EFFECTS OF GEOGRAPHICAL LOCATION ON MFI LENDING BEHAVIOUR IN DEVELOPING COUNTRIES

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DECLARATION

I hereby certify that all of the work described within this thesis is the original work of the author. Any published (or unpublished) ideas and/or techniques from the work of others are fully acknowledged in accordance with the standard referencing practices.

George Chiagozie Akomas

June 2018

DEDICATION

This PhD is dedicated to the loving memory of my late mother,

Lady Olive Erinma Uzoamaka Akomas nee Okorocha.

Always, Forever in my heart.

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I seriously doubt there is any acknowledgements to a PhD thesis ever written as long as this one, but then again, I doubt there has ever been one PhD that has been a product of so much love, goodwill and joint ambition. I do not know if anyone reads the acknowledgements to a thesis, but this is written with deep gratitude and for posterity sake.

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ABSTRACT

Ever since the United Nations declared 2005 the year of micro-credit and linked it to the Millennium Development Goals, and especially on poverty reduction, there has been a series of studies looking at factors affecting the flow of credit down the poverty line. This is of particular importance because in spite of the success of Microfinance Institutions such as the Grameen Bank in Bangladesh and BancoSol in Mexico, evidence shows that many Microfinance Institutions do not reach down the poverty line but tend to cluster at the top

Developing several hypotheses using the elements of the neo-institutional theory, this study looks at how geographic location affects how Microfinance Institutions target their clients and the moderating effect that their regional context has on other factors. This is analysed using an unbalanced panel of 6, 645 observations drawn from 443 MFI institutions in 81 countries divided into 5 regions for the time period 2000-2014. An ordered logit regression was run using the target markets as the ordinal dependable variables

Based on the arguments of the neo-institutional theory, this study builds on previous ones by using a larger sample size (and number of years) to examine how the regional context affects the relationship between institutional quality and the selective lending behaviour of MFIs in 81 developing countries. An ordered logit regression was carried out using an unbalanced panel of 6645 observations from 443 MFI institutions across six regions from 2000-2014 against a broad range of company, country, regional and global specific variables. The results indicate that the geographic locations affects how MFIs lend down the poverty line with MFIs in and those in Eastern Europe and Central America less likely to lend to down the poverty line. The study found that the regional context also plays a big role in how institutional factors affect MFI lending practises with certain factors being more relevant in some regions than in others. This study also makes a case for using target markets as a better measure for depth of outreach as opposed to the more popular loan sizes and identifies the role that rural population growth and mobile phone penetration play in increasing depth of outreach of microfinance.

Keywords: - *Microfinance, Depth of outreach, neo-institutional theory, institutional environment, ordinal logit regressions*

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CHAPTER 1: INTRODUCTION

1.1. Background of Study

Microfinance has been defined as the provision of financial services to poor, low-income but economically active people (Otero, 1999; Silva and Chávez, 2015). These financial services provided by Microfinance institutions (MFIs) include small loans, saving accounts, and/or insurance and are targeted at the segment of society that are not being serviced by traditional financial institutions due to their lack of a stable income, collateral or credit history (Silva & Chávez, 2015). Microfinance has witnessed a renaissance over the last two decades and from its informal roots has become more formalized and a global phenomenon. As microfinance has continued to develop over this period so has research around it focusing on different aspects such as trying to understand its mechanisms, real impact, successes and failures. This study is interested in understanding the reach of microfinance and is focused on analysing and determining the effect that the geographical location of Microfinance Institutions has on their lending practises, looking at the country level, regional level and global level factors. The study looks at groups of variables that are characteristic of the various location levels in order to establish what factors have the greatest influence on lending behaviour of Microfinance Institutions. These factors when identified, point out which location level exerts the greatest influence.

1.2. Context of the Study

The United Nations (UN) estimated that in 2002, approximately 1.3 billion (representing almost a fifth of the global population) lived in poverty based on their dollar a day estimation. In the war against poverty, microfinance has come to the fore as a major instrument in combating extreme poverty, with countries like Bangladesh successfully utilizing it to improve

the welfare of the poor in that country. In trying to address this issue, the United Nations decided to capitalize on the pockets of success that microfinance was having around the world and declared 2005 as the International Year of Microcredit. Microfinance can contribute significantly to the achievement of the United Nations Millennium Development Goals, as agreed upon by world leaders at the UN Millennium Summit in September 2000, which aimed at halving extreme poverty by 2015 (Hermes and Lensink, 2007). As post 2015, the MDGs have evolved into Sustainable Development Goals (SDGs), there have been reviews to the success of microfinance in poverty alleviation and several researchers agree with the United Nations that microfinance is an effective tool in reducing poverty (Panjaitan-Drioadisuryo and Cloud, 1999; Simanowitz, 2003).

Microfinance has become a global phenomenon and The Microfinance Exchange (MIX) highlights and keeps track of the development of microfinance across the globe and grouped into nine regions- Africa, East Asia and the Pacific, Eastern Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, North America, Oceania, South Asia and Western Europe. As much as poverty and inequality are global phenomenon's and can benefit from microfinance, it can be argued that it is more characteristic of developing countries than developed ones (Alvaredo and Gasparini, 2015). The developing world is home to about 85% of total world population, and the levels of poverty in these countries is more than 30% of their populations while in developed countries that ratio is closer to zero (Alvaredo & Gasparini, 2015). Zooming in a bit closer on the high incidence of poverty in the developing world, Alkire and Santos (2011) point out that the poverty levels are above 51, 58, 55 and 65% of the population in Pakistan, Bangladesh, India and Nepal respectively. They further report levels of poverty above 50% in the sub-Saharan countries of Niger, Guinea and

Mali, and above 30% in Nigeria, Burkina Faso and Madagascar. As such, poverty seems to be a major challenge exclusively of the developing world and fighting poverty would be more of a priority in developing countries than in the developed world. This study therefore will focus on the developing world looking at the African, East Asian and the Pacific, Eastern Europe and Central Asia, Latin America and the Caribbean, Middle East and the North African regions, as they are more likely to benefit from this study.

1.3. Justification for Research

There are several key reasons why this study is of relevance today. The first is that there has been a lot of literature covering the impacts of microfinance, less literature looking at how well targeted modern microcredit programs actually are and even fewer looking at factors affecting the targeting choices of the different types of MFIs. This research aims at covering the latter part.

Secondly, evidence from research indicates that many MFIs do not reach very far down the poverty spectrum, either in absolute terms or relative to other income categories (Hulme, 1999; Cohen and Sebstad, 2000). Instead, customers in these MFIs tend to be clustered around the poverty line, being as Woller (2002a) described them, predominately 'moderately poor' (top 50th percentile of households below the poverty line) or 'vulnerable non-poor' (households above the poverty line but vulnerable to slipping back into poverty). Understanding what factors affect depth of outreach to the poorest borrowers will help government in key policy formulation to encourage lending to this market segment. However, it is not possible to adopt a blanket approach in trying to understand how MFIs behave the way they do, as microfinance institutions have developed differently across the various regions in what Gravesteijn, Humberstone, Johnson, Nino, and Zarazua (2015) call the plural

history of microfinance. These differences in its development need to be considered in both research and policy formation.

Thirdly, in the wake of calls for Microfinance Institutions to become more sustainable and relying less on donor funds, the question of 'mission drift' is also becoming a popular topic in Microfinance Literature (Casselman and Sama, 2013; Mersland and Strøm, 2010). Mission Drift refers to the shifting focus of MFI's from reaching the abject poor to the wealthier poor in order to maintain financial profitability and sustainability (Cull, Demirgu¨ç-Kunt and Morduch, 2007). On one side of the argument there are the institutionalists who argue that commercialization of microfinance may attract increased commercial funds, which may contribute to supporting the outreach goal of MFIs by allowing them increase the loan amounts to the poor and/or ensure the provision of such loans for a longer period of time. This could lead to the increasing of the absolute number of poor people that have access to MFIs or outreach. They also argue that increasing competition and adopting technology in lending and operations could improve the stability of MFIs and increase their efficiency. This again, can help generate more financial resources with can be used to help the poor. Under these circumstances, outreach and financial sustainability and efficiency seem to be compatible objectives. On the other side of the argument are the welfarists (Hermes, Lensink and Meesters, 2011) who emphasize the importance of outreach and see shift of focus to sustainability as a threat as lending money to the poor can be very expensive, the cost increasing with the depth of poverty. As such, they see the sustainability goals as conflicting with the outreach goals. These studies tend to view lending down the poverty line and profit making as mutually exclusive and independent of other factors and as such, previous studies that have touched on depth of outreach have treated it as a trade-off option. This study

presents a more holistic view by presenting evidence that sustainability/profit making and lending to the poor are not mutually exclusive and as such, provide a different premise with which to understand the issues affecting lending behaviour.

1.4. Research Questions, Objectives

In a bid to understand how MFIs target their clients and why some do not lend down the poverty line, studies have tested for and linked various factors. Some studies have concentrated on how the organizational structure or Legal Charter affects the depth of outreach of microfinance. The premise is that the mission or strategic intent of Non-Government Organizations engaged in Microfinance is solely on seeking out and helping the poorest whereas other organizational types such as Microfinance Banks are more profit oriented and as such would not seek out poorer clients (Casselman and Sama, 2013; Cull et al., 2007). This argument has served as the basis for using mission drift to explain any relationship favouring profits and efficiency over depth of outreach (Hermes et al., 2011). However, these studies have not been able to reach a consensus and in several situations seem to contradict each other. Newer studies have begun to look beyond organizational structure and its components to external factors such as the macro-economic environment (Ahlin, Lin and Maio, 2011), institutional factors (Müller and Uhde, 2013) and culture (Manos and Tsytrinbaum, 2014). While these studies have shed more light on factors that influence lending patterns, they suffer one major setback- lack of generalizability.

A key part of the issue with these results is that they vary across geographical locations. As such, where one study finds that legal charter affects depth of outreach, results from another study in a different region might indicate that it does not. Studies show that even when the same model is copied as in the case of the Grameen Bank (Mauricio, Daniel, & Raúl, 2017) or

the Raiffeisenism model (Colvin & McLaughlin, 2014) across different regions or cultures, it has varying results. This points towards the influence of geographical location on the Microfinance Institutions and what these studies have failed to do is consider this while explaining variations in lending behaviour of MFIs. Therefore, the aim of this study is to:

Determine whether the geographical location of an MFI affects its lending practises.

As such, this study has as its main research question:

RQ1*: Does the geographical location of an MFI affect its lending practise?*

Studies in organizational behaviour have put forward the argument that all things being equal, organizations faced with the same kind of pressures, would respond in the same way. The various external forces that affect MFI lending behaviour can generally occur at three different levels- global, regional and country levels. Studies show that global events have the capacity to affect economic activities. For instance, the 2007-2009 financial crisis affected credit supply (Ramcharan, Verani, & Van Den Heuvel, 2016), impacted on financial markets, economies, government budgets (Lindquist, Vries, & Wanna, 2015) and stock markets (Dimitriou, Kenourgios, & Simos, 2013; Jin & An, 2016). However, the level to which the various economies and markets were affected varied from location to location (Dimitriou et al., 2013; Jin & An, 2016). Regional (such as the Asian financial crisis) and country specific events have also shaped the way economic agents perform and behave. As such, the first research question is broken down into three:

RQ1$_A$: *Do Global factors have an effect on how MFIs lend to microenterprises?*

RQ1$_B$: *Do regional factors have an effect on how MFIs lend to microenterprises?*

RQ1$_C$*: Do country factors have an effect on MFIs lend to microenterprises?*

These forces putting pressure on Microfinance Institutions are considered together as they do not act alone but exert pressure at the same time as there is varying level of embeddedness and interdependence of the different location levels being considered in this study. Countries are connected within regions and the regions with each other to form a global marketplace. Microfinance has benefitted from the recent wave of financial globalization that has been going on since the mid-1980s which has been characterized by a surge in capital flows between developed and developing countries (Prasad, Rogoff, Wei, & Kose, 2005). This leads to the next research question:

RQ2: *At what level is the most pressure exerted- organizational, country, regional or global?*

To answer these questions, this study turns to organizational theory (the neo-institutional theory in particular), which enables the study take a broader look at the environment in which these MFIs operate in. This study is able to offer a more holistic view of the factors that affect the ability of microenterprises to access credit. This study quantitatively uses a neo-institutional theory approach to look at the effect of the environment on its lending habits and sets out its first objective:

OBJ1: *To identify global factors and a wide spectrum of factors that vary across regions and countries and measure their level of impact on MFIs lending down the poverty line*

Based on the earlier assertion that the level of impact varies, this objective is further broken down to three sub objectives:

$OBJ1_A$: *To identify global factors with impact on MFI lending and determine the nature of their impact*

OBJ1$_B$: *To identify varying regional factors that affect MFI lending and determine the nature of their impact*.

OBJ1$_C$. *To identify varying country factors that affect MFI lending and determine the nature of their impact*.

While the second research objective is:

OBJ2. *To determine which of group of factors has the most impact on MFIs lending down the poverty line.*

1.5. Proposed Research Contributions

By attempting to meet the set out research objectives, this study adds to the growing body of literature that investigates the issues with lending to the poor, taking a slightly different methodological approach. This study (to the best of my knowledge) is also one of the first to empirically investigate factors affecting depth of outreach from an organizational theory perspective (the neo-institutional theory) and this was done in order to obtain results that could better explain MFI behaviour.

The multi-dimensional nature of Microfinance, its global presence with local action, its dual bottom line and its current relevance offers a unique opportunity to apply the evolving theories in the field of organisational behaviour. Neo-institutional theory looks at the forces that compel organisations towards homogeneity and applying it to this study allows us an opportunity to contribute to the development or extension of this theory.

While there have been several studies exploring why MFIs are not lending down the poverty ladder, there seems to be a lack of general consensus amongst them (as this study will show). A key contribution of this study will be explain these differences.

Part of the issue with generalization has been the narrative of this body of research. The narrative of depth of outreach in microfinance has been quite singular, looking simply at the effects of various factors on loan sizes via series of regressions. This study seeks to expand these studies by focusing on target markets rather than loan sizes. Using an ordered logistic regression and the neo-institutional theory allows us expand this narrative to explain why certain market segments are chosen over others. This study will also add to the growing literature that looks at the relationship between gender and depth of outreach in microfinance and the impact of institutional quality of depth of outreach in microfinance

1.6. Thesis Structure

Following this chapter, the structure of the rest of this thesis is as follows:

Chapter 2 will focus on introducing microfinance looking at its background, evolution and key concepts. To be able to fully grasp the theoretical framework of this research, it is important that the reader fully understands the basic concepts and history of microfinance. As such, the chapter begins with a historical overview of microfinance, tracing its development as far back as possible up to where we are today. Section 2.3 then looks at the modern day microfinance in its most prevalent forms and types. Section 2.4 then looks at the agenda of microfinance research and how this research fits in. As microfinance continues to be a hot topic, research in this area has continued to take shape over the years, as such, section 2,5 will look at microfinance in developing countries across several regions, briefly describing their key features, and where microfinance currently stands across these different regions. Specifically, this chapter looks at microfinance in Latin America and The Caribbean, Eastern Europe and Central Asia, Middle East and North America, East Asia and the Pacific, South Asia and Africa respectively, highlighting the growth of microfinance in each of these regions.

The next chapter, chapter 3 is the literature review, reviewing theoretical and examining their empirical studies backing them. It begins with a look at the theories underpinning this research- The Theory/Theories of Microfinance, Mission Drift and The Neo-Institutional Theory. Section 3.3 then examines the factors affecting depth of outreach from the perspective of geographical location. Section 3.4 looks at the neo-institutional theory and the coercive, mimetic and normative isomorphic pressures and establishes a link between them and microfinance in section. Section 3.5 draws from the preceding sections to develop the hypothesis that this study will test.

Chapter 4 discusses the methodology employed in this research. It opens with looking at the various methodologies employed by researchers in the area of microfinance and then goes on to justify the choice of method used in this research. Discussing the data, statistical methods used and issues of validity and reliability of both data and methods.

Chapter 5 is the results and Discussion chapter and is dedicated to analysing and discussing the results. The chapter starts with a discussion of the descriptive statistics and then looks at the ordered logit regression model and discusses its results in relation to the hypothesis developed in chapter 3. It also looks at further analysis as well as the robustness and sensitivity tests.

Chapter 6 is the conclusion of this thesis and beings with a summary of the research findings. Section 6.3 looks at the contributions of this thesis to the growing body of microfinance research while 6.4 looks at the limitations of this research and 6.5 discusses recommendations for further research.

CHAPTER 2: BACKGROUND & CONCEPTS

2.1 Introduction

The basis for the argument this thesis puts forward is that Microfinance has developed independently across geographic locations and although there are pressures exerted from global organizations and other sources, Microfinance Institutions have kept some of their local characteristics and these affect how they lend. This chapter looks at the plural development of microfinance across the world from its basic form to the modern version we have today.

2.2 Historical Overview of Microfinance

2.2.1 Money Lenders

Money lenders are described as individuals whose time is mostly spent lending money, sometimes without requiring collateral and usually for short time periods and at relatively high interest. Operating in markets that are highly localized, their operations have low transaction costs and the money lenders have close relationships with their clients/debtors (Buckley, 1997). Literature shows the existence of moneylenders to be widespread. Apart from the extensive work done on India, there has been evidence of moneylending amongst the pre-colonial Yoruba's (south-western Nigeria) and even in present day Ireland (Byrne, McCarthy, & Ward, 2007).

