; MFI Age, MFI Size, Portfolio at Risk > 30 days, Average Cost, and Average Profit are used for the determinants of Social Performance. The dummy variable for the Non-Profit Organization is also used as explanatory variable. Pooled OLS Technique is used in research. After using the above indicators, variables, and techniques the result of this research directs that the analyzing breadth of outreach that when MFI are profitable, large size, mature, and non-profit organizations they serve more borrowers. The findings of depth of outreach indicates that when firm choses to give large size loan to few number of poor then average cost reduces and MFI generate more profit. The non-profit MFIs do not choose to give large size loans. The conclusion that can be drawn from these results that there is tradeoff between number of active borrowers and average loan size meaning that serving more poor leads to giving small size loans. The results of operational self-sufficiency indicates that with more profit and less operating cost MFIs can become operationally self-sufficient. This ensure that they become operational in the long run and operational self-sufficiency ensures expected future outreach.

***Keywords**: Social Performance, Number of Active Borrowers, Average Loan Size, Operational Self-sufficiency, Portfolio at Risk, Non-profit Organizations.*

TABLE OF CONTENTS

List of Tables

Chapter # 1

INTRODUCTION

1.1 Background

Microfinance Institutions (MFI's) concept was basically started from the communities. Microfinance Institutions leads to provision of credit, some financial products like savings, and insurance to those people, who are poor, economically disadvantaged, and also ignored by commercial banks. These people are facilitated by the easy and stable access to investments, savings, assets, deposits, loans, salaries, pensions. Without any collateral or securities these poor people are facilitated by providing them stable access to credit, insurance, savings, and fund transfers.

There are three operating Microfinance models in Pakistan:

1. MFI's

2. MFB's (Microfinance Banks)

3. `RSP's (Rural Support Programs)

In the 1970's in Bangladesh (Grameen Bank), microfinance was very successful in most of the developing countries, all over the world. Microfinance Institutions are basically for those areas to which the access of other financial institutions are not possible. It is seen that the higher profit leads to the less outreach the poor people. There is an argument that more commercialized MFIs are most capable for helping the poorest clients, equally more profit enhance their efficiency and willingness to aid poorest (Rhyne 1998, and Christen and Drake 2002).

The new dimension which has been introduced in microfinance is tradeoff between outreach and efficiency (Rhyne 1998). Some researchers have discovered that the commercialized MFI's are competent to reach their goals, to reach the poorest people (Rhyne 1998, and Christen and Drake 2002). MFI's are not having the purpose of profit earning. There is an accord between outreach and profitability (Paxton 2000). Both of them are affecting each other simultaneously. Without the self-sufficiency, the aim to serve the poor clients cannot be fulfilled. When the self-sufficiency is considered, the purpose to reach the poorest clients will be fulfilled. Conclusion can be taken as there is a higher transaction cost of smaller size loans, and on the other side, there is a low transaction cost of large size loans, which impulse MFI's to move towards larger loan size to less poor customers.

The generally called "Microfinance Revolution" has conduct to an excessive growth of the supply of micro-credit. Dominant reason of the poverty is lack of credit availability to poor, in developing countries like Pakistan. Two dominant reasons for the non-availability of loans to poor people are: Failure of poor customers to give acceptable collateral and banks find it the more unreasonable to screen the poor clients, i.e. problem of conflicting selection and to guide the repayment by the poor, i.e. problem of moral hazard. Now everywhere in the world, most of the people are able to borrow some money for starting a business, and become richer. In the past 40 years, the growth and successfulness of microfinance market has a very positive development. It has also a great impacts on the structure of microfinance market. Some of the recent studies has been proved that MFI's are not meeting their objectives. On the other side, MFI's which were basically established as Non-Governmental Organizations (NGO's) performing on a "not for profit" basis changed their procedure as regulated banks and other profit earning financial institutions. On the other side, banks (profit earning) are very much interested in contributing microfinance facilities, as profits have become their motive.

As the microfinance industry is growing day by day, it has likewise confronted the blame that it is deviating from the operation of "serving the poor". As per microfinance and the Grameen Bank's founder Muhammad Yunus has given his view that, "clients who have better financial position push out the poorer clients in any financing scheme".

In the survey by UN in 2002, it has been found that, most of the 20% of population of world is spending their lives in very low level of life, and the income is less than 1$ per day. To overcome with high level of poverty is to provide credit facilities to the poor. UN put a great effort on microfinance for achievement of millennium development goals, which objective is for halving the great poverty. The concept of solidarity group lending is making an important role for the development of microfinance sector. It encourages both the small scale business people and in addition credit giving institute. Collective support and peer pressure of all the group members inspire single member of group to focus on the best efforts for the loan repayment as inefficiency of repayment will mulct the chance for more loan. The payback rate of group loans is almost 98%, which is higher than individual loan repayment rate.

In the sector of microfinance, there is a lot of progress due to two factors. Firstly, the poor people have a very good opportunity for the repayment rates, especially for women, and secondly, it has been found from research that the poor people are prepared and capable to pay subsidized interest rate for survival and better performance of MFI’s. Moreover researches shows that most of the loans which are given to women by MFI’s that not only reinvest their earnings but also affect at the spending on their families Bhutta, N. (2011). It not only helps to the poor people for enhancement of their living standards but the community also get credit due to the sharing of knowledge and job creation Bryant, S. E. (2005).

During the last two decades, MFI have earned developing consideration on both national and international level, specifically after achieving the Nobel Award by Muhammad Yunus. Some of the dominant addition by Muhammad Yunus was the forming of Microfinance sector easy and more accessible. For this purpose, he made Microfinance facilities more accessible to those people who does not maintain their accounts in any bank. Terms and conditions were very easy for the non-bankable poor, and it was quite dissimilar as compare to the formal banking system (Khan 2010; Khan et al. 2009).

The performance of MFI’s cannot be measured easily. In fact, if we look around the financial sustainability of the MFI’s, it will give us only one feature of the MFI’s performance. As many of the MFI’s are considered as to serve the poor people, we should include some aspects of outreach in their performance. Thus, MFI’s performance can be described as multifaceted. In this research, those factors will be found which affect average loan size, number of active borrowers, and operational self-sufficiency as a measure of outreach.

One of the argument about MFI’s is that the credits which are given to the poor people can be helpful and sufficient for the promotion of sovereign and profitable economic projects, to increase the better opportunities for poor people, and to mitigate the poverty. Henceforth, MFIs, once set up and autonomous, should have the capacity to produce "win-win" outcomes, whereby both effectiveness and value are upgraded. Generally, after all, contingent upon some exogenous factors, similar to infrastructure or access to markets, microcredit must be subsidized to ensure the survival of the MFI (Pralahad, 2005).

Some other researchers have found an evidence against the above argument. Numerous MFIs seem to experience difficulty achieving self-sustainability at the budgetary level, even after the setup period. In this case, MFI's become more likened to subsidized credit which has a long record in creating countries, yet has regularly neglected to accomplish lasting positive results (Morduch, 2000).