Moneylending however had three major issues that plagued it (Falola, 1993): First is that borrowing from money lenders was usually an act of desperation entered into as a last resort. Second is the possibility that the moneylender would look for ways to cheat borrowers. One such way would be to make borrowers sign that they had taken as principal more money than

they actually had (Mihir, Rangu, & Shankar, 2007). There were also accusations of dishonesty, with moneylenders doing all they could to ensure that their debtors stay indebted to them by using their ignorance and encouraging extravagance (Mihir et al., 2007). The third problem with money lenders were the high interest rates they charged and this is still a major issue when dealing with moneylenders today. In the Punjab area of India for instance, the interest rates ranged from 134-159% (Singh, 1983). In Thailand the rates were 60-120% with the higher rates found in the remote areas (Mingmaneenakin & Tubpun, 1993). In Pakistan interests ranged from 18-200% with an average rate just below 70% (Aleem, 1990), while in some West African countries the rates were found to be 50% higher than what is charged in the formal sectors. The common practice amongst the pre-colonial Yoruba's of Nigeria was to collect a minimum of 100% with mortgage rates at 6pence on the pound per month (72% per annum). The bigger moneylenders could offer rates as low as 3p to the pound per month but this was on the production of title deeds of premium locations in the city (Falola, 1993). In India, the interest rates varied depending on area, size of the loan and the class of moneylender. In some instances, the interest rates were risk weighted. For instance traders were charged 60% per annum normally but in situations where the purchased goods had to go through the forest, the interest rate went up to 120% per annum and up 240% per annum if the cargo was sea borne (Singh, 1983). In the Bengal area, there were five classes of moneylenders lending to different classes of people (Singh, 1983).

In India their punishments for defaulting on loans depending on the kind of dispute (18 were listed). The moneylender petitioned the king who had the powers by any means necessary to recover these loans sometimes employing such drastic measures like killing the debtor's cattle or even his wife and children. If the debtor died before paying, the children were liable

for the debts. The wife of a debtor was absolved of liability if she did not consent to the loan but the husband of a deceased debtor was held liable whether he consented or not (Singh, 1983). The Yoruba traditional method of debt collection was either of two methods. One was to use a *dogo* (distrainor) an elderly person sent to live with the debtor whom the debtor became responsible for feeding and for their funeral (if the person died while in residence with the debtor). The *dogo* would make himself such a nuisance until the debtor settled his debt. More drastic measures employed included selling the debtor as a slave (during the period of the slave trade) and forcing his family to settle the debt (Falola, 1993)

Profit seeking was not the only reason for the high interest rates charged by moneylenders. Other reasons include, the lack of proper and credible documentation, the high cost associated with collecting the debt (both in terms of time and money), the problems with securing the loans (difficulty in selling the collateral and problems collecting from the surety) all combined to increase the risk associated with lending by money lenders and contribute to the high interests charged by them (Falola, 1993). In spite of the high interest rates charged, the money lenders net return on capital is moderate, (estimated to be an average of 15% on their capital) due to the high levels of risks and the large overhead cost associated with lending and collecting (Falola, 1993; Mihir et al., 2007).

Various governments have attempted to make moneylending more efficient and less acrimonious. The representative of the British government in Lagos, Nigeria expressed his doubts that any legitimate use of money could give a return of 45% and as such, no one borrowing at such a rate would be able to extricate himself or herself from the debt. This led to the government of Lagos State to pass the Moneylenders' Ordinance of 1938 that limited interest rates and forced lenders to obtain licences (Falola, 1993).

Government regulation of moneylenders is a current practice in Ireland where lending is classified into two divisions, prime (or mainstream) and subprime lending. Money lending falls under the sub-prime category and is either regulated or legal and unregulated or illegal. Authorized money-lenders are legislated under the Consumer Credit Act 1995 and regulated by the Irish Financial Services Regulatory Authority (IFSRA). They are permitted under this act to give loans (cash or goods) with a minimum Annual (APR) of 23%. According to the IFRSAs 2003/2004 annual report (IFSRA, 2005) there were 52 regulated moneylenders in Ireland lending at an average APR of 126.9%, ranging from 29.8% to 196.5% (Byrne et al., 2007).

In Uzbekistan, moneylenders always deal with cash and lend in both the domestic currency and in dollars. The rates vary according to location and loan sizes with loans offered in domestic currency tied to the US dollar street market exchange rate to protect against the risks of inflation and devaluation. Uzbekistan moneylenders mostly use a simple interest rate in their dealings, with interest charges accrued and paid on a monthly basis. However, they apply compound interest rates to overdue payments. Loans are predominantly short-term, with maturities varying from a few days to several months. Rates also vary according to location with rates in Tashkent (the most affluent province in Uzbekistan with an annual output three times higher than the national average output across the region) between 10 to 15% per month on loans of between USD2000 –3000. In poorer provinces where the loan sizes are between USD500 –1000, the APR is between 20– 25%. This trend is similar to the trend of higher interest rates in poorer areas noticed in India by Ghatak (1983). (1983).

The reasons for borrowing from moneylenders vary ranging from convenience, ease and speed of accessing the funds and tradition (Byrne et al., 2007) to family demands, pressure to fulfil social obligations and the desire to be successful, prominent and healthy (Falola, 1993).

The most prevalent reason though is the fact that in most cases that they are the only available source of funds.

2.2.2 ROSCAs

ROSCAs are another means for compensating for the failures in existing formal financial markets arising from asymmetric information. ROSCA stands for ROtating Savings and Credit Association and is a group/collective saving scheme. In this savings method, the members of the group agree on the amount they want to contribute and the intervals at which they will make payments. This could be daily, weekly, monthly or quarterly as agreed on by all the members of the group. The total amount contributed is assigned by the entire group to each of the members in rotation and when everyone has had their turn, a cycle is concluded and the ROSCA can go either another cycle or be disbanded depending on the agreement of the members. The length of the cycle is dependent on both the length of the intervals and the number of members. Very large groups can be split into subgroups with group heads responsible for ensuring that their subgroup members make and receive their payments from the fund. The group is usually under an organizer and made up neighbours and friends. ROSCAs are able to overcome the issues of moral hazard, as there is a high level of transparency within the group because member's personal circumstances and attributes are usually known. This is because membership is usually amongst relatives and close communities and this makes it easier to use social collateral to ensure the success of the ROSCA (Armendariz & Morduch, 2010; Falola, 1993; Kimuyu, 1999; Nurmakhanova, Kretzschmar, & Fedhila, 2015). ROSCAs are usually informal but there is evidence of formal ROSCAs in Argentina organized by banks and car dealers. Unlike the informal ROSCAs, the formal ones are larger (20-100 members) and the members do not necessarily need to know each other and never meet. As such, social capital cannot be used and in its absence, the

government of Argentina regulates them. The monthly payments (and by implication, the pot) and the length of each cycle (due to its larger membership) in formal ROSCAs are larger than that of the informal. Other areas where the formal ROSCA differs from the informal one are in the collection of fees and insurance (usually about US$600), the payment of some interest to net savers (Schreiner, 2000).

There is evidence showing that ROSCAs have existed nearly universally under different names. Armendariz and Morduch (2010) records that they have been found in Bangladesh as *loteri samities*, in Taipei as *hui*, in Mexico as *tanda* and Chile as *pollo*. In Africa it is called *tontines* by the Cameroonians (Armendariz and Morduch, 2010) and *esusu* and *dashi/adasahi* by the Yorubas and Hausas of Nigeria respectively (Falola, 1993; Nurmakhanova et al., 2015)

Participation in ROSCAs in these communities is partly driven by the need to raise school fees, meet medical expenses and buy food. ROSCAs funds are also used to start or promote small businesses and acquire assets, including livestock. Households owning smaller landholdings and those enjoying higher expenditures are more likely to participate in ROSCAs. The number of schemes in which a household participates is closely related to the main uses of ROSCAs funds while contributions and value of receipts are determined by total expenditures and frequency of turns respectively. A member can contribute more than once if they want to or two or more people can come together to share a payment. When it is their turn to collect, they split it in the same ratio they contributed. Early withdrawals are not encouraged but if a member has a pressing need, they could apply to the group head. When several people make claim for early withdrawals, the group head decides who gets it. In a situation where a payment is split into two or more amongst people with urgent needs, they will split another

payment before the end of the cycle to receive the full amount they paid (Nurmakhanova et al., 2015).

If a member defaults during a cycle after they might have received all or part of the fund, the member is asked to repay the excess he has collected over the amount contributed, if the member fails to do so, they are sued to the customary court where the case is treated as a debt case. If the defaulting occurs in a cycle where the member has not yet collected, they apply for the amount due to him and collect it at the end of the cycle from any amount left over. Usually an attempt is made to find a replacement for the defaulting member (Nurmakhanova et al., 2015).

There are no overhead costs in running a ROSCA as either members bring their contributions to their group head or the heads go and collect it from those under them. However, in some unrestricted ROSCAs the members willingly contribute an extra round at the end of the cycle, which is divided among the heads and subheads. There are also professional ROSCA groups created by people who run it as a business. They tend to insist on the extra round as professional fees (Nurmakhanova et al., 2015).

There are two types of ROSCAs. The first is the conventional type, found all over the world, in which the full amount contributed (apart from minor deductions) is allocated to one member at a time, either by lot, demonstrated need or in an agreed-upon sequence. There Is also an advanced type found in a number of Asian countries including China, Vietnam and Nepal where the amount collected is allocated by auction to the lowest bidder and the balance returned to the members, or by tender (Seibel, 2005).

Risk management usually occurs in either of two ways. In the first method, payments are split amongst two or more members to reduce the likelihood of a member defaulting after they

might have collected their entire contributed sum. In the second, a reserve fund is held to reduce the loss exposure should a member default (Nurmakhanova et al., 2015). Methods of enforcement include banning participants who create problems by either late payments or defaults from accessing other facilities such as trade credit or credit cooperatives, or denying them access to needed raw material. Anderson, Baland, and Moene (2003) report that in Kenya, ROSCA participants have been known to seize goods belonging to members who default for resale. Other methods of enforcement include ostracizing the defaulting member within the local community or exclusion from religious and/or social activity (Ardener, 1964)

However, there are several limitations to ROSCAs. Armendariz and Morduch (2010) pointed out that the size of the pot or the individual contributions cannot be increased during the cycle. Increasing the pot at the end of the cycle would entail either increasing the size of the contribution (and excluding the poorer members) or adding more members (and increasing the cycle time). Secondly, ROSCAs cannot mobilize funds outside groups and/or communities. The time and timing of collection also presents a problem. Under the random method of allocating the pot, the time when a participant collects the fund may not necessarily coincide with the participants' specific financial need that needs to be met. Using the bidding method, as participants can only collect the fund once during a specific cycle, they can only hope to handle situations which occur only once (Besley, Coate and Loury, 1993). ROSCAs also are limited in that they can neither mediate between strangers nor effectively diversify risk (Schreiner, 2000).

Microfinance borrows the concepts of using groups to allocate resources from ROSCAs while being able to mobilize funds across groups and communities where needed.

2.2.3 Cooperatives

Cooperative can be defined as an organization that is made up of and represents the interest of aggregated and full integrated independent economic units or persons (Ling, 2009). An alternative definition given by the United Nations defines them as

> *"...an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise"*
>
> *(ICA, 1995; Novkovic, 2008)*

Cooperatives are generally governed by seven principles of cooperation and these are voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training and information; co-operation among co-operatives; and concern for community (Ling, 2009)

In terms of microfinance, financial cooperatives are simply a people-based organization relying on the active participation of members to differentiate themselves from investor owned firms, and to develop and support their competitive advantage. They are a modification of the ROSCA scheme. With ROSCAs, members could only save but with the modified structures of cooperatives, members can both save and borrow. A member could also choose to do either and the cooperatives structure makes room for multiple borrowers at the same time. Another key advantage of the cooperative (over the ROSCAs) is that it is not mandatory for savers to borrow, and that loan sizes vary with need. However, the trade-off is that funds now require storage and safekeeping and that there are the additional accounting and management functions, which have also become more complex.

Seibel (2005) narrates the history of microfinance across Asia and Europe and the narrative indicates that the cooperatives had a very strong presence in Europe. In Ireland, the history of microfinance goes back as far as 1720 starting off as a self-help initiative as the Irish Loan Fund which was a charity initially financed from donations and providing interest free loans. It then grew into financial intermediation between savers and borrowers with short-term loans and weekly instalment payments. There was no regulation and repayment was enforced using peer monitoring. It became legal in 1823 for funds to collect interest-bearing deposits and charge interest on loans and in 1836, the government set up a regulatory and supervisory body - The Loan Fund Board. These two events saw a boom in microfinance activities and by 1840, about 300 self-reliant and sustainable funds had sprung up. These funds went aggressively after deposits, with deposit rates three times higher than what the commercial banks were offering (and with higher interest rates on loans) and financed solely on deposits and profits, their outreach eventually covered 20% of Irish households. The Irish commercial banks felt threatened and in 1843, they induced the government to place a cap on interest rates and thereby take away the Loan Funds competitive advantage. Because of this, the loan funds went into gradual decline and by 1950, they had disappeared (Seibel, 2005).

Often cited in literature regarding cooperatives are its strong German roots. In Germany, the microfinance sector is divided into two networks: community savings funds (called savings banks in English) and member-owned cooperative associations, which are now, called cooperative banks. The lessons from Ireland indicated that there is a strong demand amongst the poor for safe deposit facilities and that charity is not sustainable.

Seibel (2005) gives a history of the evolution of cooperatives in Germany drawing from the lessons of the Irish. The Germans set up the first thrift society in Hamburg in 1778 and the communal savings fund (Sparkasse) in 1801. The savings funds had to expand their credit

business because of the influx of funds in the form of savings, and started agricultural lending. The State then passed the Prussian Savings Banks Decree in 1838 to regulate these funds and in 1884; the savings banks formed the German savings banks association. The great hunger of 1846 – 1847 led to many peasants losing their fields to moneylenders and bankruptcy. In 1847, financed by charity donations from some wealthy people, Raiffeisen started a rural charity association that brought in grain from non-affected areas in the East. This charity was able to reduce the price of bread by 50% after only a few months. However, when Schulze-Delitzsch's started the first urban credit association in 1850 (McKillop, 2005), he chose to shun charity and to follow the principle of self-help without charity from the beginning. This saw it perform better than the rural ones and as such when Raiffeisen opened the first rural credit association in Heddesdorf, he rejected charity. When the merger between rural and urban credit associations occurred in 1889 under the Cooperative Act of the German Reich (which was the first cooperative law in the world), limited liability replaced joint liability. The cooperatives grew quickly and by 1913, Germany had 1,500 urban cooperatives with combined membership strength of 800,000 (McKillop, 2005) and more than 15,000 rural cooperatives with 1.5 million members (McKillop, 2005; Seibel, 2003).

As of 1997, the two microfinance networks in Germany encompassed 39,000 branches, 75 million customers, 64% of all financial intermediation and 51.4% of all banking assets. After the consolidation exercise in 2002, the number of branches was been reduced to 29,500; representing 93% of all bank branches in Germany. That same year, savings and cooperative banks were responsible for 53% of all retail loans to private individuals and 57% of all loans to small and medium enterprises. In comparison to the top four commercial banks in Germany, these savings and cooperative banks are more profitable. In 2002 their pre-tax

return on equity was 8.2% among savings banks, 9.2% among cooperative banks and –3.1% among the four big commercial banks (Seibel, 2003).

Apart from Ireland and Germany, other European countries joined in. Luigi Luzzati brought Schulze-Delitshs' philosophies to Italy and started and promoted the peoples bank. The Peoples Bank of Milan became one of the largest banks in Italy by 1909. Leone Wollembory started rural banks for farmers and by 1913; there were 2,000 rural banks in Italy. By 1996, *Banche di Credito Cooperativo* and *Banche Poplari* of Italy had a market share of 29% of the domestic banking market (McKillop, 2005). In Austria, the first Schulze-Delitsh society (urban cooperative) was organized in 1858 and the first *Raiffeisen* (rural cooperative) in 1886. By 1913 there were 3, 500 urban and 8, 000 rural cooperatives. As of 2005, the *Volksbanken* and *Raiffeisenbanken* had a market share of 32% in Austria (McKillop, 2005). In the Netherlands and Belgium, there are no urban cooperatives and the rural cooperatives are known as *Rabobank* in Netherland (with a market share of about 40%) and *Cera* (with a market share of 15%) in Belgium. In France, *Credit Agricole*, *Credit Populaire* and *Credit Mutuel* in 2005 owned a joint market share of about 40% of the domestic banking market (McKillop, 2005) and 45% in 2015 (Coppola, 2015).

It was in 1901 that the concept of credit cooperatives came to Canada from Europe and Alphonse Desjardins is credited with starting the first people's bank (*caisse populaire* as it was called) in Levis so that people excluded from the banking system to access credit facilities (McKillop, 2005; Poulin, 2000). Growth was slow until the Province of Quebec passed legislation in 1906 and now there are 700 financial cooperatives in Canada. Desjardins is the primary bank in Quebec with a market share of about 45% and with about 5.6 million members in a population of slightly above 8 million people (Adeler, 2014; McKillop, 2005). It

is also the biggest private employer of labour in Quebec, employing an estimated 40, 000 people (Adeler, 2014).

Desjardins carried the cooperative movement over the border from Canada to the United States where he went to help set up a people's bank for a French parish in Manchester. New Hampshire. Working with the commissioner for banks in Massachusetts, Pierre Jay who drafted the Massachusetts Credit Union Act of 1909 and a businessperson, Edward Filene, they were able to spread the cooperative movement and today. one third of the American population or an estimated 85million people are union members and the 9,600 credit unions own a market share of about 7% and $630 billion in assets (McKillop, 2005).

As (McKillop, 2005) pointed out, although all financial cooperatives are started based on the guiding principles of the cooperative movement, their development has varied across countries and has been shaped by the different historical, economic, social and political settings of these countries, pointing towards the effect of geographical location.

2.3 Modern Microfinance

As illustrated in the above discussion, the underlying concept of microfinance has been around for a very long time and its development was largely via informal institutions and self-help groups. The renaissance of microfinance that has led to its formalization, the modern day structures built around it all the attention it is currently getting can be traced to US$27 loan that Prof Yunus Mohammed gave to 42 people in Bangladesh in 1976. This loan was as a result of his analysis of the poverty trap that money lenders held the poverty stricken residents of Jobra in Bangladesh (Yunus, 2003). Consequent to the repayment of that loan and armed with evidence, Prof Yunus tried to show the local bank that it was profitable to lend to the credit constrained poor with no collateral but the bank refused to get involved.

Prof Yunus stood as a guarantor and the client base grew from the small village of Jobra to ten, twenty, fifty villages to one and then five districts with default rates much lower than that of the bank. Yet the bank still refused to adopt the business model. Realizing that the rigidity and structural constraints entrenched in the traditional banking system would not support the growth of microfinance, Prof Yunus went about setting up a bank specializing in loans to poor people (what has now been come to be known as a microfinance bank) and as such in 1983, the Grameen Bank was launched. Out of the 68,000 villages in Bangladesh, 37,000 have a Grameen branch. 94% of the banks 2.3 million borrowers in Bangladesh are poor women and yet the bank has a repayment rate of 95%. The demand for microfinance has continued to grow and even though the loan sizes still remain small (an average of U.S.$175.2), by June 1997, the bank had cumulatively lent more than U.S.$2 billion to the poor (Yunus, 1998).

The success of the Grameen Bank generated so much global interest in microfinance that United Nations declared 2005 the year of microcredit with the aim of using microfinance not just to reduce global poverty by the turn of the millennium but also as a tool to reach the other seven Millennium Development Goals (UNCDF, 2005). These events have led to the development of structures and systems and the formalization of Microfinancial Institutions (MFIs) to successfully deliver microfinance services to the poor.

Following is the description of some of these formal structures that have sprung up to deliver this service.

2.3.1 Nongovernment Organizations (NGOs)

The term 'Non-Government Organization' or NGO came into usage in 1945 and was coined by the United Nations as a result of their need to distinguish in their charter between the different participation rights for specialized intergovernmental agencies and the international private organizations that they work with (Willetts, 2002). NGOs sprung up as a result of the void created by the failure of commercial banks to reach the effectively reach the poor ad they have been hailed as the true pioneers of microfinance (Helms, 2006). They possess economic, informational and intellectual resources that has allowed them gather enough proficiency and influence to shoulder authority in issues that were traditionally the sole purview and responsibility of states (Clark, 1995). There is no officially accepted definition of an NGO and within different contexts the term carries different meanings. However, according to Willetts (2002) there are a few basic characteristics that include:

- An NGO must be independent. That is, it should not be directly controlled by any government.
- An NGO cannot be created as a political party
- An NGO should is a not for profit organization
- They must be a non-criminal group and non-violent in nature.

These characteristics apply in general usage, because they match the conditions for recognition by the United Nations. The boundaries can sometimes be blurred: some NGOs may in practice be closely identified with a political party; many NGOs generate income from commercial activities, notably consultancy contracts or sales of publications; and a small number of NGOs may be associated with violent political protests. Nevertheless, an NGO is never constituted as a government bureaucracy, a party, a company, a criminal organization or a guerrilla group. Thus, for this article, an NGO is defined as an independent voluntary

association of people acting together on a continuous basis, for some common purpose, other than achieving government office, making money or illegal activities (Willetts, 2002).

Clark (1995) pointed out, there are three main things that give NGOS their level of influence and make them effective in their chosen areas of dedication when compared to states. The first is that whereas states have a myriad of issues they need to attend to (with national security being top priority); NGOs are singular in their focus. Secondly, because they usually take up principle-based issues, NGOs are able to commit to issues and causes that states' may rank lower in their list of priorities or ignore completely. The other thing is that when compared to states, NGOs are very intensive in their commitment to their chosen issues. The narrower scope of NGOS mentioned before allows them to concentrate their resources of volunteer memberships and paid staff in a way that state representatives may not be able to.

Some NGOs dedicated solely to delivering microfinance and micro-financial services, while there are others offering these services as part of a bundle of services. The nature of these NGOs also varies; they could either be entirely indigenous or have some affiliation to international networks. Although NGOs have been at the forefront of the development of microfinance, there have been a number of challenges and constraints. One of such constraints is their dependence on donors for financing. NGOs more often than not were launched with and remain dependent on donors for financing and this limits the growth of microfinance in areas served by these NGOs as they may not be able to meet the growing demand. Compounding this challenge is the fact that because their board members do not represent the shareholders and/or are not member-owners with a financial stake, their governance structure is not qualified to assume fiduciary responsibilities and this limits the range of finance related products they can offer. For instance, one way of increasing available

funds for disbursement is by mobilizing savings but NGOs cannot legally do this as this can only be done by banks and other intermediaries that are under the supervision of banking authorities. As the demand for efficiency and sustainability increases, more and more NGOs are moving towards commercialization in order to wean off of donor funds and be able to increase available funds by seeking commercial sources. As such several NGOs have scaled up to become formal financial institutions. However, this scaling up has raised the question as to whether an NGO whose primary focus are socially conscious issues would lose that focus in their quest for profits or financial sustainability. This is what has come to be known as 'Mission Drift'. As microfinance continues to evolve, questions are being asked as to what roles international and domestic NGOs will play in the building of inclusive financial systems and since they do not have access to national payment systems and are not allowed to mobilize savings, if they will ever be able to offer the variety of services that poor clients are demanding. In general, there is an on-going debate as to the role NGOs will play in the future as providers of microfinance (Helms, 2006).

2.3.2 *Rural Banks*

Rural Banks are formal and/or informal financial institutions and agencies that are created with the help of the government to meet the peculiar credit needs of people in the rural areas (Desrochers, 2003; Khankhoje, 2009). Rural banks are state run (Cull, Demirguc-Kunt and Morduch, 2009) and usually established by legislature such as the 1977 1:4 license rule in India (Khankhoje and Sathye, 2009) and the New Rural Bank Act (RA 7353) of the Philippines (Desrochers, 2003). The reasoning behind establishing rural banks was to reach the unbanked and poor in rural areas with financial services that met their unique needs (Khankhoje, 2009). As such, a lot of rural banks were offering agricultural loans.

2.3.3 *Microfinance Banks*

The need for sustainability led to the belief that Microfinance could benefit by applying more commercial logic. This combined with the need to tap into more sources of funding and the expansion of microfinance into new areas lead to the evolution of Microfinance Banks. Banks were formed through one of several means. One way was for an NGO to upscale their status to become a bank (e.g. Bolivias BancoSol in 1992) or for donors to set up a Greenfield bank with a banking license and specializing in micro lending. Another way Microfinance Banks were formed was by commercial banks 'downscaling'. This is when a commercial bank creates a microfinance department (Lützenkirchen, 2012). There are several characteristics that differentiate Microfinance Bank from the other big player in microfinance- NGOs. First of all, Microfinance Banks are clearly for-profit organizations primarily seeking to maximize investments for financial reward (Cull et al., 2009). There is also a difference in how they distribute their profits with non-profits ploughing back any profits generated into their business to continue to advance their social goals while for-profits have the liberty to do whatever they want with any after tax profits generated (Cull et al., 2009). The ownership structures are also different with the boards of Microfinance Banks representing their shareholders and/or stakeholders in the bank. They are also allowed to mobilize funds via savings and are as such, supervised by the government.

Apart from the above mentioned MFIs there are also Non-Banking Financial Institutions that are usually NGOs that upscale

2.4 Microfinance Research

A research paper by Mersland (2005) examined the agenda of recent research in microfinance. Results of the analysis indicated that there are two broad groups into which these studies fall- research on sustainability and research on the impact of microfinance. The study captured a shift in impact assessment studies from an individual perspective to a wider impact assessment. What the Mersland (2005) study doesn't capture though is the shift in recent sustainability studies from best practices to a focus on the concept of mission drift, which as mentioned before is arising due to the increased call for sustainability and the fear that this might affect depth. The study highlighted that the benefits of the research produced so far seems to favour donors and practitioners more and pays less attention to research that would benefit governments and the banking community, especially the banking community.

Table 2-1: Type of research method vs. type of knowledge produced [1]

Article/Knowledge	Sustainability	Impact	Both	Total
Descriptive	30	23	3	56
Empirical	24	35	1	60
Theoretical	6	8	0	14
Total	60	66	4	130

In another paper looking at microfinance research, Fischer and Ghatak (2011) looked at the gap between microfinance theories and corresponding empirical work and suggested that existing or new theory should be used to explicitly design experiments and as the *ex-ante*

[1] (from Mersland, 2005)

framework for more empirical work. This thesis takes that step by using neo-institutional theory to explore MFI behaviour in the hope that the results would help in formulation of theories that taken into consideration location based factors.

2.5 Microfinance in Developing Countries

When Prof Muhammad Yunus and the Grameen Bank won the Nobel Prize for Economics in 2006, microfinance became a hot topic. A Google Scholar search with the keyword 'microfinance' gives 12,400 results prior to 2006 but from 2006 to present day, that number has more than tripled to 38,400. This section looks at the development of Microfinance Post Yunus in developing countries in the six regions as classified by MIX.

2.5.1 Latin America and the Caribbean

This region comprises of 41 countries ranging from small island nations to the larger economies like Brazil and Mexico. It is widely diversified in terms of financial sector development and income levels. While growth slowed down in other regions during the 2008 financial crises, the Latin America and Caribbean region posted a relatively strong performance. However, as measured by the Gini coefficient, the region, alongside Sub-Saharan Africa are the regions with the highest income inequalities even though its recent growth has slightly reduced this income inequality. This income inequality is more prominent and significant in a number of the strongest economies in the region, such as Brazil and Chile (CGAP, n.d.-b).

As of 2016, there were 433 self-reporting Micro financial Institutions in Latin America and the Caribbean with a combined 23.09 million active borrowers and a gross loan portfolio of USD 43.64 billion.

The commercialization of microfinance has happened faster in Latin America than anywhere else in the world. In a few short years, microfinance has gone from being the exclusive domain of non-profit organizations and cooperative societies to being funded by commercial banks (Providing 29% of the funding for microenterprises) and licensed financial institutions (formerly non-governmental organizations) and other specially licensed financial intermediaries (providing 45%). This shift has seen the provision of micro financial services extended to the poor on a massive scale by commercial enterprises (Christen, 2001). This is possibly because of the context and manner in which microfinance developed within this region (different from how it developed in the Asian region) - in a failing populist system, with prevalent unemployment. Microfinance developed to provide credit to the cash-strapped informal sector in order to solve the urban unemployment problem at that time. As such, the commercial logic of microfinance was embraced quite early. Latin America and the Caribbean's have a culture of social assistance that dates as far back as the 1920's and microfinance was the second form of social assistance to expand after 1990s. The growth and development of microfinance (and other social assistance schemes and policies) were significantly shaped and constrained by democracy and authoritarianism in this region (McGuire, 2013).

Morduch and Rutherford (2003) believe that this environment in which microfinance developed is responsible for the Latin American industry being characteristically urban and its focus on profitably serving micro-enterprises rather than aiding poverty alleviation. As such, its target has always been poor people with established businesses looking for capital for growth. Microfinance in this region was a business opportunity not social responsibility. The Latin America Microfinance institutions that have gone commercial are more profitable

than not just other Microfinance institutions in other regions but in some cases are even more profitable than the traditional commercial banks in their areas of operation (Christen, 2001).

There have been technological advances in Latin America too. Several banks and MNOs have partnered and launched a number of mobile banking products with the primary targets of low-income users via mobile payments products, but have a long-term vision for providing a broader range of banking services on these channels down the road. Mexico, Colombia, Argentina launched in 2012 and Paraguay and Haiti have been operating earlier. This region has also seen the incorporation of other service offerings/products such as healthcare (Geissler and Leatherman, 2015). Diego *et al* (2013) looked at how macro, meso and micro territorial boundaries affect the loan repayment rates of female clients of mega microfinance institutions (MFIs) based in Latin America and the Caribbean. The study uses panel data (random effect analysis) comprising of data covering seven years and 407 MFIs of LAC. Their findings indicate that the repayment performance of MFIs' female clients in the LAC region is meso- and micro- territorially bounded. It is positively influenced by the urbanization and gender inequality levels of the LAC countries, and by the number of loans per MFI loan officer.

2.5.2 Eastern Europe and Central Asia (EECA)

According to the CGAP (2011) report on the region, The Eastern Europe and Central America region was the hardest hit by the global financial crises in 2009. The region relies heavily on government assistance, with the government funding most of the MFIs/ This region in one of the most regulated and policy makers involved in regulating to prevent quasi-deposit-taking. There is also a premium placed on consumer protection and consumer financial education. There is a call for more research to establish whether government funding of microfinance

is filling in gaps or undermining private sector players, or in essence, doing more good than harm.

2.5.3 Middle East and North Africa

The Middle East and North Africa also known as MENA make up only about 5% of the global population and is characterized by its large youth population (50% of its population is between the ages of 15 and 24) who at 24% have the highest unemployment rate globally.

According to Findex[2], the region has the lowest percentages of adults with a formal account (14%) and of poor people with formal access to financial services (9%). In many countries in this region, the government plays a role in financial access through social funds (Egypt, Jordan, Lebanon, Yemen) or by strongly supporting the microfinance industry (Morocco). Reflecting the population share, microfinance coverage is of 3% of clients recorded on the MIX, with a remaining market estimated at about 19 million clients. The region counts both success stories and cases of severe crisis. According to the 2014 Findex figures and excluding Gulf countries, the region accounts for the highest percentage of financially excluded adults, with 80% of the population or about 200 million not having access to an account, and 95% not having access to credit.

Pearce (2010) offered the following insights into the characteristics of microfinance in the MENA region:

- Microenterprises make up the majority of enterprises in the region and are key employer of labour. For example, in Egypt, microenterprises make 92.5% of the enterprises and about has a 64% share of private employment.

[2] http://datatopics.worldbank.org/financialinclusion/region/middle-east1

- When compared to the other regions (apart from OECD countries and East Asia), the MENA region has greater financial depth[3]
- With the improvement of the credit registries and the establishment of credit bureaus comes a subsequent improvement in the quality of credit information and availability throughout the region.
- The MENA region is dominated by NGOs, state banks and postal networks and although a few countries within the region have passed legislation allowing other MFI legal charters, yet postal savings banks and post offices remain the primary service providers for savings and payment services for low income people in the region. Savings and loan cooperatives are not a major source of financial services in much of the MENA region.
- With the exception of Asia, the MENA region has better depth of outreach in comparison to other regions, with a large percentage of women, at 63 percent of total microcredit borrowers (although only 31% employees of Sanabel member MFIs are female). The proportion of women microcredit clients ranges from as low as 18 percent in Iraq, where female workforce participation has declined.

Brandsma and Chaouali (1998) identified social, cultural, or religious constraints as barriers to the development of microfinance in the MENA region. In certain Islamic groups for instance, charging interest rates on loans is considered to *haram* (forbidden by the Koran). To be able to penetrate these areas, it would be necessary to be innovative with the development of microfinance products which can be offered using Islamic banking principles such as *musharaka* (Equity financing where profits and loss are shared based on the

[3] Measured as private credit as a percentage of GDP

proportion of capital invested by each party), *murabaha* (similar to western rent-to-own arrangements), *or mudaraba* (trust based contracts). Pearce (2010)Pearce (2010) confirms this, directly linking innovation in creating Islamic banking products for microenterprises to the success of financial inclusion.