Still, regardless of the possibility that MFI's don't achieve financial sustainability and come up short in this way to adjust to the "win-win" assumption, they can still be considered important on the off chance that they give credit facilities to poor households who might not have the capacity to discover budgetary resources otherwise. In this perspective, outreach has a social worth in itself, which might more than offset the cost associated with lasting financial subsidies required by the MFIs (Pralahad, 2005).

In simple words, MFI's has to face a double demanding challenge, they are not only bound to provide the financial services to the poor people(outreach), but also have to focus control over their costs to avoid bankruptcy(sustainability) . Both extensions must consequently be considered into account in order to assess their execution.

1.2 Rationale of the Study

The rationale of investigating the factor that influence the social performance is important because one of the main objectives of MFIs is reaching the poor to provide credit. The number of poor served is called breadth of outreach higher is number of borrowers means more poor are provided with loans. The average loan size captured the depth of outreach meaning that if MFIs are giving small size loans they provide loan to more poor. Self-sufficiency indicate that MFIs are meeting their expenses and they become sustainable and have the ability to serve the poor. The exploring the determinants of all three measures is helpful for MFIs to meet their objectives, for borrowers to know that they are served by these MFIs. This analysis is also benefit researchers, academicians and policy makers.

1.3 Problem Statement

The study focuses to investigate the factors that influence the social performance that is breadth of outreach, depth of outreach and self-sustainability that is core objective of MFIs.

1.4 Research Questions

What are the factors that affect outreach broadly?

What are the factors that affect depth of outreach?

What are the factors that affect operational self-sufficiency?

1.5 Objectives of the Study

The main objectives of this study are:

- To examine various factors that affect breadth of outreach measured by number of active borrowers
- To examine various factors that affect depth of outreach measured by average loan size.
- To examine the factors that affect the operational self-sufficiency as a measure of outreach.

1.6 Organization of the Study:

After the first chapter of introduction, the rest of the study is catalogued as follows. Chapter two provides overview of MFIs of Pakistan. Chapter three present literature review, and the methodology and data is discussed in chapter four. Chapter five presents estimation results and interpretation, and in the last chapter conclusions and policy implications are given.

Chapter # 2

LITERATURE REVIEW

The non-availability of loans to the poor is always concern of economist, international organizations, and policy makers. Since the successful experience by Dr.Yunus in Grameen Bank a large body of literature appears on the theoretical and empirical aspects of microfinance institutions. Both objectives outreach and sustainability of MFIS are extensively researched. However there is lack of serious work on MFIs' performance in Pakistan. This chapter reviews the relevant literature on the social performance of the microfinance institutions.

The writing accessible on MFI's over the globe can be comprehensively separated into two sorts. In the first place, talking about and assessing the significance of and the effect of smaller scale money related administrations on the destitution level of the customers of MFI's while another arrangement of studies tries to assess the social execution of these associations by utilizing distinctive benefit markers assembled into diverse classifications, for example, manageability pointers, portfolio quality pointers, productivity markers, resources and obligation pointers while the social execution is spoken to buy effort indicators. This study is worried with the second sort of writing. The survey of different related exploration studies is introduced in this segment.

A latest study by Ahmad (2009) has additionally broke down the proficiency and performance of MFI's in Pakistan by utilizing the information for the year 2003 and 2009 separately. For this investigation he additionally utilized non-parametric data envelopment analysis (DEA) approach. The variables utilized as a part of this paper were: complete resources, gross credit portfolio, number of work force and the quantity of dynamic borrowers. As indicated by DEA examination, three MFI's (FMFBL, Sungi, Taraqee) out of 12 MFI's were on the efficiency frontier in the year 2003 under consistent comes back to scale and four MFI's were productive variable comes back to scale suspicions. MFI's that were proficient under both constant and variable comes back to scale were NMFB, TF, POMFB, and RMFB in the year 2009. Also, four MFI's were effective under steady while nine were proficient under variable comes back to scale suspicion in 2009. The creator presumed that MFI ought to give money related administrations on economical premise.

Nghiem (2004) has likewise utilized the DEA philosophy for surveying the proficiency and adequacy of microfinance segment in Vietnam. The paper hypothesis that exchange of exists between money related strength and social advancement amid the beginning period microfinance division improvement in Vietnam. From the social improvement angle, the normal specialized proficiency score stays high when contrasted with the normal specialized productivity in regards to the money related part of the microfinance. A large portion of the microfinance establishments were effective in view of social perspectives yet when considered over independently.

The social performance of MFI's likewise relies on, among a few different components, some urgent macroeconomic and institutional elements. These macroeconomic and institutional variables decidedly or contrarily impact the money related strength of MFI's Sullivan, C. (2006).

As of late, in its more extensive measurement miniaturized scale acknowledge known as small scale fund, has turned into a greatly supported mediation for destitution lightening in the creating nations and slightest created nations. There is hardly a poor nation and improvement arranged contributor office, (multilateral, reciprocal and private) not included in advancement (in one structure or other) of a small scale money program. Numerous accomplishments are asserted about the effect of miniaturized scale fund programs, and an outside eyewitness can't however stand amazed at the scope of differing qualities of the advantages guaranteed. Different studies show that quick and practical neediness decrease relies on upon connection of an extensive variety of arrangement measures and intercessions at large scale and miniaturized scale levels (Ahmed, 2002). In Grameen model, one of the kind and creative methodology of gathering loaning is utilized. As Sengupta (2008) portrayed, the gathering loaning has numerous advantages. In the first place, bunches generally sort out in individuals who are neighbors to one another; those can see one another well and perceive their needs. Second, that if anybody of the group are not present in the gathering meeting, the pioneer or another part can pay its portion. We can say that there is a sort of common comprehension between all individuals. Third, in south Asia by and large, and particularly in Bangladesh, there were social weights among individuals from society with social ties with them. On the off chance that one individual from the gathering won't pay even one portion, social weight will be required from each of the eight gatherings on this part. At last he will attempt to pay portions. This prompts the lessening of danger. The idea has been brought from Muhammad Yunus, he launched the concept of MFI’s, the Grameen Bank idea was effectively and it also conveyed financial facilities to those poor women of Bangladesh who were suffering from the problem of poverty. It was basically a step to eliminate the poverty all around the globe. This better approach of doing business together secure funds from open and private area investors, moneylenders, and contributors for tackling the fundamental difficulties of developing country like; health, education, and employment. This theory had become really very helpful for those entrepreneurs who was working basically to improve the living standards of poor people (Yunus & Weber, 2007). About 70 million low-income (poor people) are served by MFI’s all around the globe (Daley-Harris, 2006). In 2007, it has been assumed that there was almost 10,000 MFI’s in all over the world (Ming-Yee, 2007), which has been aiding around 113 million clients. MFI’s are examined to assume a huge part in annihilating poverty especially in developing countries everywhere in the globe (Caudill, Gropper, and Hartarska, 2009; Zohir and Matin, 2004). There are few famous daily newspapers, who had contended that microfinance could be the utmost vital device to decrease poverty, for example, The Economist, The New York Times, and The San Francisco Examiner.