2.5.4 East Asia and the Pacific

The CGAP (n.d.) profile on East Asia and the Pacific highlight that it is home to 27% of the world population and 24% of its poor. It is made up of 25 countries and 3 major and significantly heterogeneous sub-regions and has enjoyed a high rate of economic growth over the past decade. East Asia and the Pacific has the highest percentage of adults with formal accounts, it also has several markets that are largely under served with less than 30% its poor people having formal access to credit. Governments play a prominent role at all levels of the financial system, and private microfinance has limited coverage (Duflos, 2012) . The region has several success stories in the area of regulations, retail models or branchless banking. The success of microfinance in this region has been linked to the innovations in the structuring of the of the microfinance institutions. In Indonesia for instance, the MFI *BRI Unit desa* has highly decentralized and semi-autonomous units and limit their staff number in order to keep their units small and focusing their operations. Their accounting system is designed to access the performance of each unit as a profit centre while their management information system is standardized to provide timely information on selected key performance indications to management (CGAP, n.d.). In Bangladesh, institutional innovation came in the form of the Palli Karma Sahayak Foundation (PKSF), which is public-private apex body created to channel microfinance funds to MFIs. In India, the institutional innovation was the concept of Self Help Group (SHG) Federations, formed in response to the problem Self Help groups were

having raising funds. SHGs Federations are made up of 20-30 SHG clusters, which are in turn, made up of 20 to 30 SHG groups (Parikh, Ghosh and Chavan, 2003). Having larger groups makes it possible to transfer funds across SHGs groups and to attract more funds from other sources such as institutional investors (Parikh et al., 2003). Other services provided by the SHG Federations include sector development, financial, livelihood and social intermediation, with the exact combination of services varying from place to place and evolving over time (Salomo, Rao and Kumar, 2010)

On the customer side, this region is characterized by a rice culture where deficit production requires large numbers of house-holds to supplement food production with small-scale market-based activities such as petty trading; high population density; clearly defined property (including land) rights; and a network of regular and accessible markets

2.5.5 South Asia

Like their Eastern counterparts, there is a lot of diversity in the various forms of microfinance in South Asia and in the institutional systems that formed them. However, while their Eastern counterparts post positive returns on assets and equity and their earnings from their loan portfolios covers their much higher cost levels, MFIs in South Asia post negative returns on assets and equity, even though their expense structures are some of the lowest in the world (Thapa, 2007). The region covers 15% of the MFIs reporting to the MIX database.

The CGAP website also highlights the following characteristics of the region:

- The accessibility of technology- this is encouraging the growth of branchless banking with several microfinance banks, mobile operators and more recently large commercial banks in Pakistan aggressively pursuing opportunities in this area. Other

countries are following suite with improved regulations from their central banks and substantial investments from multiple providers. Bangladesh, India, Afghanistan, Sri Lanka, Maldives and Nepal are all taking strides in the direction of branchless banking.

- The Pacific islands governments are also encouraging the development of microfinance with the government of Fiji established a National Microfinance Unit (NMU) and the government of Papua New Guinea adopting microfinance policy that ties into international principles of sustainability and facilitator role rather than a delivery one for the government.

The East Asia and the Pacific have their own unique set of challenges and the role of microfinance to their development challenges is unclear (Donaghue, 2004)

2.5.6 *Sub-Saharan Africa*

Microfinance institutions (MFIs) in sub-Saharan Africa includes a broad range of diverse and geographically dispersed institutions that offer financial services to low-income clients: non-governmental organizations (NGOs), non-bank financial institutions, cooperatives, rural banks, savings and postal financial institutions, and an increasing number of commercial banks. Overall, MFIs in Africa are dynamic and growing. Of the 163 MFIs that provided information for this study, 57 percent were created in the past eight years—and 45 percent of those in the past four. 2 African MFIs appear to serve the broad financial needs of their clients. Unlike trends in most regions around the globe, more than 70 percent of the reporting African MFIs offer savings as a core financial service for clients and use it as an important source of funds for lending. MFIs in Africa tend to report lower levels of profitability, as measured by return on assets, than MFIs in other global regions. Among the African MFIs that provided information for this study, 47 percent post positive unadjusted returns; regulated

MFIs report the highest return on assets of all MFI types, averaging around 2.6 percent. The microfinance sector in Africa is quickly expanding, and institutions have increased their activities. In fact, African MFIs are among the most productive globally, as measured by the number of borrowers and savers per staff member. MFIs in Africa also demonstrate higher levels of portfolio quality, with an average portfolio at risk over 30 days of only 4.0 percent. Still, African MFIs face many challenges. Operating and financial expenses are high, and on average, revenues remain lower than in other global regions. Efficiency in terms of cost per borrower is lowest for African MFIs. Technological innovations, product refinements, and ongoing efforts to strengthen the capacity of African MFIs are needed to reduce costs, increase outreach, and boost overall profitability. Overall, African MFIs are important actors in the financial sector, and they are well positioned to grow and reach the millions of potential clients who currently do not have access to mainstream financial services.

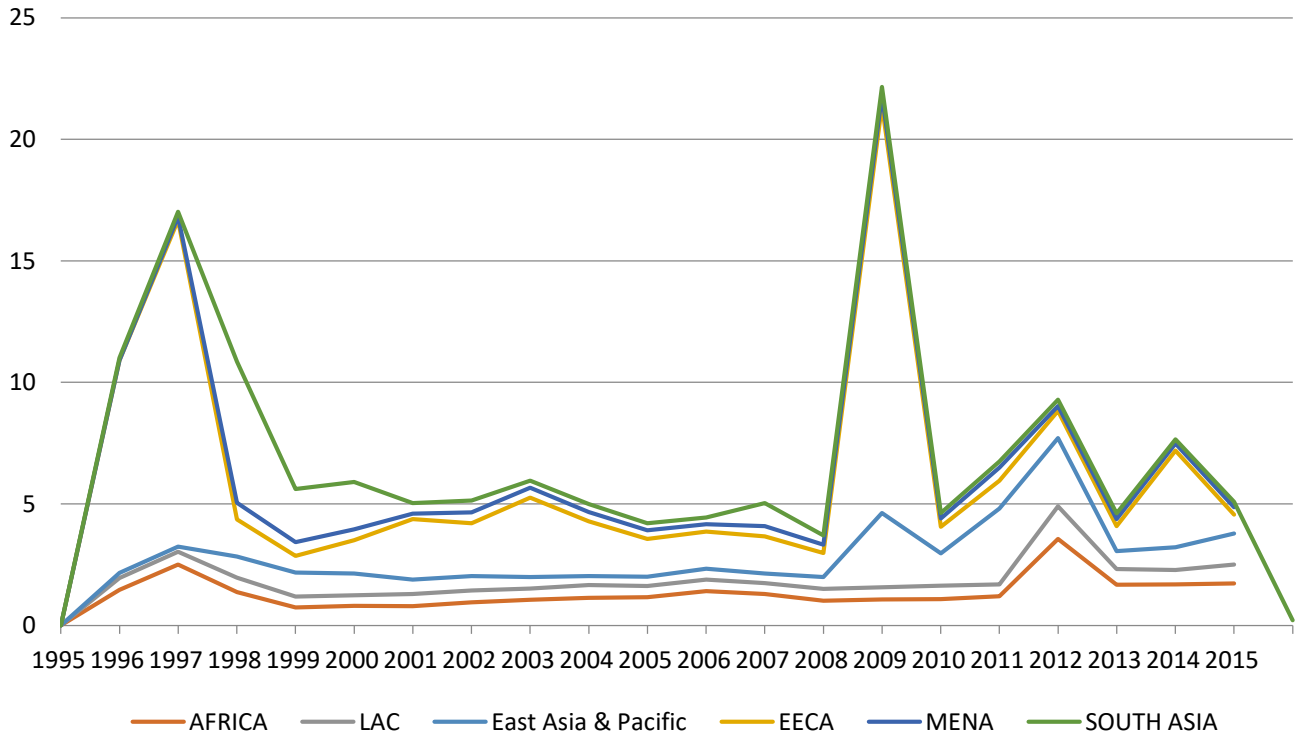
2.6 Conclusion

This chapter traces the evolution of microfinance from the time of moneylenders to its informal existence as ROSCAs and the cooperative movement that swept across Europe and then North America. It also looked at the modern day renaissance of microfinance from its rebirth in the Grameen Bank and the subsequent movement championed by Prof Yunus Mohammed. The environment and culture of the people has always affected the development of microfinance. For instance, it has been shown that interest rates and punishment for breaking of contracts varied from place to place and influenced heavily by things such as religion and the caste system (in India).

Figure 2-6 shows the average loan balance/capita GNI across the six regions of this study. This is usually used as a rough indicator as to the income level of an MFI's clientele. The graph

indicates that although the balances vary from region to region, they all follow similar peak and trough patterns, reacting similarly to various events but to varying degrees. For instance the Asian financial crisis in 1997 and the Global Financial Crisis in 2009, affected the average loan balance/capita GNI for the South Asian markets, increasing dramatically as they started lending to the richer poor and closer to the top of the poverty ladder. The Middle East and North Africa and Eastern Europe that have similar characteristics with the South Asian region (microfinance sector that is technology based) seem to mirror this trend while the other three regions do not. The other three regions -Africa, Latin America (and the Caribbean's) and East Asia (and the Pacific) - seem to have more similar trends and responses than the other regions.

Figure 2-1: Average Loan Balance/Per Capita GNI across All Six Regions



This is the argument that this thesis is based on - certain factors seem to be peculiar to each region. The Asian regions account for the majority of MFIs and retain the highest volume of

savings and cred it while serving more members than any other continent. The East Asia and the Pacific and MENA regions have their institutional innovation and technology culture while (Quayes, 2015) indicates that MFIs operating in Africa and Asia have a poorer level of financial performance than MFIs from other regions. The history of social policies of the Latin America and Caribbean, the Islamic banking of the Middle East and North Africa, the level of poverty in Sub-Saharan Africa and so on. The question as to how much of these regional differences comes to bear on the lending practises of the MFIs operating within them is the focus of this study.

CHAPTER 3: LITERATURE REVIEW

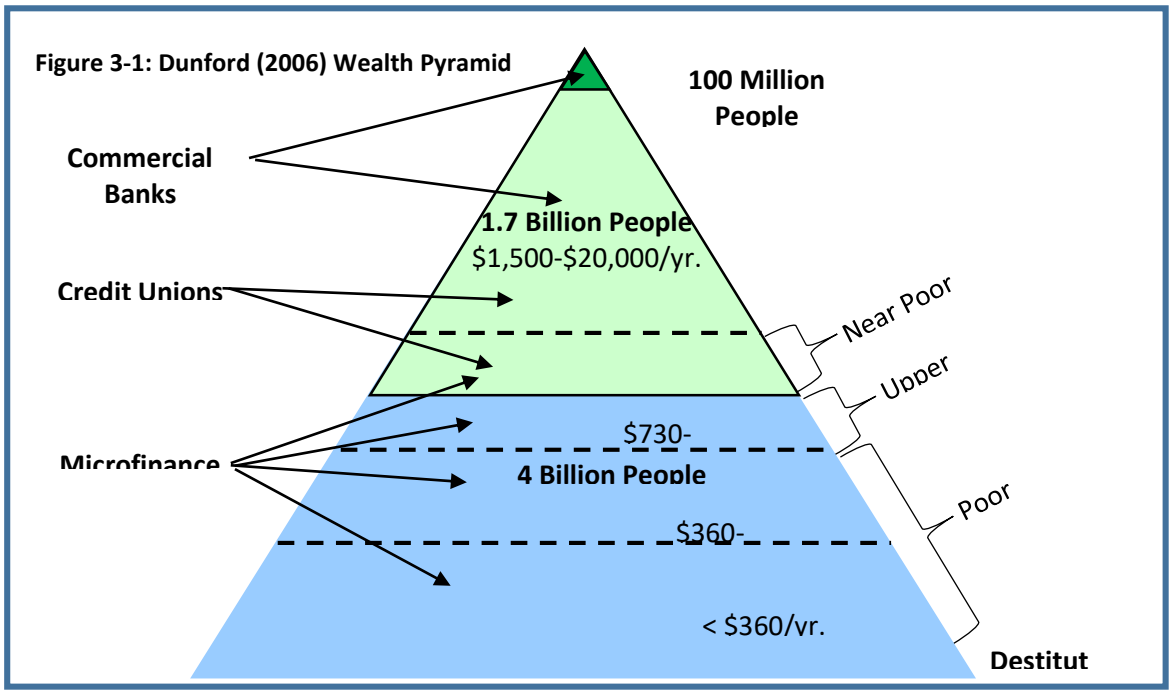
3.1 Introduction

This chapter will review literature pertaining to and relevant to this study. Specifically, this chapter will examine the key theories and arguments, which form the basis of this research framework and look at the empirical evidence supporting these studies. In so doing, this chapter will seek to explain how this framework was developed.

The chapter is divided into four main sections. Following this introduction, the second section of this chapter (3.2) will examine the theories of microfinance that seek to explain the lending behaviour of MFIs. Section 3.3 discusses the various locational factors that affect the outreach of microfinance at the company, country, regional and global levels. Section 3.4 discusses the neo-institutional theory, tracing its development and major concepts. Section 3.5 links the neo-institutional theory to microfinance and develops the theoretical argument for this thesis. The chapter concludes with a summary of the main points.

3.2 The Theories of Microfinance

The wealth pyramid of Dunford (2006)[4] in Figure 3.1 graphically shows the



target markets of the commercial banks, co-operatives and MFIs. The solid horizontal line separating the green region form the blue region represents an international poverty line and the dashed lines below it are the $2 and $1 -a-day expenditure per capita. The figure shows that commercial banks target clients at the top of the pyramid while credit unions by utilizing their principles and their lower cost structures are able to reach further down the pyramid. However, they generally do not reach below the international poverty line, even though there is a market of 4 billion people with an estimated purchase power parity of $5 trillion (Hammond et al, 2007). The theories of microfinance are based on the premise that the major problem that these poor face is their inability to access credit, and as such, if provided with

[4] A modification of the economic pyramid of Prahalad (2006)

access to loans, they would engage in entrepreneurial activities and thereby be able to escape poverty (van Rooyen, Stewart, & de Wet, 2012). This argument forms the core mission of microfinance institutions (MFIs): To lend very small sums to very poor (Mersland and Strøm, 2010; Otero, 1999; Woller, 2002a).

The four issues with lending to the poor were the issues of adverse selection, moral hazard, auditing costs and contract enforcement. Adverse selection is the challenge in ascertaining the level of risk attached to a potential borrower. Moral hazard is the challenge of determining whether the potential borrower will use the loan, once made, for the purpose stated to ensure repayment. Auditing costs challenges are those associated with ascertaining how the project actually performed in case of the borrowers inability to repay and enforcement problems lie in finding ways of forcing a reluctant borrower to repay their loan (Armendáriz and Labie, 2011; M. Ghatak and Guinnane, 1999; Hermes and Lensink, 2007; Simtowe, Zeller, and Phiri, 2006). To mitigate these risks, traditional financial institutions demand that asset(s) are pledged by the borrower as collateral in the event of default. These assets could be property, machinery, real estate, accounts receivable or any other current or non-current assets as deemed fit by the lending institution (Berger & Udell, 1990; Blazy & Weill, 2013; Chan & Kanatas, 1985). However, because the poor lack the necessary collateral, they are not able to secure loans from traditional financial institutions (Armendariz & Morduch, 2010). Microfinance Institutions have been able through various innovations such as group lending so as to create 'joint liability' (Armendariz & Morduch, 2010; Armendáriz de Aghion & Morduch, 2000; Dunford, 2006) , regularly scheduled repayments (Armendariz & Morduch, 2010; Dunford, 2006; Jain and Mansuri, 2003) and targeting women (Aggarwal, Goodell, & Selleck, 2015; Armendariz & Morduch, 2010; Dunford, 2006) to overcome these

challenges and extend small loans to the poor. These innovations have been shown to be effective in several instances. Sengupta and Aubuchon (2008) found the Grameen Bank in Bangladesh, BancoSol in Bolivia and Compartamos in Mexico to be profitable lending average sums of 69, 1,571 and 440 USD respectively. Navajas et al (2000) looked at five Microfinance organizations (BancoSol, PRODEM, FIE, Caja Los Andes and Sartawi) all based in Bolivia but from different geographical locations and using different lending methods. What they all had in common was that they all work in niches untouched by traditional banks; all grant small loans to first-time borrowers and make bigger loans to repeat borrowers; all of them charge high interest rates and yet all five have been able to keep arrears and loan losses low and have all made progress toward sustainability.

Further support for the profitability of microfinance as a service and product can be found in the abundance of evidence and research on capital gains amongst microenterprises carried out by McKenzie and/or Woodruff. McKenzie and Woodruff (2006) used data from the Mexican National Survey of Microenterprises (ENAMIN) to estimate the returns to capital among the smallest urban Microenterprises in Mexico. Their results indicate that microenterprises that invested less than $200 had returns of between 10-15% per month, and an uncompounded rate of 180% per year. For those with capital stock above $500, the returns fall to around 40-60% per year. De Mel, McKenzie, and Woodruff (2008) used randomized grants to generate shocks to capital stock for a set of Sri Lankan microenterprises. They found that the average real return to capital in these enterprises came to about 4.6-5.3% per month (55% - 63% per year), amounts substantially higher than the prevalent market interest rates at that time. McKenzie and Woodruff (2008) repeated their 2006 research but with a sample of microenterprises in Mexico with less than $900 of capital stock. They found return on

capitals this time to be in the range of 250%-360% per year, higher than the cross-sectional estimates in their earlier work. Udry and Anagol (2006) estimate the average rate of returns in a sample of small scale of agricultural farmers in Ghana. Their sample data was made up of inputs and outputs collected over two years at the plot level for 1.659 plots cultivated by 435 farmers in four village clusters. The data was collected at six-week intervals over the survey period to increase the accuracy of recall by the farmers especially in the area of the use of household labour and continual harvest of staple crops. Their results show the returns to be 50% per year among those producing traditional crops on a median-sized plot and 250% per year among those producing non-traditional crops on median sized plots. These results provide empirical evidence supporting the argument that the poor are able to engage in entrepreneurial activities and pay back their loans, even with high interest rates.