Certainly, MFI’s aid just a little part of poor needy people who are in need of that kind of services around the world (CGAP, 2004, 2006). Furthermore, an extension of their activities to entertain more individuals is compulsory. Those individuals who were getting the less incomes, were having a need of MFI’s facilities and distinguish them to be sustainable. For maintaining the sustainability, MFI’s must introduce some new and different innovative approaches to increase their impact and efficiency. For this purpose, MFI’s must introduce some kind of financial products which are the necessity for those poor needy people, to lessen the variations in their unstable incomes and expenses.

Heads of Government announced that through embracing the Millennium Development Goals (MDGs), perceived such as globally concurred advancement targets, any nation could accomplish economic growth (United Nations Millennium Summit, 2000). These MDG's are new targets, which are essentially accomplished from various measurements of welfare, like; growing access for the basic health care, safe water, nutrition, basic education, and women's empowerment, to lessen the ratio of poverty (IFAD, 2003).

Some of researchers have found that the level of income is considered as a most important cause for measurement of the effect of financial system (Cuong, 2008), whereas other researchers has specifically affirmed on income-generating exercises endorsed by the poor people, like; microenterprise, livestock products, and agriculture (Montgomery & Weiss, 2011). A few researches reflect the once-a-month the total monthly/yearly per capita expenditure on healthcare, food and non-food items, and education (Pitt &Khandker, 1998; Khandker, 2005; Cuong, 2008; Islam, 2008; Montgomery & Weiss, 2011; Tinh Thanh, 2011).

Like other organizations, MFI's also have to measure their performance by using different measures, to assess their existence and growth. Unlike other organizations, nonetheless, MFI's performance includes equally capitals and outreach. Meanwhile, microfinance development, for the performance of MFI's, different fragments of this industry propose different assessment measures (Kereta, 2007; Meyer, 2002; Ngehnevu & Nembo, 2010).

There was a focus on three analytical scopes, the "critical triangle of microfinance," it must be examined while assessing MFI's performance; outreach to the poor, financial sustainability, and effect on the welfare (Zeller and Meyer, 2002). For the MFI's performance, all of the borders of the triangle must be assessed, and it is also required to enhance an organization's success. MFI's have a distinguishable effect on customers' quality of life (Zeller and Meyer, 2002). Furthermore, they also focused that maintenance is the most stable indicator of impact, towards the customers and also the capability for performing the task deprived any direct subsidies.

As from the above critical triangle which MFI's need to reach, Outreach is also one of the most important objective. Currently available measurements for MFI's show an overruling interest with the profitability of MFI's actions and comparatively less with social performance. Outreach, anyhow, is a multi-layered thought which should be measured through several measurements accordingly (Meyer, 2002; Navajas, Schreiner, Meyer, Gonzalez-vega, & Rodriguez-meza, 2000). There are six aspects to measure the outreach of MFI's, affirming that "outreach is the social value of the output of a microfinance organisation in terms of depth, worth to users, cost to users, breadth, length, and scope" (Navajas et al. 2000, p. 335).

In simple words, most of the researchers explained outreach as it is the number of borrowers dealt by MFI's (Bassem, 2009; Cull, Demirgüç-Kunt, & Morduch, 2007; Hartarska, 2005, 2009; Hartarska & Mersland, 2009; Hartarska & Nadolnyak, 2007;Kereta, 2007; Mersland&Strøm, 2009; Meyer, 2002; Navajas et al., 2000; Tchakoute-Tchuigoua, 2010). It implies the individuals with no past reach for those formal financial services which are currently serving by MFI's. The people who are not even having the collateral to get loan from the formal financial sector are the poor ones. The annual rate of change was used of number of active borrowers for assessment of outreach rather than the number of borrowers (Kyereboah-Coleman and Osei, 2008). As compare to men, women are facing more problems to get loans. That is why, scholars more focused and measured the number of poor women who has been served by MFI's, and in case MFI's deliberately target the poor female borrowers while providing the loans to poor ones (Mersland, Randøy, & Strøm, 2011).

By the reason of lack of collateral securities to access the loan, it is very difficult for those people who are extremely poor. It is quite necessary to recognize the poor customers. The criteria of the research for measuring the outreach of microfinance exercises was "depth of outreach" (Hartarska 2005, Tchakoute-Tchuigoua 2010 and Bassem 2009). Phrase attributes that "the worth the society add to the net increase to the net gain from the use of micro credit by a given borrower" (Navajas et al., 2000, p. 335). Although, this is quite challenging to measure the depth of outreach, this is essential to recognize that in what way MFI's work to access the poor people. Moreover, the researchers also emphasized on the conditions of wealth for borrowers and expense for borrowers like two extra essential parts of outreach. These attributes that how much the borrower is able to pay the collateral for taking the loan and the cost of the loan to a borrower subsequently. As a rule, there are numerous kinds of loan-related costs and interests associated with the cost of loan, which has to be paid to the investor.

The variety of financial services or quantity of types of agreements which has been offered, discussed to as the breadth of the outreach is also one of the other important component in assessing MFI's outreach (Navajas et al., 2000). It explains that how much demand is there for the financial instruments by the poor people is, and demonstrates how the welfare has been improved over insurance, efficient and secure savings, remittance transfers, and some of the other services which are provided in extension to loans (Meyer, 2002). Shetty (2008) recognized that service as "credit plus services," which is also acknowledged as "integrated approach" or "maximalist approach" in microfinance sector. Mitigation for poverty cannot be reached by providing an easy access to the poor ones while providing them loans, while the demand for the financial services is changing with the level of poverty (Sinclair, 2012). It reveals that MFI's are not only delivering the credit service for their poor clients, but they can also entertain their customers by providing the following services; savings, health care services, micro-insurance, micro-enterprises or self-employment development, various trainings and awareness programs, and networking with various institutions (Shetty, 2008).

Navajas et al. (2000) likewise noticed the length of outreach, which assigns to the time frame in which a microfinance organizations provides advances for those needy poor people. MFI's provide loans for excess time period. If there is an opportunity for borrowers to take more loans in future, they will pay back their loans to take that opportunity. On the other hand, if loans are given for the less time period, it will be the burden for the social welfare of the society. Furthermore, some of the scholars occupied average outstanding loan size (Galema, Lensink, &Mersland, 2012; Mersland et al., 2011; Mersland & Strøm, 2009), and capacity of loans (Hartarska and Mersland, 2009), as a measure for outreach, it is given to the poor people. Mersland et al. (2011) utilized rural and urban market criteria for an outreach measure of MFI's, mirroring the focus of MFI's loans. It basically explains that whether MFI's are working properly on their motive, are they giving loans to the poor urban people, or giving loans to both urban and rural poor people.

In past few years, there has been symbolic discussion regarding the introduction of social performance yardstick for measurement of MFI's performance since consistently the victory of MFI's has a lot been measured by using only the financial measurements (Koning & McKee, n.d.; Zeller, Lapenu, & Greeley, 2003). Supplementary criteria have determined MFI’s to enhance their understandings of the simultaneous hunt of social and financial performance, a “double bottom line”, which is basically the tradeoffs between economic and social return on investment (ROI). The level of commitment for the fulfillment of their social mission is measured by the social performance of MFI’s (Bédécarrats, Baur, & Lapenu, 2011). Goal is purposeful by the primary customer issue if there is a result of lack of household security due to an unstable family income. Hence, these measures for the social performance of MFI’s are essential means for deciding the measure of work which has been prepared by the MFI and where MFI’s has contributed its money for acknowledgement of perceptibility from the general public.

Hermes et al. (2009) used a sample of more than 1300 experiences to examine if there is any tradeoff between outreach and efficiency of MFI’s exist. He found an evidence for a negative relationship between outreach and efficiency. MFI's which were having a lower average loan balance were less effective.

Ledger Wood (1998) focused on that the opportunity cost of MFI’s is high as unit cost of lending for smaller loans are higher as compare to larger loans. So, it has been proved that financial sustainability is the most important performance indicator for MFI.

Khandker, (1998); Morduch (1999) has been argued that MFI’s are mainly working for the objective to reach the poor. If MFI’s will seek to be financially sustainable, and do not rely on allowances then their social objective to serve the poor will be ruined.

Chapter # 3

METHODOLOGY AND DATA

In this chapter, there is a discussion about the theoretical framework, empirical methodology, data, data sources, and variable construction.

3.1. Theoretical Framework

The microfinance has basically came into form to meet the financial needs of poor people. The dominant objective of the microfinance industry is to reach the poor sector of the society, while other financial institutions feel hesitant to provide loaning. So, the poor people who are having not enough collateral and securities to obtain loan, can be facilitated by MFI's. The goal of the study is to find out the determinants of social performance. Three indicators are used for this purpose; operational self-sufficiency, number of active borrowers, and the average loan size. Literature suggests that the cost per borrower, profit, repayment risk effects positively number of active borrowers. The average loan size is negatively related to cost per borrower, repayment risk, and profit. OSS increases with increase in profit and decrease with an increase in cost and repayment risk.

If average profit increases, it contributes to increase in average loan. Increase in average loan defines that MFI's can give large size loans but then they can serve few poor clients. The opposite is the case of, if average cost increases MFI's would prefer to give few large size loans and therefore, less clients are benefited from MFI's. There may be trade-off between average loan size (depth of outreach) and number of active borrowers. As firms become more experienced (age), they give large loans. Non-profit MFI's, for example; NGO's give small size loans. Therefore, following hypothesis are formulated to examine the determinants of average loan size that captures the depth of outreach in social performance of MFI's.

3.2. Hypotheses

3.2.1. *Average Loan Size*

These hypothesis has been made while considering average loan size as a dependent variable. The following hypothesis will be tested to check the relationship between IVs and DVs:

- H1: There is a negative relationship between average loan size and cost per borrower.
- H2: There is a positive relationship between average loan size and average profit.
- H3: There is a positive relationship between average loan size and repayment risk.
- H4: There is a positive relationship between average loan size and size of MFI.
- H5: There is a positive relationship between average loan size and age of MFI.
- H6: There is a negative relationship between average loan size and non-profit organization.

The number of active borrowers measures the breadth of outreach as social performance indicator.

3.2.2. *Operational Self-sufficiency*

These hypothesis has been made while considering operational self-sufficiency as a dependent variable. The following hypothesis will be tested to check the relationship between IVs and DVs:

- H1: There is a negative relationship between operational self-sufficiency and cost per borrower.
- H2: There is a positive relationship between operational self-sufficiency and average profit.
- H3: There is a positive relationship between operational self-sufficiency and repayment risk.

- H4: There is a positive relationship between operational self-sufficiency and size of MFI.
- H5: There is a positive relationship between operational self-sufficiency and age of MFI.
- H6: There is a negative relationship between operational self-sufficiency and non-profit organization.

The number of active borrowers measures the breadth of outreach as social performance indicator.

3.3. Empirical Methodology

The average loan size is used for the depth of outreach in the study of microfinance. We follow the Christen and Drake (2002) inference in my research methodology. For our first objective of this research, we are using the following model, no of active borrowers is dependent variable;

$$\textit{No of Active Borrowers}_{it} = \beta_1 \textit{Average Profit}_{it} + \beta_2 \textit{Average Cost}_{it} + \beta_3 \textit{Risk}_{it} + \beta_4 \textit{MFI age}_{it} + \beta_5 \textit{Size}_{it} + \beta_6 \textit{DNPO} + \textit{Constant} + u_{it}$$

For the second objective of our research, we are using the model in which, we are considering the average loan size as a dependent variable;

$$\textit{Average Loan}_{it} = \beta_1 \textit{Average Profit}_{it} + \beta_2 \textit{Average Cost}_{it} + \beta_3 \textit{Risk}_{it} + \beta_4 \textit{MFI age}_{it} + \beta_5 \textit{Size}_{it} + \beta_6 \textit{DNPO} + \textit{Constant} + u_{it}$$

While considering our research objectives, the third model which we are using in our research is that we are having OSS (Operational Self-sufficiency) as a dependent variable;

$$\textit{OSS}_{it} = \beta_1 \textit{Average Profit}_{it} + \beta_2 \textit{Average Cost}_{it} + \beta_3 \textit{Risk}_{it} + \beta_4 \textit{MFI age}_{it} + \beta_5 \textit{Size}_{it} + \beta_6 \textit{DNPO} + \textit{Constant} + u_{it}$$

3.4. Data

There is an explanation about the data and data sources of MFI's in Pakistan. At present, large number of MFI's are operating in Pakistan. Anyhow, only 31 out them are monitored by September 2010, and other are non-monitored. We are particularly focusing on the study of monitored MFI's only. Out of 31 MFI's, 23 MFI's are member of Pakistan Microfinance Network (PMN), and develops almost 95% of MFI's business in Pakistan.

Source (State Bank of Pakistan, Department of Microfinance, Jan 2011). **Data** is collected from financial statements of MFI's, which are gathered from Microfinance Mix Information Exchange website. Data has been collected on annual basis. Our data set encompasses of those MFI's that is having a data for two consecutive years or more. Data consist of 25 MFI's for the period of eight years from 2005 to 2012. Every MFI is containing eight annual observations in the data. The total number of cross sections is 25. Thus, the total annual observations are 170. So, this is unbalanced panel data on 170 observations.

3.5. Variables Construction

Variables selection and determination method strongly effect on the results of analysis. Thus, variables selection in research is very important, and also a time taking process. Data has been collected for different variables. Some of the variables are directly attained from the MIX website, while the other variables are derived from the collected data. In this research, there is a list of variables and definitions which has been used. All of the variables are derived as of the preceding firsthand literature which has been presented in literature.