Despite these instances where MFIs have successfully and profitably reached the poor as cited in the above examples, there are still cases where credit is not trickling down and this will be discussed next section.

3.2.1 Mission Drift

The success of the early Microfinance Institutions gave credence to the arguments of Prahalad (2006) and (Dunford, 2006) as to the potential of the 4 billion poor people lacking access to credit. The arguments were not just as to the social benefits but also to the economic benefits of serving the poor- indicating that profits and social service are not mutually exclusive (Woller, 2002b). However, serving the poor comes at a cost (Hermes & Lensink, 2011) and the with the United Nations declaring microfinance as a vital tool in realizing the MDGs, focus turned to how to make it more sustainable and to enable it meet its demand (Quayes, 2015; Woller, 2002b). Commercialization of MFIs has been promoted

(amongst other things) as a means allowing MFIs take deposits so as to increase their capacity, provide for better supervision and to adopt 'better' management practises (CGAP, 1996; Woller, 2002b). Commercialization can be defined as the implementation of a profit-seeking approach by MFIs in delivering their services (Woller, 2002b). However, there are those of the school of thought that the call for commercialization will lead to MFIs abandoning their social mission of focusing on lending to the poor in favour of profiteering. This divergence from an organizations original mission is what is known as mission drift (Cornforth, 2014).

Sebstad and Cohen (2001) after examining the activities of 5 MFIs in Kenya- Kenya Rural Enterprise Programme, Pride Kenya, NCCK-Small Scale Enterprise Division, CARE-WEDCO and Kenya Women Finance Trust, Kashangaki, Hulme, and Mugwanga (1999) found that most of the MFIs were seen to be assisting the poor and not so poor[5] while the very poor relied on friends, family or ROSCAs. Furthermore, in an examination of 18 studies covering 20 microfinance programs, Sebstad and Cohen (2001) looked at the percentage of clients in or outside of the study-defined poverty groups and found that 11 of the 20 had a majority of clients outside the poverty group. Examples like these have raised alarm and seem to support the mission drift theory.

Mersland and Strøm (2010) theoretically analysed mission drift based on the assumption that in order to remain in business, that all Microfinance Institutions have to be financially sustainable and that this is the key driver in their choice of market segments. Focusing on the profit function alone and disregarding governance issues, they assumed that the MFI's risk averse with an exponential utility function

[5] They used the Using ACCION International classifications of poorest, very poor, poor, moderately poor, threshold level and non-poor which uses different distinguishing proxy characteristics for income – single status, low level of education and the level and type of business

$$\boldsymbol{u(\pi) = -e^{-\rho\pi}} \qquad (\mathbf{3\text{-}1})$$

Where

π is the MFIs profits and

ρ is the measure of risk aversion.

When profits are normally distributed, the expected utility of profits may be written as:

$$\boldsymbol{E\left(u(\pi)\right) = u\left(\pi - \frac{1}{2}\rho\sigma^2\right)} \text{ = } \boldsymbol{u}(\mathbf{P}) \qquad \mathbf{(3\text{-}2)}$$

Where

σ is the risk of profits

$\pi$is the banks profit function

As such, in a bid to maximize the expected utility, Microfinance Institutions would seek to maximize *P.* To arrive at an estimable function, *P* would have to be specified, so they hypothesized that profit per credit client is correlated with average loan amount.

$$\boldsymbol{\pi\,(D, L) = (r_L - r)L + (r(1 - a) - r_D)D - C(D, L)} \qquad (\mathbf{3\text{-}3})$$

Where

r_L is the rate of loans

r_D is the rate of deposits,

r is the rate on the interbank market,

L is loans,

D is deposits,

a is the percentage of deposits for compulsory reserves and

C (D, L) is the production function or management costs. The banks profit would then be the sum of intermediation margins on loans and deposits, net of management costs, while the risks of profits consists of risk in the intermediation margins, changes in the demand for loans and supply of deposits, the repayment on loans, and management cost risk. The assumption they make here is that for any given Microfinance Institution, the major risk lies in repayment.

As such, they nullify three arguments- the first, the MFI may be able to maintain near constant intermediation margins, even though the loan rate on the interbank market is variable. This is the case when the MFI is the sole provider of financial services in its area, and therefore, has some degree of monopoly power over customers. Then the MFI is able to control its own risk level (Freixas & Rochet, 2008, pp. 89–91). Furthermore, relationship banking is a characteristic of microfinance. In such a setting, the customer becomes locked in with the bank (Mersland, 2009; Rajan, 1992; Sharpe, 1990). The MFI has some power to fix deposit and lending rates, and is therefore able to neutralize changing rates on the interbank market. Second, because MFIs management cost is primarily related to labour, it should be predictable and as such possess very little risk. Thirdly, repayment costs are likely to be risky even though microfinance observers find that the poor repay their loans. MFIs try to minimize their losses by making small loans with short maturity terms; by making group loans, so that peers control each other; and by differentiating between individuals based on their reputations as their individual credit histories accumulate (Ghatak & Guinnane, 1999). However, repayment seems to be the chief risk element in microfinance, since an MFI is often unable to differentiate between good and bad risks and to monitor a client's performance (Armendariz de Aghion & Morduch, 2005). The outcome is that the only risk remaining is the repayment risk and this now gives:

$$\boldsymbol{P = (r_L - r)L + (r(1 - a) - r_D)D - C(D, L) - \frac{1}{2}\rho\sigma^2(L)} \qquad \textbf{(3-4)}$$

Where $\frac{1}{2}\rho$ is a constant. P is a risk-adjusted profit measure and the management cost function is assumed to be linear. By a simple rearrangement of the last equation and a division by the number of credit clients, *CC*, the average loan *L* may be written as:

$$\bar{L} = \frac{1}{r_L - r}\frac{P}{CC} - \frac{r(1-\alpha) - r_D}{r_L - r}\frac{D}{CC} + \frac{1}{r_L - r}\frac{C(D,L)}{CC} + \frac{1}{2}\rho\sigma^2(L) \qquad (3\text{-}5)$$

The right-hand side of equation 5 shows (risk adjusted) profit, deposits, management costs, and loan risk per credit client. Based on this model, the prediction would be that the higher the profits, the more the average loan size will increase; deposits would decrease, management costs, and the risk per credit client would go up. If coefficients differ but the signs are equal, the average profit or the average cost will be the more significant variable. The prediction for risk indicates that higher risk per customer may lead to mission drift, since the bank may then favour higher loans to members of society who are better off. This is a mission drift hypothesis.

Several empirical studies seem to support this theory. Olivares-Polanco (2005) using data from 28 Latin American MFIs and a multiple regression analysis, tested for mission drift and other factors that available literature indicated could affect size of loans. His results indicate that the type of institution, (whether it is an NGO, Credit Union or MFI), whether regulated or not, does not effect on the size of loan size and that most of the MFIs, whether they are NGOs or banks were not reaching very far down the poverty spectrum. What he found that did affect loan sizes were the age of the institution and competition. This led to the conclusion that the more intense the competition, the larger the loan sizes and less depth of outreach, claiming support for the mission drift theory.

There however, exist several issues with assuming the mission drift theory is responsible for the lack of depth of outreach. Examining equation 5, a risk exposure argument would result in the opposite prediction. When risk per customer increases, one would expect MFIs to reduce the average loan size as this is one of the ways bank limit risk exposure to particular customers. This is a risk exposure hypothesis. Thus, the risk prediction in the last equation is

not clear-cut. In addition to the model variables, a MFIs time in business may induce it to accept smaller loan sizes. This time variable is important, since the mission drift argument implies that the older an MFI, the more it will drift toward higher income segments. The data of Mersland and Strøm (2010) showed that the average loan size for all MFIs does not increase with MFI age. Two effects pulling in the same direction may be at work here. The first is a cost effect in which operating costs may drop over time as an MFI expends less effort to promote microloans and to ensure their repayment. The second effect stems from the fact that a repeat relationship with the same customer segment reveals its typical creditworthiness. An MFI may be willing to increase loans and move deeper into a segment with a good record. The initial low-risk customers in a given segment may establish a good reputation, which benefits followers with lower loan demands. An experienced MFI is more likely than a newer MFI to obtain such customer information and to risk lending to smaller customers. Thus, the older and more experienced the MFI, the more likely it will be to go down the poverty spectrum, and thus annulling the theory that pursuance of profits negatively affects outreach.

There are other issues with the premise of this hypothesis. First of all, governance factors have been shown to exert considerable influence of organizational decisions and outcomes (Shleifer & Vishny, 1997) and ignoring them raises doubts as to the practicality of the hypotheses. Another key issue is its assumption that an MFI has to focus on either profits or depth of outreach, that both goals are mutually exclusive. Supporters of the 'double bottom line' and the profitability at the 'bottom of the pyramid' suggest that they are not necessarily mutually exclusive and could be attained simultaneously (Cull et al., 2009; Prahalad, 2006; Rosenberg, 2007).

The evidence offered by Olivares-Polanco (2005) seems to support the mission drift theory. However, this observation could be local to Latin America and may not be universally valid. Also, his original sample of 30 (11 NGOs and 19 banks or nonbanking financial institutions), with almost all of them regulated (Only 3 of the NGOs were unregulated) is far from representative of Microfinance banks in developing countries- a fact he acknowledges in his paper. This research takes a cross-country approach. Surprisingly, he found the NGOs less likely to reach down the poverty spectrum than the banks or nonbanking financial institutions. I do not believe that an increase in average loan size with an increase in market share (his proxy for competition) does not necessarily imply a mission drift as he states. Other explanations could account for this such as repeat customers taking larger loans. Information on the ratio of 'wealth poor' to 'very poor' might have shed more light on this but it was not included. In addition, in a situation where the largest MFIs are actually targeting wealthier clients, competition does not necessarily explain this as it has not been shown that the very poor are unprofitable. Besides, it could also be a socio-cultural phenomenon or the largest MFIs are making those choices because of the same influencing factors common to all of them.

My theory finds support in the work of Hishigsuren (2007) whose research looked at the effects of a MFIs scaling up on their outreach, using field research to analyse these effects on Activists for Social Alternatives (ASA), a microfinance organization servicing poor women in rural India. The results from his research indicate that after their expansion ASA's percentage of rural members decreased from 80% to 55%. However, this he explained was largely because new branches were opened in urban and semi-urban areas. The results showed that the absolute number of rural members had grown and the decrease was in relation to the

ratio of them in the total pool of ASAs customers, because of the relatively larger number of urban members. He used average size of first loans as a percentage of GDP, Housing Index, monthly household income per capita, the caste the customer belonged to, geographical distribution of membership and sectoral distribution of loans to measure the *depth of outreach* or poverty level. As ASAs mission statement lay emphasis on the importance of economic, social and political empowerment of the poor, he used the number and type of financial and nonfinancial services before and after scaling up to determine if there were any changes in the *scope* of the services rendered. Several variables were used to determine and measure any changes in the *quality* of outreach. These variable included, the level of members' overall satisfaction with the organization; the average number of hours available for working with each member and the number of members per Financial Officer. The quality of member services such as personal attention and business counselling (as perceived by members) and the ratio of people who dropped out due to reasons connected to the MFIs expansion were also included. In conclusion, he proposed that mission drift is not a result of deliberate decisions by the management or board but rather is a result of the challenges posed by the expansion and the process of scaling-up.

As the evidence offered by the mission drift theory does not conclusively explain the problems with depth of outreach, the next section will look at other studies that have looked at factors that affect outreach.

3.3 Factors Affecting Outreach

In order to meet the research objectives and answer the research questions, the study has grouped the factors into the following:

3.3.1 Company level factors

Based on the argument that the function of governance is to achieve corporate goals and that for most MFIs there is a duality of goals- to contribute to development (and lend to the poorer population) and to do this in a financially sustainable manner independent of donors, Mersland and Strøm (2009) look at governance and its effects on outreach. The data they used came from five micro lender-rating agencies; all approved as official rating agencies by the Ratingfund of the C-GAP. The agencies are MicroRate, Microfinanza, Planet Rating, Crisil, and M-Cril. Average loan size and the number of credit clients (used as a proxy for outreach) were regressed over variables representing board characteristics, MFI innovations, and external variables covering a period of four years. These variables were CEO/chairman duality, presence of international directors, internal board auditor, board size, Shareholder owned firms, female CEO, individual loan sizes, competition, bank regulation, urban market, MFI experience, portfolio at risk (30 days), firm size, human development index, and firm years. Their results indicate that governance mechanisms generally have little impact on outreach. The only variables with any significant effect were CEO/chairman duality and individual loan implying that the CEO/chairman can increase the number of customers (Mersland & Strøm, 2009). This is similar to results from an earlier study of theirs (Mersland & Strøm, 2008) in which MFI type (NGO or Self Help Group) were used in a logit regression, regressed against Cost (Debt cost, Operational cost, Loan losses, equity costs), depth, breadth, length and scope. The proxies for depth were average loan amount (gross outstanding portfolio/number of active credit clients), gender bias and the percentage of female borrowers.

This is disputed however by the work of Barry and Tacneng (2014) who also looked at the impact of governance factors and institutional quality on the outreach of MFIs but with a

focus on Sub-Saharan Africa. The study looked at 1400 observations drawn from 200 MFIs from 30 Sub Saharan African countries over a seven-year period (2001-2007), examining both the financial and social performance of MFIs. They looked at financial performance from two perspectives- profitability and efficiency. Profitability they measured using Return on Assets and the adjusted rate of Return on Assets. Efficiency was measured using the ratio of operating expenses to total loans. For social performance, the study looked at both the depth and breadth (outreach) of service delivery. Their proxy for outreach was the log of active borrowers and clients while for depth they used the average loan balance over GNI per capita and the ratio of their female borrowers to total borrowers. The governance indicators they looked at were the MFI types of Non-Governmental Organizations, Cooperatives, Banks and Non-Banks. Control variables were size (natural log of MFI tot assets), age (natural log of age of MFI), loan (gross loan port: total assets), growth: log of real GDP per capita). The results of the study indicate that return on assets for NGOs is higher when compared to the other MFI forms but rank lower than Banks on adjusted return on assets. The results also indicate that NGOs outperform cooperatives and non-banks in converting expenses to loans. In term of the perspective, the results of the study indicate that NGOs reach deeper down the poverty line and have a larger proportion of female borrowers than the other MFI form. However, even though the NGOs attract more clients than cooperatives, results indicated that banks are able to cater to more people, apparently because they are able to take deposits.

3.3.2 Country-level factors

The country level factors usually fall into groups- macroeconomic and institutional quality. Vanroose (2008), used a cross-country analysis (a dataset covering 115 countries) to identify what factors explain why microfinance institutions are reaching more clients in some

countries than in others. The dependent variable used is the number of clients divided by the population. The independent variables used spanned three major areas: Policy, Geographical and Institutional. The policy variables he used were- GNI per capita, level of inflation, amount of international aid per capita (to proxy the international support), level of industry value added (to proxy the level of industrialization). The g*eographical variable was p*opulation density while the i*nstitutional variables were* literacy rates (to approach the level of education) and colonial background dummies. As his control variables, he used the level of political stability and a corruption. His major data source used to assess the number of MFIs and the number of clients served by these institutions was the CGAP database in the time up 2003. This dataset was augmented with data from the following agencies the Microfinance Information Exchange (MIX) and three other microfinance-rating agencies listed by the Rating Fund- MicroRate, PlaNet Rating and Microfinanza. This brought the data set to 2677 serving 278,243,699 clients. His results indicate several things. First is that the microfinance sector is more present in the richer countries of the developing world than that of the poorer ones. In addition, microfinance reaches more clients in countries that receive more international support and that population density has a positive influence. This might explain why the sector is still underdeveloped in rural areas and that the level of industrialisation and inflation do not seem to influence microfinance outreach, while regional dummies do.

Hartarska and Nadolnyak (2007) in a cross-country survey using data for 114 MFIs from 62 countries looked at the impact of regulation on MFI performance. They used an empirical model specifying performance as a function of MFI-specific, regulatory, macroeconomic and institutional variables. Their result does not find any direct link with regulation to outreach. In other words, a MFIs being regulated or not does not affect its outreach.

Ahlin et al. (2011) investigated whether the success of MFIs is dependent on macro-economic and macro-institutional factors that are country specific. The focus was on operational self-sufficiency and the loan portfolio growth of MFIs and the study used a broad range of variables to measure these. Operational Self-sufficiency was further broken down and the three variables used (and their proxies) are- financial revenue versus costs (operational self-sufficiency, average interest rate, interest mark-up), default costs (loan loss expense rate and Portfolio-at-risk 30 days) and operating costs (cost per dollar loaned and cost per borrower). The variables for portfolio growth (and their proxies) were extensive growth (number of borrowers) and intensive growth (average loan size). These were used in a series of regressions, run against 21 independent variables chosen to represent the macro-economic and macro- institutional environments. The macro economic variables were:

- Income,
- Real per capita growth,
- The workforce participation,
- Manufacturing value-added to GDP ratio,
- Private credit (domestic credit to the private sector divided by GDP),
- Gini coefficient of inequality,
- Inflation,
- Net foreign direct investment inflows and remittances, as percentages of GDP;
- The percent of population in rural areas and
- The share of GDP from agriculture, services, and industry, respectively.