Table 3.1

List of Variables

Variable	Explanation
NAB	Number of active borrowers;
$\overline{LS}$	Average loan size; Indicates average loan size per active borrower and obtained by dividing total loan disbursed divided by No. of credited clients.
OSS	Operational self-sufficiency; Measures how well the MFI can cover its costs through operating revenues. It is adjusted for grants and donations and is obtained by (Operating revenue) / (Financial expense + Loan Loss Provision + Operating Expense).
$\overline{\Pi}$	Average Profit; measures the profit per loan disbursed and obtained by net annual profit divided by No. of credited clients.
$\overline{C}$	Average cost; shows the average cost of MFI, obtained total cost divided by No. of credited clients.
Δ	Risk; Indicates repayment risk of loan that is overdue by 30 or more days.
MFIA	Microfinance institution age; MFI age represents the age of MFI, for how long MFI is operating financial services.
S	Size of MFI; Total Assets at the end of the year are used as proxy for size of MFI
DNPO	Non-Profit Organization; DNPO is dummy variable that is 1 for non-profit organization and 0 otherwise.

For the measurement of required variables, loan portfolio, number of active borrowers, net annual profit, operating cost, total assets, and total equity are picked from the annual reports of MFI's in order to measure the required variables. All of these annual reports and figures are given on Microfinance Information Exchange Website (MIX).

3.6. Explanations of Variables:

All of the variables which are used in research are explained in detail here:

Average Loan Size

The depth of outreach is measured through average loan size in most of the studies. The assessment of the performance of microfinance industry is measured by Average loan size. It is too connected with the profitability of MFI's. Cull et al. (2007); Bhatt and Tang, (2001); Schreiner, (2002) also used the same variable in their study.

Average Loan Size = total value of loans / total number of borrowers

Average Profit

Average profit per borrower has been used for the assessment of profitability of MFI. The financial statements of MFI's has been derived the Net annual profit, and divided it by the total number of borrowers. Average profit per borrower indicates that if MFI's are working according to its profitability or not in that formula. The average profit indicates the profitability of MFI's and also an essential variable which should be included in this study.

Average Profit = net annual profit / total number of borrowers

Average Cost

The efficiency and effectiveness of organization are indicated by Average Cost. It is used to measure the self-sufficiency. Self-sufficiency means that MFI's are having the ability to cover it costs from its revenues. The efficiency of MFI's is increased by the lower cost, and also make a way easier to more outreach, and results in increased emphasize at social performance. From financial statements of MFI's net annual operating cost is gained, and for the calculation of the average cost it is divided by total number of borrowers. In the tasks of MFI's Cost has a very important role and it also leads towards social or profit earning mission that is why it is considered in regression. Average cost has been used in earlier studies of financial institutions by Yuengert (1993) and Gutierrez-Nieto, et al. (2007).

Size of MFI's

For the size of MFI's total assets are used as proxy. Size of MFI's and the operations of MFI's are related with each other. There is an increase in the operational self-sufficiency when MFI grows in its size, and thus it can easily fulfill its social duty to provide the finances to poor people. The key determinant of MFI's mission is size, while size effects the profitability and loan size of MFI's. It is considered in regression specification. This variable is declared directly from financial statements.

Portfolio at Risk > 30 Days

Portfolio at risk explains the specific part of total loan portfolio which is outstanding in 30 days or can be more than 30 days. In the social performance, profitability of MFI's, efficiency, and Portfolio at risk is very important. The MFI's will not be able to provide loans to the primary poor clients as their profitability is affecting by non-repayment when this risk increases. Cost of operations increases due to the risk, it forms delays in level performance of institution. It is included in analysis, due to its effect on the social performance and profitability. Portfolio at risk is taken from financial reports of MFI's.

Age of MFI's

Age of MFI's illustrate the total years of MFI's operations. The more the MFI's are operating the more they will become experienced in confronting repayment risk and earning profit. More age of MFI's indicates to divert from its social undertaking of outreach credit to poorer clients. Age of MFI's impacts on the decision of loan disbursement that is why this variable is included in regression. This variable is gained from the MIX Market.

3.7. Sample Selection

Nowadays, large number of MFI's are working in Pakistan. Nevertheless, only 31 MFI's out of them are structured by September 2010, and others are non-structured. In our study, we are only emphasizing on those structured MFI's. 23 MFI's out of 31 are member of Pakistan Microfinance Network (PMN), and establishes almost 95% of MFI's business in Pakistan. Source (State Bank of Pakistan, Department of Microfinance, Jan, 2011). Our data set encompasses of 25 MFI's for period of eight years from 2005 to 2012. Those MFI's are comprised in data set, whose data is available for at least two sequential years. The data has been collected from following sources;

1. Website of Mix Market
2. State Bank of Pakistan (SBP)
3. Pakistan Microfinance Network (PMN)

3.8. Unit of Analysis

In our research, we will use a demonstrative sample of different types of MFI's like:

1. MFI-NGOs
2. Microfinance Banks
3. Rural Support Programs

Table # 3.2

Lists of MFI's which are Included in this Research

Category	MFP	Total Market
Microfinance Banks	Khushhali Bank	17.8%
	The First Microfinance Bank	11.2%
	Tameer Microfinance Bank	4.0%
	Network Microfinance Bank	0.2%
	Pak-Oman Microfinance Bank	0.5%
	Kashf Bank	0.8%
	Rozgar Microfinance Bank	0.8%
MFI-NGO	Kashf Foundation	14.3%
	Akhuwat	0.9%
	Asasah	1.4%
	ASA	1.6%
	Community Support Concern	0.6%
	Development Action for Mobilization and Emancipation	2.7%
	Orange Pilot Project	2.7%
	BRAC	3.2%
	Sindh Agricultural and Forestry Workers Cooperative Organization	1.7%
	Centre for Women Cooperative Development	0.6%
	Rural Community Development Society	1.1%
	Sungi Development Foundation	0.2%
	Jinnah Welfare Society	0.1%
	ORIX Leasing Pakistan	0.9%
Rural Support Programs	National Rural Support Program	24.7%
	Punjab Rural Support Program	4.4%
	Sarhad Rural Support Program	0.2%
	Thardeep Rural Development Program	1.7%
	Total	95%

3.9. Empirical Results

Pooled OLS estimation technique is used for the model 1, 2, and 3, because the data set is containing 72 MFI's for the period of 2005 to 2012. The analysis is directed by the use of Eviews and Stata.

Chapter # 4

ESTIMATION RESULTS AND INTERPRETATION

Basic aim of our study is to check the social performance of microfinance industry of Pakistan. In this chapter results of three different proxies of social performance are presented. The analysis begins with examining the summary statistics of the data.

4.1. Summary Statistics of Data

4.1.1. *Descriptive Statistics*

The Table 5.1 reports the summary stats of variables. Mean shows the results of average for each variable. Mean loan size is much higher in the microfinance apprehension. It demonstrates that the MFI's are distributing loan to few borrowers. The suggestion is that the MFI's must be non-profit organizations, so that they are able to achieving their goal to reach the poorer people and provide loan to them. But in the table mean is as high that shows that MFI's are meeting their operational cost by its profit and provide loan to the poor people for profit motive.

Table 4.1

Descriptive Statistics

	Mean	Std. Dev.	Min.	Max.	Observations
Loan Size	12045.88	6019.66	1100	38202	170
OSS	89.41	40.13	-9.8	278.7	170
Profit	-46.03	266.27	-3094.09	1119.36	170
Cost	3866.12	3648.72	677	24837	170
MFIA	10.82	5.89	1	24	170
MFIS	20.12	1.56	16.8	23.1	170
RISK	6.10	10.45	0	66.43	170

Correlation

Table 4.2

Correlation between Variables

	ALS	AP	AC	MFIA	MFIS	RISK	OSS
ALS	1.0000						
AP	0.1160	1.0000					
AC	0.6664	0.0040	1.0000				
MFIA	-0.2368	0.1373	-0.4356	1.0000			
MFIS	0.2957	0.1110	0.1006	-0.0818	1.0000		
RISK	0.0466	-0.0297	0.2087	-0.0432	-0.2308	1.0000	
OSS	-0.0725	0.2988	-0.3573	0.3951	0.1240	-0.2386	1.0000

There is a correlation between different variables in the above table. Average cost has a positive relationship with average loan size. Average cost is also correlated with MFI's size. Though, the correlation coefficients between the other explanatory variables are relatively low. Correlation between variables is low showing no problem of multicollinearity.

4.2. Regression Results

For analyzing the results of determinants of social performance three indicators of performance are used: number of active borrowers, average loan size and operational self-sufficiency.

Pooled OLS is used as estimation technique for number of active borrowers, average loan size and OSS. The effect of average cost, average profit, portfolio risk, size of MFI, age of MFI, and dummy of non-profit organization is examined on each measure of social performance.

Social Performance Pooled OLS Technique Results

To examine the social performance in the operations of the microfinance institutions, is the primary objective of this study. For social performance three alternative variables; number of active borrowers, average loan size, and operational self-sufficiency are used. For that measurement purpose different models are run. Pooled OLS technique has been used.

Table # 4.3

Results of Determinants of Average Loan size as Indicator of Depth of Outreach

Average loan	Coefficients	T value
Intercept	.8597	2.49
Average Cost	-0.106***	-9.45
Average Profit	0.207***	2.15
Repayment Risk > 30 days	-0.2228	-0.72
MFI Age	0.2576	0.36
MFI Size	0.636***	2.65
Dummy NPO	-651.63	-0.8
R-Squared	0.52	
F test (p-value)	0.000	

Note: The *, **, *** indicates significance at 10%, 5% and 1% respectively.

Interpretation of Model 1

There is a positive and significant effect of average profit on average loan size. When there came an increase in average profit, loan size increases, and if there came a decrease in average profit, loan size decreases. This variable is significant at the level 1%. Therefore, our hypothesis that there is a positive and significant relation between average profit and average loan size has been accepted. According to Mersland and Strom (2011), result is consistent. The result approves that the hypothesis of relationship between average profit and average loan size from the Freixas and Rochet 2008 model. The result also shows that an MFI is able to earn higher profit, if the loan size becomes larger. That is essentially the Yunus' concern that big loan size creates more profit, that's why the poorer clients were exempted from that credit scheme (Christen and Drake, 2002).

MFI's should increase its efficiency to minimize the cost, as loan size increases with an increase in cost. When an MFI is efficient, cost is low and loan size is also small.

This outcome is related in accordance with the cost outcomes of Littlefield et al. (2003) and Hishigsuren, (2007).

Total assets of the MFI's, have a positive and significant effect on average loan size, which is used as proxy for size of the company. Therefore, signifying that average loan size will increase due to the increase in size of the MFI's. This variable is significant at 5% confidence level. Hence, our hypotheses that there is a positive and significant relation between size of MFI's and average loan size is accepted. Result is in accordance by the discoveries of Mersland and Storm (2011).

Portfolio risk is having an insignificant plus negative relation. Hence, it is not having any effect on average loan size. So, our hypothesis that there is a positive and significant relationship between portfolio risk and average loan size is rejected. Portfolio risk is not effecting loan size. This is insignificant in Mersland and Storm (2011) definitions and also insignificant and negative in our study.

In this model, age of MFI is positive and insignificant. That is why, there is also no effect on average loan size. The hypotheses we made that there is a positive relation between portfolio risk and average loan size is rejected. There is no effect of portfolio risk on the size of loan. It is insignificant in Mersland and Storm (2011) definitions and it is also insignificant in our study.

Dummy of non-profit organization (NPO) is insignificant and is negatively related to average loan size. So, it is not having any effect on average loan size. Our hypotheses that there is a negative relationship between NPO and average loan size is not significant at 5% confidence level.

The model explains 52% of the model. The p-value of F-statistics tells overall goodness of the fit.

Results of Model 2

In second model, the number of active borrowers is used as the proxy for breadth of outreach and it is examining the aspects that are affecting number of active borrowers.

Table # 4.4

Results of Determinants of No of Active Borrowers as Breadth of Outreach

Active Borrowers	Coefficients	t- value
Intercept	.8597 **	2.49
Average Cost	0.1370 **	1.98
Average Profit	0.3252 ***	2.90
Repayment Risk > 30 days	0.0197	0.70
MFI Age	0.1455 ***	2.61
MFI Size	-0.9884	-1.62
Dummy NPO	0.2234***	2.11
R-Squared	0.59	
F test (p-value)	0.000	

Note: The *, **, *** indicates significance at 10%, 5% and 1% respectively.

Interpretation of Results of Model 2

The results that as profit of MFIs increases more number of borrowers are served, as the experience of MFIs increases they give loans to more borrowers. Non-profit organizations cater more borrowers. Repayment risk and size of the firm has no significant effect of number of borrowers. The model explains 59% of the model. The p-value of F-statistics tells overall goodness of the fit.

Table # 4.5

Results of Determinants of Operational Self Sufficiency as indicator of Outreach

Operational Self-Sufficiency	Coefficients	t- value
Intercept	.8597 **	2.49
Average Cost	-0.0025***	-3.13
Average Profit	0.037***	2.19
Repayment Risk > 30 days	-0.57***	-2.64
MFI Age	0.181***	2.55
MFI Size	2.47***	1.04
Dummy NPO	-1.47	-0.23
R-Squared	0.46	
F test (p-value)	0.000	

Note: The *, **, *** indicates significance at 10%, 5% and 1% respectively.

Interpretation of Model 2

In this model, Operational Self-Sufficiency (OSS) is used as a dependent variable and as the proxy for the social performance. Average cost, average profit, age of MFI, size of MFI, and portfolio risk are independent variables.

The results of this model shows that an average cost is significantly and negatively related with OSS. It is significant at 5% confidence level. It is indicating that as average cost increases, the organization's operational self-sufficiency decreases. The firm needs to increase its profit to meet its cost. The results are same as in the above model, where social performance is apprehended by average loan size.

Average profit is positively and significantly related with OSS in this model. Average profit is significant at 5% confidence interval. It explains that as profit increases the OSS also increases and vice versa. If the average profit is high, MFI is able to meet its operational expenses easily. The results are also showing that increase in profit is considered as a bad impression on the social performance of MFI's. The results are also in accordance with the above results where social performance is apprehended by average loan size.