To represent the macro-institutional environment they used private credit bureau coverage; 2 variables from the World Governance Indicators- political stability and control of corruption

(estimates); 7 from Doing Business - procedures to start business, cost to start business, time to enforce contract, procedures to register property, time to register property, credit rights index and credit information index. The control variables were MFI institutional type, MFI age and three variables indicative of the MFI size via number of borrowers, average loan size and assets-to-loans ratio. Their dataset was 2278 observations drawn from 373 MFIs from 74 countries for 4 years (2004-2007). Of the six institutional factors, only two were found to have any significant effect on the social performance of MFIs. Greater government efficiency was shown to lead to smaller loan sizes while hampering increase in the number of clients or breadth of service. Control of corruption was found to lead to an increase in client base but seemingly had no effect on loan sizes.

Muriu (2011) also explored the question as to whether the institutional environment of a host country, influences the performance of the microfinance Institutions in it. The study used a dataset of 2,004 observations drawn from 167 MFIs from the MIX for a 12-year period covering 1997 to 2008. To evaluate this, Return-on-Assets were regressed against a set of institutional variables. The institutional variables were estimates of the six World Governance Indicators already described in previous chapters of Voice and Accountability, Political Stability, Government Effectiveness, Regulatory quality, Rule of Law and the Control of Corruption. To gauge the complementary business environment, the study used two variables from the World Bank's Doing Business indicators- business freedom and Property rights. The MFI-specific control variables were capital (capital/assets), debt to equity ratio, deposits to assets, portfolio to assets, age of the MFI in years, MFI Size, Portfolio at Risk, Efficiency, Loan size, share of lending to women. The country specific control variables used were inflation expectations, per capita income growth, domestic credit to private sector and the rural

population Political stability, rule of law, regulatory quality, control of corruption and government effectiveness all showed strong, significant relationships with MFI profitability while Voice and Accountability did not. The results of the regressions/GMM Estimator generally indicate that a country's institutional environment has significant impact on the profitability of MFIs operating in them. Specifically, the results indicate that on average, microfinance institutions (MFIs) are more profitable when there is political stability. Upon interaction with MFI age, the study indicated that political stability could make it more conducive for young MFIs to form relationships with reliable new borrowers. Rule of law was associated with greater MFI profitability while corruption makes it harder for MFIs to realize profits, irrespective of age. Well-developed institutions may therefore make it less costly for MFIs to operate in a fully compliant way.

Whereas previous studies had looked at institutional quality as a side effect or in the context of different research questions, or used one or two elements to gauge the quality of institutions, the study by Müller and Uhde (2013) explicitly focuses on the impact of a broad set of institutional factors on the social and financial goals of MFIs. Their study examined 558 MFIs drawn from 80 developing countries over a period of 6 years (2002-2007) giving 3348 year end observations. Return on Assets (ROA) was the proxy for profitability, Operational Self Sufficiency (OSS) was the proxy for sustainability and the outstanding loan size per borrower/GDP per capita was the proxy for social success/outreach. The measures for external governance quality used were the estimate values (ranging from -2.5 to +2.5) of the six World Governance Indicators. The control variables were GDP growth, annual inflation rates one period lagged, interest rates, British Legal origin, age, size and sources of funding. Their results as it relates to the size of loans first indicate a significant positive relationship at

the five-percent level. This implies that the better the institutional quality, the larger the size of the loans becomes. Secondly, they looked at the six governance indicators individually. They found significant positive relationships between four of these variables and profitability and sustainability. These are political stability, regulatory quality, rule of law and government effectiveness. Of these four, three were to found to impact on loan size (outreach). These were political stability (at ten percent confidence level), regulatory quality (at ten percent confidence level and rule of law (at one per cent confidence level). No relationships were found between voice and accountability and control of corruption and any of the dependent variables. Another important outcome of their regression analysis was the effect of some of the control variables used on loan size. The control variables found to impact on loan size were- *competition, deposits, size* and *loans*. The relationship with loan size and competition was found to be negative, implying that with an increase in competition, the smaller the loan sizes become. This, they said was as a result of larger financial institutions crowding out MFIs and leaving them to fight for 'crumbs', thereby reaching down to the poorer, unwanted or unserved clients. Microfinance institutions that accepted deposits were also found to be more likely to give out smaller loans. The authors suggested that providing savings accounts could principally be a means of attracting wealthier clients while rationing credit to the larger number of poorer clients. Size had a significant positive impact on loans sizes with older MFIs tending to give larger loans. No explanation was offered for this observation by the authors. The control variable *loans* also led to larger loan sizes but it was not explained what this variable was (apart from that it was used as part of the business orientation matrix alongside capital ratio and deposits - to control for the differences in MFIs business concepts) nor the implication of its relationship on loan size. The variables of sources of finance, regulation, services and British legal origin although found to have some relationship with the

independent variables, the relationships were not found to be insignificant. As mentioned earlier, Barry and Tacneng (2014) looked at how governance and institutional quality factors affect MFI social and financial performance in Sub-Saharan Africa. The proxies they used for institutional quality were government effectiveness, and rule of law from the World Governance Indicators and information sharing measured by Djankov, McLiesh and Shleifer (2007). Their results indicated that NGOS tend to lend to more people and lower down the poverty line than other MFI types, in environments where government effectiveness is low and there is weak rule of law, possibly because weak rule of law favours relationship-based transactions. However, when the institutional quality is strong, no difference was found between NGOs and other MFI governance types in terms of social performance. The average rule of law index is Sub-Saharan Africa was found to be negative and the NGOs were found to be better suited to lending in this environment as the average loan sized increased for the other governance types with lower values of the rule of law index.

Manos and Tsytrinbaum (2014) looked at the role of culture in determining MFI financial and social performance looking at 852 MFIs (4545 observations) from 30 countries from between 2000 and 2010. Financial performance was measured using the return on assets and operating self-sufficiency indices provided by MIX market and two proxies' average loan balance and per cent of female borrowers. To gauge culture the study used the Global Leadership and Organizational Behaviour Effectiveness (GLOBE) indices of performance orientation, uncertainty avoidance, power distance, institutional collectivism, humane orientation, in-group collectivism, gender egalitarian and assertiveness. The used three sets of control variables- a set of institutional, a set of country and a set of complementary variables. The set of institutional control variables included age, regulation, profit status,

debt/capital ratio, PAR (30 days) and total expense/assets. The national control variables were GDP/capita growth, log GDP/capita, rural population share and regulatory quality and the complementary variables were used to control for financial performance and were operational self-sufficiency and return on assets. Depth in terms of average loan size was found to negatively relate to power distance, institutional collectivism and performance orientation are positively and significantly related to human orientation. This implies that in cultures with higher values of power distance, institutional collectivism and performance orientation, MFIs tend to reach lower down the poverty line and in cultures with higher human orientation ratings, MFIs look for richer clients. Depth in the context of the percentage of women borrowers was found to be positively and significantly related to performance orientation and negatively and significantly related to in-group collectivism, performance orientation, gender egalitarianism, assertiveness and the control variables of regulation and profit status.

3.3.3 Regional-level factors

To the best of my knowledge, no study has focused on how regional factors affect lending practises of MFI's. A major reason for this could be that it is difficult to isolate any factor as being specifically regional. The study by Vanroose (2008) had used regional dummies in the study of factors affecting breadth of microfinance, finding that regions that MFIs find themselves in determines their breadth of their services (i.e. how wide in terms of number of people they are able to reach).

3.3.4 Global-level factors

The fact that microfinance is a global phenomenon has seen Microfinance Institutions turn to both commercial banks, domestic and international capital markets, and international

investors to raise their funds. As such, microfinance institutions are no longer insulated from mainstream and global finance and their shocks (El-Zoghbi et al. 2011).

Of the various global factors available such as wars and oil prices, the global financial crises of 2007-2009 has been the one linked with microfinance. Wagner and Winkler (2013) examined 655 MFIs in 80 countries over the period 2000 – 2009 and found a significant strong negative relationship between the global financial crises and credit growth of MFIs especially those in the Eastern Europe and Central Asia region. Furthermore, Wagner and Winkler (2013) point out that the effects of the recession that followed the last global crises were so deep and far reaching that even the flexible micro-entrepreneurs were seriously affected by it. Again, to the best of my knowledge, no study had linked the global factors to microfinance depth of outreach, a gap that this study will try to bridge.

However, to understand why MFIs are not reaching down the poverty line and to gain better insight into what is being explained as 'mission drift' while taking into consideration environmental and other factors, a more appropriate theoretical framework would be required. One theory that fits this bill and has been used to explain mission drift, especially for social enterprises- is the institutional theory (Christopher Cornforth, 2014; Laville & Nyssens).

3.4 Neo-Institutional Theory

There is a need to understand how and why organizations (in this case MFIs) behave in a certain manner and the consequences of these behaviours and the field of study that seeks to answer these questions is organizational theory (Greenwood et al, 2013). Within the field

of organizational research, institutional theory covers the social context in which they operate and how they are influenced by their environment (DiMaggio and Powell, 2012).

Over the past two decades, several strands began to evolve looking at the dynamics between the organizations and its environment from different perspectives. Such perspectives include the 'old' and 'new' institutional theories (DiMaggio & Powell, 2012; Selznick, 1996). Even though the two schools of thought share basic, fundamental premises, such as the recognition of the significance of the environment in which an organization operates and the restrictions placed by institutions on the ability of organizations to behave rationally (DiMaggio & Powell, 2012), they still differ in certain key areas relevant to this study. DiMaggio and Powell (2012) outlined some of the key differences between what has come to be known as the 'old' and 'new' institutional theories. One of the key differences is that whereas the 'old' institutional theory places more emphasis on irrational informal structures and inter-organizational politics to explain why organizations act parochially, the new institutional theory explains these using the irrationality found in the formal structures. Also, in the old institutional theory, the organization is taken to be the unit as well as the loci of institutionalization and thus focuses on the characteristics of individual organizations while the new institutional theory on the other hand takes the sector or society to be the loci of institutionalization and looks at the similarity in formal structures across organizations. Essentially, the old institutional theory is definitional and focuses on more on markets and market forces while the new institutional theory looks at social actors and factors to explain how institutionalisation occurs (Scott, 1987).

As this study is interested in comparing behaviour across societies, it leans more towards the new institutional theory, looking at the explanatory capacity of isomorphism to examine and

explain the problem of depth outreach in microfinance. However, as much as there appears to be transient differences in focus between the old and new institutional theories (Selznick, 1996), institutional theory is still maturing and more analysts recognize the relevance and significance of meaning systems, symbolic elements, regulatory processes, and governance systems. There is also the recognition that there are overlapping similarities (DiMaggio & Powell, 2012; Samuels, 1990) and at some points, they converge (Scott, 2014) and this convergence around multiple themes is what Greenwood and Hinings (1996) called 'neo-institutional' theory.

Seen from the perspective of neo-institutional theory, the influence of the environment on the organization is subtler and unconscious to the organization, it permeates the organization and creates the lens through which its actors view the world and influences their thoughts and actions (DiMaggio & Powell, 2012). In neo-institutional theory, an institution refers to a set of common conceptions about what reality is and how different actors in different situations are expected to act. An institution is made up of well-established habitual systems that seldom are questioned. Additionally, institutions define identity and help in categorizing and classifying phenomena. Institutionalization describes how social processes, obligations or actualities become rules and norms in social thought and action (Meyer & Rowan, 1977). Organization institutionalism is concerned with institutional processes at both the organizational level and the institutional level (Greenwood et al., 2013).

Neo-institutional theory emphasizes the role of socio-cultural factors in legitimizing and defining what ideas and behaviours become acceptable to an organization, particularly deeply engrained ones (Meyer & Rowan, 1977). The social context within which an organization finds itself exerts influence on the organization. That context contains strong institutional rules that

will shape and define what would become appropriate and acceptable forms of behaviour for the organization. As such, to understand why an organization behaves in a certain way, the influence of this institutional context must be taken under consideration. Granovetter (1985) shows that markets are rooted in their local cultures and are a reflection of the value systems and historical background of these societies.

These infusion of values is not a random act or process, especially when it happens within an organizational sector or as (DiMaggio & Powell, 1983) calls it- organizational field. An organizational field is made up of key suppliers, product and resource consumers, regulatory bodies and other organizations offering similar products or services that when put together make up a recognised area of institutional life. Incongruent organizations come together to form these structural fields via a four-part process of structuration. In this process, there is first an increase in the level of interaction between the organizations in the field from which visible patterns of coalition and inter-organizational structures of dominance emerge. This is then followed by an increased load of information that the organizations have to deal with and cumulates with the organizations in this field having a sense of mutual awareness of the set of organizations involved in a common enterprise (DiMaggio, 1982; DiMaggio & Powell, 1983).

Following the formation of these organizational fields, the neo-institutional theory explains that forces arise that compel these organizations to behave in the same way – become homogenized. The extent of homogenization is such that even when an organization with the aim of improving performance introduces some form of innovation to set itself apart, two things happen. One is that the new practise becomes imbued with values that go beyond its predefined aims. The other is that as other organizations within the institutional field begin

to adopt the innovation; a threshold is reached beyond which adoption does more to provide legitimacy to the organization than it does to improve performance (Meyer & Rowan, 1977). It is a logical argument that competitive advantage that comes with the adoption of innovation is lost as the innovation spreads across the industrial field, however, its spreading is what makes it become 'normal' that organizations within that field adopt it and as such the cumulative effect of all the individual change is that they all remain similar. Innovation or organizational changes as used within this context refer to the organizational culture, goals, program, formal structure or mission and not necessarily technical change. The process by which this homogenization occurs is called isomorphism of which there are two types- competitive and industrial. Competitive isomorphism is more interested in market competition and fails to holistically explain the modern world of organizations. As such it is better applied in studies looking to explain early adoption of innovation. Industrial isomorphism on the other hand, which makes it appropriate for examining the political and ceremonial aspects of organizational life which this study is interested in. Industrial isomorphism occurs via three mechanisms- coercive, normative and mimetic.

3.4.1 Coercive isomorphism:

Coercive isomorphism is said to occur when external organizations or bodies (usually powerful agencies of the State) either persuade or compel organizations to adopt organizational elements or behave in a certain way (DiMaggio & Powell, 1983; Greenwood et al., 2013). This could be in the way of regulatory controls, or requirements imposed by suppliers or other members of the organizational field. Apart from the coercive changes arising from legislation, organizations could also make structural changes or alter practises as an organic response to changes in societal preference (DiMaggio & Powell, 1983). Even

though these organization changes due to coercive forces can to a large degree be ceremonial, they are still very significant as they signal to the various stakeholders in the organization that the organization is responsive to the preferences of the society in which it operates. By adhering to societal preferences, the organization is able to secure economic resources, influence and power (Meyer & Rowan, 1977). Examples of coercive pressure and organizational responses are highlighted in Table 3-1 below.

Table 3-1: Examples of coercive pressure and organizational responses include

Coercive Pressure	Organizational Responses
Government environmental regulations	Manufacturers adopt new pollution control technologies to meet new standards
New tax requirement	Non-profits hire accountants and start maintain books
Societal outcry on discrimination	Organizations employ affirmative action officers to fend off discrimination allegations
Societal concerns on ethical production	Organizations such as Fairtrade to demonstrate ethical and sustainable behaviour

3.4.2 Normative isomorphism:

Normative isomorphism involves the diffusion of societal and organizational norms through training and socialization as well as the networks professionals develop through practise societies, educational activities, and common knowledge bases (Campion & Gadd, 2009). It occurs because organizations are driven to respect societal obligations (Greenwood et al., 2013) and attempt to appear to be more professional or to conform to what is perceived and widely held as acceptable standards of professionalism (DiMaggio & Powell, 1983). DiMaggio and Powell (1983) identified two major sources of normative pressures-universities and professional associations.

The universities ability to exert normative pressure is because they lay the foundations and define the norms and values of practise for each profession. Professional associations comprise of like-minded professionals who often determine what proper or ethical and professional behaviour is for their members (Greenwood, Suddaby, & Hinings, 2002). When organizations recruit managers from these universities or their managers belong to the same professional associations, they would be inclined to see the world through the same lens, accepting the same policies, structures and procedures and basically approaching decisions in the same way (DiMaggio, 1991)

Normative pressures stemming from professionalism are also diffused through the organization via the hiring practise of organizations- when they hire from the same pool or group of individuals. For instance, elite law firms, investment banks and consultancy firms in the United States recruit only from what is considered the top five universities- Harvard, Yale, Princeton, Stamford and Wharton, even though some of those responsible for recruiting were critical of the education offered by these elite schools (Rivera, 2011)– atypical case of culture and norms overriding logic and reason.

3.4.3 Mimetic isomorphism:

Mimetic isomorphism is driven by organizational uncertainty (Selznick, 1996) or by an organizations motivation by what they interpret to be the behaviour of other successful organizations (Greenwood et al., 2013). Certain organizations as a safety measure would tend to mimic what they believe to be rational behaviour in a bid not to appear out of touch happens as a result of uncertainty. Certain organizations as a safety measure would tend to mimic what they believe to be rational behaviour in a bid not to appear out of touch (DiMaggio & Powell, 1983), implying the possibility that organizational adaptation is likely

more irrational than rational (Selznick, 1996). DiMaggio and Powell (1983) identify three levels of uncertainty

- When the technologies that am organization use are not properly understood
- When the organizational goals are ambiguous and
- When the environment creates symbolic uncertainty

American manufacturers copying the management styles of Japanese manufacturers in attempt to improve their fortunes after a period of depression and the adoption of their colonial masters' form of government by West African countries are two good examples of mimetic isomorphism.

This typology is for analytical purposes and these three mechanisms are not always distinct empirically. Each of them occurs via a separate process, but it is possible for two or even three of them to occur simultaneously and their resultant effects may not always be clearly distinguishable (DiMaggio & Powell, 1983; Mizruchi & Fein, 1999).

3.4.4 Neo-institutional Theory and Microfinance

Understanding the relationship between MFIs and the environment they find themselves in would enable a more informed evaluation of MFIs and can help determine the role of microfinance in the bigger picture of economic development (Ahlin et al., 2011). Coercive, normative and mimetic isomorphic forcers are found in the institutional field of Microfinance.

Coercive forces exist in the way of regulation for various countries. Regulations are developed with the aim of creating order and minimizing the effects of market failures. It does this by putting forth enforceable rules restricting or directing the actions of participants and consequently, altering the outcomes of their actions (Arun, 2005). Research looking at the

effects of regulation of MFIs and various measures of their performance yield varying results. For instance, the study of 2 regulated MFIs in Latin America indicated the benefits outweigh the costs while another study of regulated MFIs in Ghana observed the cost of regulating MFIs in that country exceeded the benefits (Steel & Andah, 2003). Yet, developing countries simply copy certain 'best practises' that are used by developed countries (Arun, 2005) even though has been shown that following these best practises does not mitigate the probability that a country would face a banking crises (Barth, Caprio Jr, & Levine, 2004). This copying of what is perceived as best practises by MFIs in developing countries can also be ascribed to mimetic pressure if it is in response to uncertainty of what to do and a need to appear 'in the know'.

The argument that this thesis puts forward is that there are several distinct organizational fields that can be identified within the microfinance industry and these can be seen across the various geographical areas highlighted in the last chapter. The premise of this research is that microfinance institutions and markets are entrenched in their local social norms and support socially acceptable positions. Therefore, the decision of what segment to lend to is not strictly a profit versus depth issue but one linked more towards the isomorphic forces at work in the organizational field. The next section will identify some of these forces from literature.

3.4.4.1 Corporate Governance (Legal Charter/Governance Structure)

As microfinance continues to grow globally, focus has been drawn to several issues. One has been the issues of contracts- innovative contracts were key to the early success of microfinance and are still key in its success in many places (Armendariz & Morduch, 2010; Conning, 1999; Navajas et al., 2000). There is also a need to protect investors and stakeholders as microfinance funds begin to run into millions of dollars (Hartarska, 2005) and

along these lines, regulation plays a key role (Hardy, Holden, & Prokopenko, 2003; Van Greuning, Gallardo, & Randhawa, 1998). These areas touch on mechanisms of corporate governance. The call for the sustanability of Microfinance Institutions has led to an increased interest in how they can be better managed to reach their goals of outreach and good governance has been identified as a key driver for success (Rock, Otero, & Saltzman, 1998) and the lack of it as a major deterrent to its growth (CSFI, 2008; Labie, 2001).

The goal of corporate governance is to inspire market confidence in the organization and it focuses on the political-legal frameworks by which the organization operates, legislation prohibiting certain behaviour and the capacity of frameworks to ensure compliance (Harrow, 2011). In the context of NGOs, it can is can be defined as the structures for directing, controlling and holding organizations accountable (Cornforth, 2003). Generally, whether the organization is profit oriented or socially motivated, its corporate governance and its mechanisms are designed to ensure that shareholders and stakeholders are able to ensure their principal's achiever the organizations missions (Hartarska, 2005; Shleifer & Vishny, 1997). The affect of corporate governance on organizational performance via its various mechanisms (board size, ownershio strucutre etc) has been well dcoumented in research literature[6].

Larcker, Richardson, and Tuna (2007) explain that the lack of well-developed theory about the multi-dimensional and complex nature of corporate governance makes it difficult to determine the suitable structural models to use and whether the corporate governance mechanisms included in the model are the relevant ones. However, even though there is a

[6] Shleifer and Vishny (1997) provides a more comprehensive review of literature looking at the effects of corporate governance

debate as how best to capture the workings of corporate goeverance (Larcker et al., 2007), legal or ownership structure is of particular interest in the area of microfinance. This is because the decision-making strategies, policies and governance mechanisms of MFIs are determined by their ownership structure (Barry & Tacneng, 2014). These structures have evolved over time in response to the need to find a solution for access to finance for the poor. These legal charters covered in chapter 2 are the organizational forms that have been involved in microfinance and have come to be formally and legally recognized by governemnts. It can also be argued that the conceptual basis for using ownership structure lies on:

- Modern microfinance started with NGOs with a social mission and the calls for adopting commercial logics makes a case for mission drift. It has been argued that NGOs are better suited to reach lower down the poverty line because they emphasize their social role over their financial performance (Dichter, 1996; Gutiérrez-Nieto, Serrano-Cinca, & Mar Molinero, 2009)
- The policy and regulatory changes occurring in the industry are geared towards and directly affect ownership structures.
- With neo-institutional theory, an organizations form is not seen as a rational system for coordinating activities or explained using transaction costs theories. Instead, it is seen assumed that the formal structure is a product of institutionalization from internal and external forces and is a reflection of predominant societal concepts as to how work should be organized (Scott, 1987; Selznick, 1996). Thus the effects of isomorphic forces would be best captured by ownership structure.

There is a push to have 'best practises' styles of MFI governance adopted internationally and by developing countries in particular (Helms, 2006b; Otero & Chu, 2002; Rock et al., 1998). This push to copy the governance structures and mechanisms of developing countries leads to mimetic pressures on MFIs and the push for more regulation exerts coercive presures. Organizations within the microfinance institutional field are also exerting isomorphic pressures on MFIs. A typical case are the activities of the Consultative Group to Assist the Poor (CGAP). CGAP is an organization formed by the largest aid agencies in conjunction with partner networks, funders, and microfinance institution has by using training, publications and advocacy built an almost universal consensus around certain microfinance issues such as regulation and supervision, financial reporting, disclosure and product pricing (Gutiérrez-Nieto et al., 2009; Helms, 2006b). Combining this with their research and operational tools, they have helped professionalize microfinance across the world Their Key Principles of Microfinance have been recognized and supported by governments all over the developing world and as well as by the Group of 8 industrial nations. It is the CGAP that created the Microfinance Information eXchange (MIX), for MFIs to report their perfomance and metrics to create a picture of transparency, sustainability, and growth. As a result of the success of MIX, mainstream rating agencies themselves are starting to include microfinance institutions in their reviews (Helms, 2006b). By facilitating the professionalization of the microfinance industry, CGAP has become an instrument of normative isomorphic pressure and by influencing national governments to adopt some of its policy recommendations, has also become an instrument of coercive pressure.

3.4.4.2 Culture

Erez and Early (1993) point out that the sociocultural dynamics formed within an organization that become its culture are not formed independently of external sociocultural influences. Rather, organizational culture develops as a function of the societal cultural values, norms, and codes of communication. Zucker (1977) and Zucker (1983) mention pressure from implemented institutional elements coming from within the organization itself or from imitating other similar organizations. The neo-institutional theory explains how culture by way of isomorphism shapes organizational behaviour via cultural scripts, beliefs, symbols and rituals, and the like (DiMaggio, 1982; DiMaggio, 1991; DiMaggio & Powell, 1983; Scott, 1987). Suchman and Edelman (1996) go further to say that organizations, just like humans, could develop habits, experience shame and stigma, respond to ethics and customs or consider the legality of their actions.

Microfinance is deeply rooted in the cultural contexts of where it is being practised. Chapter 2 traced the development of microfinance pre-Yunus/Grammeen Bank and illustrated the rich cultural contexts of religion, tribal practises, economic contexts and socio-economic stratifications that affected interest rates, loan products, punishments for defaulters and service delivery. Post Yunus/Grameen Bank, microfinance institutions across the world have tried to apply the Grameen Bank model. However, the cultural context in which the Grameen Bank was developed and deployed is different than that of a lot of other countries and as Auwal (1996) showed, the model had to be adapted culturally to be able to work in the United States (The Good Faith Fund) and Malaysia (Amanah Ikhtiar). The Good Faith Fund for instance made several changes- making the group size flexible, changing the loan period from a one-year period to three months, six months and one-year loans (repaid at the market

interest rates). They also did away with the gender segregation, allowing members to have one immediate relative their group and meeting bi-monthly instead of weekly (Auwal, 1996). In the Gonja community of Ghana, the problem with microfinance is the change it brings to gender roles, which are culturally and religiously constructed through socialisation, with men having a higher social standing than women do. In such areas, anything that would lead to a change in the status quo, which is likely to affect men, would be difficult to accept (Kessey, 2005). Epstein and Yuthas (2010) identified that some regions have cultures of non-repayment, thereby making them more difficult to lend to and requiring that different management strategies be developed that takes into consideration the unique characteristics of these regions.

To be able to compare differences in the elements of culture, and to determine what elements affect the delivery of microfinance, standard measures are needed. This is where cultural dimensions come in.

3.4.4.2.1 Hofstede's Cultural Dimensions Theory

Aristotle in his *Politika* published in 328BC said:

> *"Man is by nature a social animal; an individual who is unsocial naturally and not accidentally is either beneath our notice or more than human. Society is something that precedes the individual. Anyone who either cannot lead the common life or is so self-sufficient as not to need to, and therefore does not partake of society, is either a beast or a god"*

Twenty-five centuries after this statement was made, man's social nature has been observed and measured through different sciences. Neuroscience has shown that there are mirror

neurons in the brain whose sole purpose is to improve man's awareness of others by either sharing feelings or learning by imitating. Physiology and biology offer evidence that the human ear is tuned more to human voices than to any other sound, that facial muscles common to every human being are those required to for communicating the basic six emotions of sadness, happiness, disgust, anger, surprise and fear. Additionally, the human sciences explain how our perception of the world is governed by our social interactions and how, by attaching social meaning to modes of informal communication, our day-to-day behaviour is shaped. These thoughts are echoed in the works of anthropologists who believed that societal groups (whether they be modern or traditional) all face the same basic challenges and differ only in the way they solve these issues. A sociologist and psychologist, Inkeles and Levinson (1954) identified the following as the basic global challenges faced by every society as well as the groups and individuals in them:

- How they relate with authority
- How they perceive themselves especially their relationship with the larger society and how they perceive masculine and feminine behaviour.
- How they deal with issues of conflict, include how they express feelings and control aggression.

These assumptions formed the premise of the research on national culture carried out by Dr. Geert Hofstede in 1980.

Based on Hofstede, Hofstede, and Minkov (2010) culture can be defined as the collective programming of the mind that distinguishes the members of one group or category of people others. Markus and Kitayama (1991) explain that people from different cultures are likely to have distinctively different views on the concepts of self, others, and of the interdependence

of the self with others. These views or constructs tend to influence, and in many cases actually determine, the very nature of the individual's experiences in life including the cognitive, emotive and motivational learning processes of learning from their experiences. To further illustrate the point of how different cultures shape the behaviour of different people, Markus and Kitayama (1991) gave an example of the Asian and American cultures. They noted that most of the Asian cultures idea on individuality emphasises on attending to others, fitting in, and harmonious interdependence with each other. The American culture on the other hand is quite the opposite. The culture does not support or encourage such closeness between individual members of the society but instead people within this culture tend to preserve their own independence by focusing on themselves and on discovering and expressing their unique inner characteristic traits.

As people became more aware of the effect of culture on people, groups and organizations there grew an increasing need to develop a framework to allow of studying it and undertaking cross-cultural national and organizational studies. One of the most significant and pioneering solutions to this was the Hofstede Cultural Dimensions. The data for the Hofstede research came from a database of questions from an IBM staff survey containing 116,000 questionnaires administered twice (first in 1968 and then in 1972) to matching samples of IBM employees based in 50 countries in 3 regions. The questionnaire contained 150 questions out of which only 32 standardized attitude and value survey questions were utilized for the analysis. The questions chosen were those that focused on the respondent's worldview and those that highlighted the differences in the countries in the two time periods in which the questionnaire was administered. The questionnaire was then administered to several occupational groups (managerial, technical, professional, and clerical) within each country

and scores determined for each question based on answers collected from a constant mix of seven questionnaires drawn from these groups. The average score was then calculated from the two time periods. The unit of analysis was at the country level and so 40 different groups of questionnaires were examined using both relevant theories and statistical relationships. The results yielded four dimensions that were expressed as indices. There were originally 67 countries in the data bank, but 27 were left out of the analysis because more than half of the necessary occupational data was from fewer than eight respondents. Also, each country had to have a minimum of 50 respondents to qualify for the analysis, for each of the two survey rounds, so this reduced the initial data set of 67 countries to 40. 10 more countries were later added when they met the minimum requirements at a later stage bringing the country count to 50.

The results confirmed the theory put forward by Inkeles and Levinson (1954), with respondents indicating that the common problems faced by them all were issues surrounding

- Their relationship as individuals with the larger groups they found themselves in
- How they relate with authority and issues of social inequality
- The implications (social and emotional) of being born male or female within that society and their perceptions of gender and gender roles and characteristics.
- How they handle ambiguity and uncertainty. These in turn are linked to how they express their emotions and how they control aggression.

These findings were grouped into what has come to known as the four basic dimensions of culture- power distance (ranging from small to large), individualism (versus collectivism), uncertainty avoidance and masculinity (versus femininity) and are explained below.

Power Distance Index (PDI)

This describes the degree to which inequalities are accepted by the citizens of a country. In those countries that have a higher degree of power distance, these inequalities are expected and accepted by the less powerful members of that society. On the other hand, in countries where the power distance index is low, the people believe in minimizing these inequalities and strive for equal power distribution, demanding justification for inequalities of power. Societies with high power distance would be more stratified economically, socially, and politically with those with power or authority expecting, and receiving, obedience. As such, organizations within these societies would be characterized by the by the abuse and use of power for personal gain, a lack of equal opportunities for minorities and women, and a lack of opportunities for personal or professional development for their staff (Abate, Borzaga, & Getnet, 2014). Managers in high power distance countries are less likely to consider people of lower ranking to them or the concerns of the public. On the other hand, research indicates that social enterprises are more likely to develop in cultures with low power distance (Dorfman et al, 2012).

Individualism versus Collectivism (IDV)

The individualism index looks at the level of integration between the people within any given society. Countries with high individualism scores place more emphasis on themselves and their immediate families while those with low individualism scores (otherwise said to be collectivistic) live within a tightly knit social framework. Erez and Somech (1996) pointed out that residents in urban areas tend to exhibit more individualistic behaviour than those in rural areas which Griffin (2010) highlighted as

a hindrance to joint lending as It is easier to overcome adverse selection in rural areas where people have better information on their neighbours due to the more collectivistic culture. However, the research of Postelnicu and Hermes (2015) indicate that individualism is positively affects both the percentage of female borrowers and depth of outreach using average loan size.

Masculinity versus Femininity (MAS)

This index captures the differences in gender roles and expectation as expressed by different societies. Countries with high masculinity scores tend to exhibit traits that are more assertive and competitive, celebrating achievement and abhorring failure whereas countries with low masculinity scores (said to be feminine cultures) place a higher value on modesty, caring and nurturing and encouraging affiliation. This index is seen in countries that emphasize competition and offer opportunities for increased pay, promotion and recognition on a merit based system (Newman & Nollen, 1996)

High masculine cultures emphasize the differences between gender roles, men having stereotypically masculine roles and women, feminine ones. In high masculinity cultures women may not be treated as equals and hence they may not be allowed to take on roles the culture considers masculine.

Uncertainty Avoidance Index (UAI)

Uncertainty avoidance (and research using this index) look to measure the level of discomfort that members of a society associate with unpredictable or unknown situations (Dorfman et al., 2012; Hofstede, Hofstede and Minkov, 2010) and how they behave within such an environment. It has been shown that the higher the level of

uncertainty (countries with high uncertainty avoidance scores) the more averse to risk the members of that society would likely be and to alleviate this uncertainty would follow engage in such behaviour that would provide greater stability (Hofstede, 1991).

In 2010, working with Michael Minkov, the third edition of third edition of *Cultures and Organizations: Software of the Mind* (Hofstede et al., 2010) was published with the addition of two more indices were added to the original cultural dimensions

Long Term Orientation (LTO) versus Short Term Normative Orientation

The measure of Long term orientation was added to gauge how members of a society plan and deal with the future. With cultures that have high values of long term orientation, they are more comfortable and certain, prioritizing long term planning over short term concerns, taking actions that improve their future prospects. Cultures exhibiting long term orientation shun quick fixes and place value on patience, persistence, obedience, a sense of duty, seeking the greater good and respecting elders and ancestors (Newman & Nollen, 1996). However, for countries with low long term orientation scores (otherwise known as short term normative orientation), the struggle is to survive and as such they focus on short instead of long term investments and show a preference for immediate (as opposed to long term) returns.