In this model, repayment risk has a negative and significant relation with OSS. It elaborates that when repayment risk increases then the OSS of MFI decreases. Repayment risk is significant determining factor of OSS at 5% confidence interval.

Age of MFI is also one of the significant determinant of OSS, and is positively related with OSS. If the time of operations of MFI is high, MFI is self-sufficient in its operations. Age of MFI is significant determining factor of OSS at 5% confidence interval. This result approves the study of social performance as age of MFI increases the firm becomes profit motive and deviate from its primary objective of outreach to the poor segment of the society.

Total assets of MFI's are used as the proxy of size of MFI and it has a positive but insignificant relationship with OSS. Size of MFI is not having any effect on the operational self-sufficiency of the MFI.

The model explains 46% of the model. The p-value of F-statistics tells overall goodness of the fit.

Chapter # 5

CONCLUSION AND POLICY IMPLICATIONS

Conclusion

From the beginning, Microfinance is known as the poverty alleviation tool. Microfinance is having two major objective: (1) providing cheap loans to those needy poor people who were ignored by the recognized financial sector, (2) to remain itself financially sustainable. The main objective of this study is to examine the factors that influence social performance of the microfinance institutes of Pakistan for the period of 2005 to 2012.

The social performance is measured by three proxy variables: the number of active borrowers that measures the breadth of outreach, average loan size that captures the operational self-sufficiency and depth of outreach that measures MFIs are meeting their operational expenditures and therefore are sustainable. In set of determinants average profit, average cost, MFI size, MFI age, dummy of whether MFI is non-profit organization (NGO) that takes value 1 and zero otherwise. The pooled OLS is used as estimation technique.

The main findings of the analyzing breadth of outreach that when MFI are profitable, large size, mature, and non-profit organizations they serve more borrowers. This means that there is an increase in the cost per borrower and reduces profit, when large number of small loans are given to the large numbers of borrowers. The findings of depth of outreach indicates that when firm choses to give large size loan to few number of poor then average cost reduces and MFI generate more profit. The non-profit MFIs do not choose to give large size loans. The conclusion that can be drawn from that there is tradeoff between number of active borrowers and average loan size meaning that serving more poor leads to giving small size loans.

The results of operational self-sufficiency indicates that with more profit and less operating cost MFIs can become operationally self-sufficient. This ensure that they become operational in the long run and operational self-sufficiency ensures expected future outreach.

Overall, this study has found in that average loan size increase leads to the increase in profit of MFI’s, but the increase in average loan size leads to decrease in the operating cost of MFI’s because if there is an increase in average loan size then the number of clients decreases and decrease in clients leads to the low operational cost. In that way, the MFI’s will be getting profit, and that profit will help to meet its operational cost. So, the result is that if the MFI’s are getting profit, they will be able to meet its operational cost and MFI’s will be self-sufficient. Cost efficiency is important to provide small loans to large number of poor people. When a cost efficiency increases, loan size becomes small. Hence, all of the stakeholders must strictly focus on the efficiency of cost that how to reduce the cost per borrower. If we see the portfolio risk results, it is insignificant in all cases except operational self-sufficiency. Portfolio risk is negatively related to operational self-sufficiency. So, if there is an increase in repayment risk, the operational self-sufficiency of MFI’s will be decreased.

To The objective of social performance that is outreach can be achieved by the MFI’s when they are sustainable. For that purpose the MFI’s have less cost per borrower called efficient.

Policy Implication

The following implication can be drawn from empirical results for improvement in the social performance of MFIs in Pakistan:

- The reduction of operational cost is impotent because only then MFIs become sustainable and provide loans in the poor and meet the core objective.
- Subsidies need to be provided to the MFIs to make them sustainable.
- While providing loan to poor better restrict to some business activity so that on the one hand repayment risk is reduced and on the other borrower become self-sufficient.
- Non-profit organization are doing well in reaching the poor, there role should be increased

Limitations of the Study

As we just took few years study to make our research, it is not enough to make authentic results. The research period must be expanded. There can be a factor of inflation or deflation in those years, due to which we are not able to find the accuracy in our results.

Due to the reason of unavailability of data, we just picked very few Social Performance tools and studied on it. There are few tools which are considered as important but are not used in our research are inflation effect and default rate. Outreach can be measured by other variables.

Future Extensions

- Other factors that determine social performance can be used
- Some other indicator of social performance can also be studied
- The other objective of MFIs that is financial self-sufficiency can be addressed

REFERENCES

Bassem, B. S. (2008). Efficiency of microfinance institutions in the Mediterranean: an application of DEA. Transition Studies Review, 15(2), 343-354.

Bassem, B. S. (2009). Governance and performance of microfinance institutions in Mediterranean countries. Journal of Business Economics and Management, 10(1), 31-43.

Bédécarrats, F., Baur, S., & Lapenu, C. (2012). Combining social and financial performance: A paradox? Enterprise Development and Microfinance, 23(3), 241-258. http://microcredit.momentumitgroup.com/resource/23/combining-social-and-financial performance.html

Bhatt, N., & Tang, S. Y. (2001). Delivering microfinance in developing countries: Controversies and policy perspectives. Policy studies journal, 29(2), 319-333.

Bhutta, N. (2011). The Community Reinvestment Act and Mortgage Lending to Lower Income Borrowers and Neighborhoods. Journal of Law and Economics, 54(4), 953-983.

Bryant, S. E. (2005). The impact of peer mentoring on organizational knowledge creation and sharing an empirical study in a software firm. Group & Organization Management, 30(3), 319-338.

Caudill, S. B., Gropper, D. M., & Hartarska, V. (2009). Which microfinance institutions are becoming more cost effective with time? Evidence from a mixture model. Journal of Money, Credit and Banking, 41(4), 651-672.

CGAP. (2004). Annual Report 2004. Washington, DC: Consultative Group to Assist the Poor, The World Bank. Retrieved from http://www.cgap.org/gm/document-1.9.41932/CGAP_Annual_Report_2004.pdf

CGAP. (2006). Good practice guidelines for funders of microfinance. Washington, DC: Consultative Group to Assist the Poor, The World Bank. Retrieved from http://www.mastercardfdn.org/pdfs/Good%20Practice%20Guidlines.pdf

Christan, R. and D. Drake. (2002). Commercialization, the new reality of microfinance. The Commercialization of Microfinance. Balancing Business and Development. Kumarian Press by Stylus Publishing, 02-22.

Cull, R., & Morduch, J. (2007). Financial performance and outreach: a global analysis of leading microbanks*. The Economic Journal, 117(517), F107-F133.

Cuong, N. V. (2008). IS A GOVERNMENTAL MICRO-CREDIT PROGRAM FOR THE POOR REALLY PRO-POOR? EVIDENCE FROM VIETNAM. The Developing Economies, 46(2), 151-187.

Daley-Harris, S., & Laegreid, L. (2006). State of the microcredit summit campaign: report 2006 (p. 66). Washington, DC: Microcredit Summit Campaign.

Freixas, X., & Jorge, J. (2008). The role of interbank markets in monetary policy: A model with rationing. Journal of Money, Credit and Banking, 40(6), 1151-1176.

Galema, R., Lensink, R., & Mersland, R. (2012). Do powerful CEOs determine microfinance performance? Journal of Management Studies, 49(4), 718-742.

González Vega, C. (1998). Microfinance: Broader achievements and new challenges. Economics and Sociology Occasional Paper No. 2518, The Ohio State University, www.agecon.ag.ohio-state.edu/RuralFinance

Gutierrez-Nieto, B., Serrano-Cinca, C., & Molinero, C. M. (2007). Microfinance institutions and efficiency. Omega, 35(2), 131-142.

Hartarska, V. (2005). Governance and performance of microfinance institutions in Central and Eastern Europe and the newly independent states. World development, 33(10), 1627-1643.

Hermes, N., Lensink, R., & Meesters, A. (2009). Financial development and the efficiency of microfinance institutions. Available at SSRN 1396202.

Hermes, N., Robert, L. & Aljar, M. (2009). Outreach and efficiency of microfinance institutions. Faculty of Economics and Business, University of Groningen, the Netherlands.

Hishigsuren, G. (2007). Evaluating Mission Drift in Microfinance Lessons for Programs with Social Mission. Evaluation Review, 31(3), 203-260.

IFAD. (2003). Achieving the millennium development goals by enabling the rural poor to overcome their poverty. Rome, Italy: International Fund for Agricultural Development

Kereta, B. B. (2007, November). Outreach and financial performance analysis of microfinance institutions in Ethiopia. In African Economic Conference, Addis Ababa.

Khan, Z. (2010). Commercial Verses Cooperative Microfinance Program: An Investigation of Efficiency, Performance and Sustainability. Dialogue (1819-6462), 5(2).

Khan, Z., Khan, A., & Ullah, A. (2009). Co-operative microfinance: A New Option for Government and Development Organizations. Journal of Managerial sciences, 3(2), 180-191.

Khandker, S. R. (1998). Fighting poverty with microcredit: experience in Bangladesh. Oxford University Press.

Ledgerwood, J., & White, V. (2006). Transforming microfinance institutions: providing full financial services to the poor. World Bank Publications.

Littlefield, E., Morduch, J., & Hashemi, S. (2003). Is microfinance an effective strategy to reach the Millennium Development Goals? Focus Note, 24(2003), 1-11. Retrieved from: http://www.cgap.org/publications/microfinance-effective-strategy-reach-millennium-development-goals

Meyer, R. L. (2002). Track record of financial institutions in assisting the poor in Asia (volume No. 49). ADBI Research Paper Series. MIX. (n.d.). Social Performance Indicators Retrieved from http://www.themix.org/social-performance/Indicators

Ming-Yee, H. (2007). The international funding of microfinance institutions: An overview. ADA Microfinance Expertise, 14(1), 1-12. Retrieved from http://www.microfinance.lu/fileadmin/media/Publications/downloads/etudes/MF_intermediation_overview_01.pdf

Montgomery, H., & Weiss, J. (2006). Modalities of microfinance delivery in Asia and Latin America: Lessons for China. China & World Economy, 14(1), 30-43.

Montgomery, H., & Weiss, J. (2011). Can commercially-oriented microfinance help meet the millennium development goals? Evidence from Pakistan. World Development, 39(1), 87-109.

Morduch, J. (1999). The microfinance promise. Journal of economic literature, 37(4), 1569-1614.

Morduch, J. (2000), “The Microfinance Shism”, World Development, **28**(4), 617–629.

Morduch, J. Demirguc-Kunt & Cull, R. (2000). Financial performance and outreach: A global analysis of leading micro banks. World Development, 517(2), 107-133.

Navajas, S., Schreiner, M., Meyer, R. L., Gonzalez-Vega, C., & Rodriguez-Meza, J. (2000). Microcredit and the Poorest of the Poor: Theory and Evidence from Bolivia. World development, 28(2), 333-346. An Ohio State Primer on Microfinance in Bolivia, manuscript, The Ohio State University, gonzalez.4@osu.edu.

Navajas, S., Schreiner, M., Meyer, R. L., Gonzalez-Vega, C., & Rodriguez-Meza, J. (2000). Microcredit and the Poorest of the Poor: Theory and Evidence from Bolivia. World development, 28(2), 333-346.

Pitt, M. M., & Khandker, S. R. (1998). The Impact of Group-Based Credit Programs on Poor Households in Bangladesh: Does the Gender of Participants Matter?. Journal of political economy, 106(5), 958-996.

Rhyne, E. (1998). The Yin and Yang of microfinance: Reaching the poor and sustainability. Micro banking bulletin, (2), 6-8.

Schreiner, M. (2003). A Cost-Effectiveness Analysis of the Grameen Bank of Bangladesh. Development Policy Review, 21(3), 357-382.

Schreiner, M., & Colombet, H. H. (2001). From urban to rural: Lessons for microfinance from Argentina. Development policy review, 19(3), 339-354.

Sengupta, R., & Aubuchon, C. P. (2008). The microfinance revolution: An overview. Review-Federal Reserve Bank of Saint Louis, 90(1), pp.9-30.

Shetty, N. K. (2008). The microfinance promise in financial inclusion and welfare of the poor: Evidence from Karnataka, India.

Sinclair, H. (2012). Confessions of a microfinance heretic: How micro-lending lost its way and betrayed the poor. Berrett-Koehler Publishers.

Strøm, R. Ø., D’Espallier, B., & Mersland, R. (2014). Female leadership, performance, and governance in microfinance institutions. Journal of Banking & Finance, 42, 60-75.

Sullivan, C. (2006). The Implementation of Microfinance: Where is it Applied and Why? The Effect of Political Institutions on the Implementation of Microfinance.

Yuengert, A. M. (1993). The measurement of efficiency in life insurance: estimates of a mixed normal-gamma error model. Journal of Banking & Finance, 17(2), 483-496.

Yunus, M. (2003, January). Expanding microcredit outreach to reach: The Millennium Development Goal–Some Issues for Attention. In International seminar on attacking poverty with microcredit, Dhaka (pp. 8-9).

Yunus, M. (2007). Creating a world without poverty: Social business and the future of capitalism. Public Affairs.

Yunus, M. (2007). Creating a world without poverty: Social business and the future of capitalism. Public Affairs.

Yunus, M. (2011). Sacrificing Microfinance for Mega-profits. The New York Times, 14. Available at www.nytimes.com/2011/01/15/opinion/15yunus.html

Zeller, M., & Meyer, R. L. (Eds.). (2002). The triangle of microfinance: Financial sustainability, outreach, and impact. Intl Food Policy Res Inst.

Zeller, M., Lapenu, C., & Greeley, M. (2003). Social performance indicators initiative (SPI): Final report. Paris: Comited' Echange, de Reflexionetd' Information sur les systemes d'Epargne-credit (CERISE).