Indulgence (IND) versus Restraint

This index is relatively complementary (weakly negatively correlated) to Long term Orientation and looks at the degree to which a society permits its members the comparative freedom to pursue the gratification of basic and natural human desires associated with the enjoyment of life and pleasure. In countries that are highly indulgent, people are free to

pursue pleasure and gratification while in countries that have lower indulgence scores (restraint), gratification is controlled and/or regulated via strict societal norms and regulations (Hofstede, 2011; G. Hofstede et al., 2010)

Some level of correlation was found between power distance and individualism, although negatively correlated (r = 0.67 across 40 countries), have been maintained as separate dimensions for conceptual reasons. When, later, ten more countries and three regions were added, the index scores for these supplementary units were calculated according to the formulas derived from the first and larger 40 units. Adding these new units did not substantially change the structure of the dimensions (Hofstede, 1983).

The index scores of the countries on the dimensions have been validated based on the significant correlation found to exist between them and the results of about 40 other existing comparative studies. The four dimensions considered are related to very fundamental problems which every human society or group faces and to which they have found different answers to. They are used to explain

- The different ways of in which organizations or nations are organized.
- The various innovations within organizations, and
- The various challenges that people and organizations face within their society.

The questionnaire used for the IBM study (now improved on and updated and known as the Values Survey Modules or VSMs) has been used in various other studies trying to replicate the work of Hofstede and these studies confirm his findings and the cultural dimensions. The original country list has been updated from 40 to 93 and three regions were also added- Arab speaking, West Africa and East Africa (Hofstede, 1982, 1983; G. Hofstede et al., 2010)

3.4.4.2.2 Criticisms of Hofstede Cultural Dimensions

The IBM survey carried out by Hofstede was the first study on culture carried out on that scale

Hampden-Turner and Trompenaars (1997) highlighted several criticisms of Hofstede's research and the cultural dimensions. Using the United States of America for an example, an Individualism score on the Hofstede's Cultural Dimensions of 91, would imply that country is a highly individualist society and as such not group or community oriented. However, this could be misleading as Americans tend to form more voluntary associations than any other country in the world, have more publications centred on team work and of the developed nations, has the largest church membership. As such, argue that culture is not as linear as Hofstede (1980) makes it out to be but is rather circular.

In spite of all these criticisms, Hofstede Cultural Dimension theory continues to be of relevance and used in research. It is usual that after a publication has been put out for the number of citations it has to peak in the 3rd to fifth year after its publication date and subsequently declining till it gets to a steady state which is usually about 10 years after publication (Gamble, O'Doherty and Hyman, 1987). Baskerville (2003) analysed the Hofstede (1980) work and found that instead of declining, and in spite of the heavy criticism it has come under, there seems to be no decrease in the citation rate. On the contrary, it seems to be increasing, mostly in areas outside the mainstream social sciences such as the areas of organizational studies, psychology, management and the behavioural sciences. This is likely an indication that it meets a certain need in these areas where it is used. Baskerville (2003) further highlighted that these areas focus on how individuals respond to problems or stimuli and as such are frequently embroiled in debates of the nature vs nurture kind. This is reflective of the nature of this study and informs the belief that the Hofstede Cultural

Dimensions is a reliable tool for measuring the effects of culture within the context of this study.

3.4.4.3 Institutional Quality

The institutions and the institutional environment are key concepts attached to institutional theory. Institutional elements are usually external to the organizations and are strong enough to cause change in organizations (Zucker, 1987). Institutions are symbolic and social systems that collectively form regulatory mechanisms that define human interactions and structures the incentives in their political, social and economic exchanges (Aagaard, 2011; Henisz & Delios, 2015; Law & Azman-Saini, 2012; Levchenko, 2007; Scott, 2014) and is formed naturally as a result of social needs and pressures (Selznick, 1957). The institutions could be either formal or informal, with formal institutions creating the formal rules -laws, constitutions and property rights- and the informal institutions creating codes of behaviours (such as norms), conventions, traditions, taboos and customs (Law & Azman-Saini, 2012).

The institutional environment exerts regulatory and normative pressures applied on organizations by professions and the state or society. It includes political institutions such as the national structure of policymaking, regulation and adjudication; economic institutions such as the structure of the national factor markets and the terms of access to international factors of production; and socio-cultural institutions such as informal norms (Wade, Swaminathan, Wade, & Swaminathan, 2015). These institutional environments define and restrict the social reality of the organizations operating within them creating a need for the organizations need to conform to the characteristic rules and requirements of these institutional environments in order to obtain support and legitimacy. Not taking their

influence into consideration is to ignore significant causal factors that shape organizational structures and practices (Meyer and Rowan, 1977; Scott, 1987).

The overall political and economic environment of a country affects how microfinance is provided in that country as the economic and social policies of the government influence microfinance organizations in the delivery of financial services to the poor (CGAP, 1996). For instance, the regulatory frameworks exert coercive pressure on microfinance institutions that could be either positive or negative. Regulation is the implementation of public policies by coercive government power that affects market outcomes (Chaves & Gonzalez-Vega, 1994) and the regulatory framework are mechanisms put in place to protect depositors, avoid financial crises and to encourage competition and efficiency within the sector (CGAP, 1996; Chaves and Gonzalez-Vega, 1994). However, when the regulatory framework leads to imposed interest rate ceilings and tax structures that discourage investments; this could result in financial repression (CGAP, 1996). Five key things recommended as the barest minimum issues to be considered when supervising or regulating MFIs by CGAP (1996) - Minimum capital requirements, asset quality, capital adequacy, liquidly requirements and portfolio diversification. Enforcing these puts both coercive (in form of regulation), mimetic (copying of best practises) and normative (CGAP encourages professionalism) pressures on MFIs.

The capacity of the legal framework to ensure effective contract enforcement is key to the delivering of microfinance. Even though most MFIs do not require collateral and as such are not particularly concerned with the ability to repossess a defaulter's assets, a strong legal system that allows defaulters to be prosecuted can act as a deterrent for would be defaulters. The ability of courts to uphold and enforce these contracts also facilitates lending

(Ledgerwood, 1998). Also, properly articulated property rights and good contract laws helps to reduce the costs of both exchange and production transactions, which in turn frees up resources that can be invested in areas where it is needed (Gwartney, Holcombe, & Lawson, 2004; Ledgerwood, 1998). Politically, general instability, corruption, civil war, party or tribal rivalries affect the country economically. There are also psychological and social effects -their future outlook, where they want to invest, what they are willing to invest in and their attitude to risk are all affected by the political institutional environment (Ledgerwood, 1998).

The quality of these institutions varies from country to county and from region to region and has been shown to account for cross-country differences in various areas. These areas include flow of trade (Levchenko, 2007), income and growth (Gwartney et al., 2004), Monetary policies for developing countries (Huang & Wei, 2006), Bilateral Trade Patterns (De Groot, Linders, Rietveld, & Subramanian, 2004) and the adoption of organizational practices by the subsidiaries of multinational corporations (Kostova & Roth, 2002).

3.5 Hypothesis Development

The institutional environment via coercive, mimetic and normative isomorphism influences the behaviour of organizations (DiMaggio, 1982; DiMaggio & Powell, 1983, 2012). Connecting the empirical evidence with the theoretical arguments,

This thesis proposes the following hypotheses to answer the research question:

3.5.1 Hypothesis 1: Global Effects

Financial stress, defined as periods of impaired financial intermediation, has been shown to transmit from developed countries to emerging economies, with the extent of transmission associated with the depth of financial linkages between the developed and developing

economies (Balakrishnan, Danninger, Elekdag, & Tytell, 2011). With funds for MFIs coming from both domestic and international capital markets and with the lack of insulation from mainstream and global finance and their shocks (El-Zoghbi, Gähwiler, & Lauer, 2011), the first hypothesis postulates that

H_1: Global Factors affect the depth of outreach

H_{1a}: H_1 is not true

3.5.2 Hypothesis 2: Regional Effects

The Consultative Group to Assist the Poor is a global partnership made up of over 30 leading organizations with the aim of advancing financial inclusion. They do this by developing innovative solutions through practical research and active engagement with financial service providers, policy makers, and funders (CGAP, 2018). They have grouped the developing countries into regions that share similar cultural and religious (like the MENA areas) and historical traits. CGAP exerts pressure by influencing policy across these regions. As such:

H_2: The Region an MFI is located affects its depth of outreach

The developing countries used in this study are grouped into six regions. Each region has its own unique set of characteristics and the argument is that each region exerts different forces on the MFIs in them. As such, it is expected that the behaviours of these MFIs will differ. Breaking down the second hypothesis across regions gives six sub-hypothesis 2a to 2f

H_{2a}: Locating an MFI in Africa affects its depth of outreach

H_{2b}: Locating an MFI in East Asia and the Pacific affects its depth of outreach

H_{2c}: Locating an MFI in Eastern Europe and Central Asia affects its depth of outreach

H_{2d}: Locating an MFI in Latin America and the Caribbean affects its depth of outreach

H_{2e}: Locating an MFI in Middle East and North Africa affects its depth of outreach

H_{2f}: Locating an MFI in South Asia affects its depth of outreach

H_{2g}: Alternative to any of the above is true

3.5.3 Hypothesis 3: Country Effects

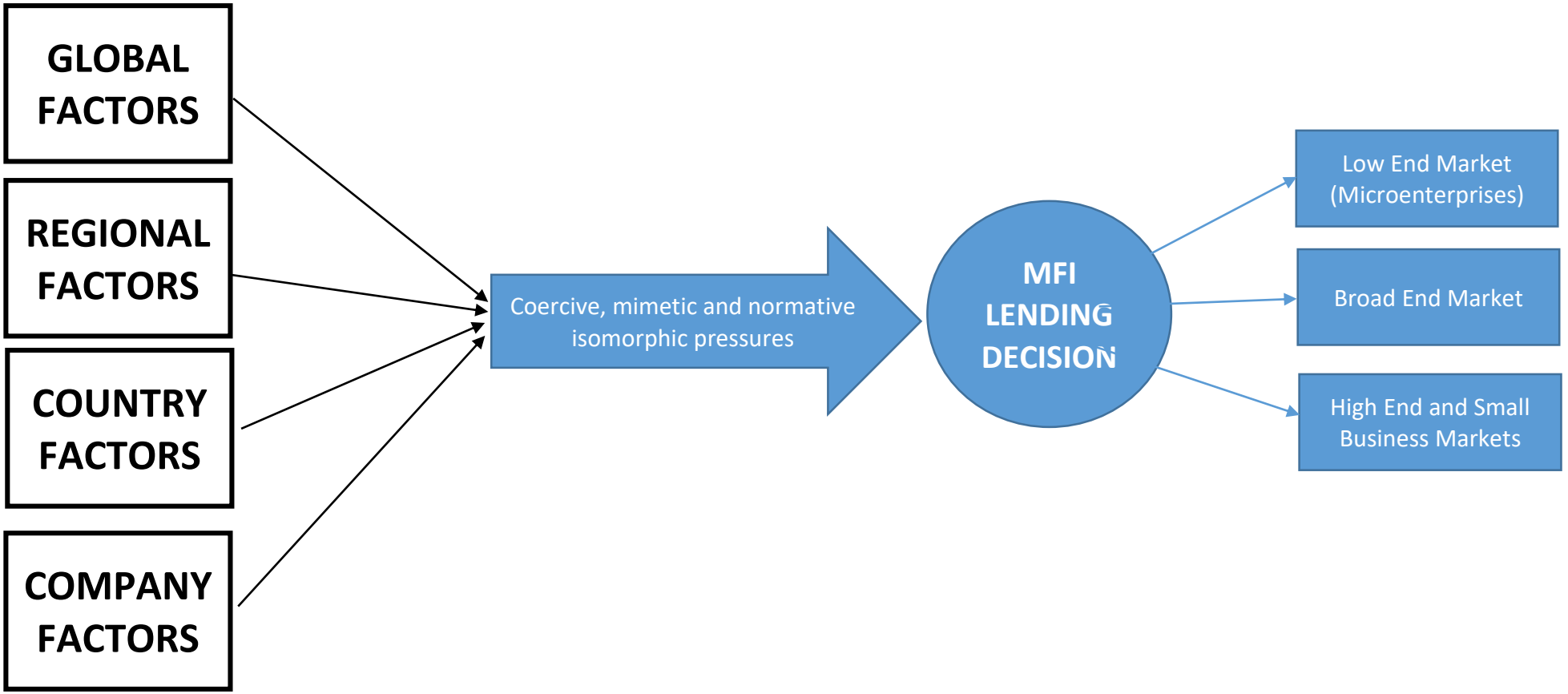
According to the neo-institutional theory, organizations would adapt to their environment, therefore, MFIs in a corrupt country will find a way to survive and respond differently than those who have less corruption. The isomorphic forces are exerted by formal institutions expressed as laws, constitutions and property rights, (Law & Azman-Saini, 2012) and organizations conform to them in a bid to gain legitimacy (Scott, 2014). Vanroose (2008) found the microfinance sector stronger in developing countries with stronger economies, Ahlin, Lin, and Maio (2011) found the efficiency of the government and the control of corruption to affect size of loans, Muriu (2011) found political stability, corruption and rule of law all affecting MFI profitability. (Müller & Uhde, 2013) found political stability, regulatory quality and rule of law to affect depth of outreach. This leads to the hypothesis:

As such, the hypothesis:

H_3: The Country an MFI is located in affects its depth of outreach

H_{3a}: H_3 is not true

Figure 3-2: Conceptual Framework



3.6 Conclusion

The primary aim and mission of MFIs from their inception was to provide small loans to the poor, to reach the unreached. With evidence indicating that these loans are not flowing down to those who need it, there has been research devoted to understanding why. The reason proffered vary and are inconsistent. Some place the blame on the call for MFIs to adopt commercial logics in order to be more sustainable while others look to the restrictiveness of regulatory rule. However, adopting the neo-institutional theory as a framework for this research highlights the following factors: First, that there are distinct institutional and socio-economic forces combining to apply pressure on Microfinance Institutions internally and externally, that have the power to override what would appear to be logical business decisions or organizational logics. Secondly, that these coercive, normative and mimetic pressures occur through separate processes, they and their resultant effects are not always empirically distinguishable and two or even three of them might even occur simultaneously (DiMaggio & Powell, 1983; Mizruchi & Fein, 1999). Equally, the governance structures, national cultures and institutional quality of various countries have been identified as sources of isomorphic pressure and influence MFI behaviour but also may not always independently. For instance, CGAPs push to have the governance structures and mechanisms of MFIs in developing countries copied exerts mimetic pressures on MFIs and when these polciies are adopted by governments, coercive presures is exerted on MFIs. CGAP also carries out training programs and tries to set the standard for professional conduct i.e. normative pressure. All these take place against a cultural backdrop that varies from region to region. Neo-institutional theory allows us to take into consideration these various levels and areas in which pressure is being applied to MFIs to behave in a particular way and as such lends itself

as an apprpriate tool to understand why they are not reaching lower down the poverty line and the determinants of microfinance outreach.

This chapter also reviewed the empirical evidence examining the factors affecting depth of outreach and found these studies lack a consensus in their findings. The empirical review also highlighted that although there have been several studies looking at how global factors such as the financial crises of 2007-2009 affects growth of credit and regional factors affect breadth of outreach, there has been no study linking these directly to depth of outreach- studies have been concentrated on company and country specific factors. The hypotheses for this research were then developed using the neo-institutional theory with an understanding of how the environment exerts pressure on organizations (specifically MFIs) and the nature of these forces. These factors were grouped into company, country, regional and global factors. The next chapter explains what variables have been chosen to proxy these factors/forces and how they will be used to answer the research questions.

CHAPTER 4: METHODOLOGY

4.1 Introduction

Building on the proceeding chapters' review of empirical literature and the hypothesis developed, this chapter discusses the methodology and data by which the hypotheses will be tested. It makes an argument for an objectivist ontology and positivist epistemology in the analysis of depth of outreach, and for a micro-ethnographic methodology to answer the research questions. It argues that ethnographic methods will best enable the role of social norms within the microfinance market to be explored in depth, as well as provide the market participants' perspectives on the effectiveness of the formal constitutional and operational rules.

The chapter is subdivided into seven sections. Section 4.2 looks at the other research methods that used in related studies and the problems with them. Section 4.3 discusses the design of this thesis by exploring the ontology, epistemology, research methods and describing the model used for this study. Section 4.4 then looks at the data used for the study, breaking it down to source and some descriptive statistics. Section 4.5 then explains the dependent and independent variables, section 4.6 looks at the Robustness tests and other tests and statistical methods used in this study and section 4.7 concludes this chapter.

4.2 Research Methods in Microfinance

Several methods have been employed in research examining the factors that affect the depth of outreach. Hartarska (2005), Hartarska and Nadolnyak (2007), Mersland and Strøm (2008), Vanroose (2008), Ahlin et al. (2011), Muriu (2011), Müller and Uhde (2013), Assefa, Hermes, and Meesters (2013), Barry and Tacneng (2014), Manos and Tsytrinbaum (2014) all use

regression analysis. The regression analysis is used to try and determine if a relationship exists between two variables (Wooldridge, 2015). Gujarati (2003) explains that the relationship explored is usually one of dependence and regression analysis is to enable the prediction and/or estimation of the mean of the dependent variable in terms of the known or fixed values of the independent variable. These studies all sought to establish causal link to depth of outreach and have looked at several factors – governance, institutional, macro-economic, cultural and so forth. Hartarska (2005) and Barry and Tacneng (2014) used random effects models while Ahlin et al. (2011), Muriu (2011) and Assefa et al. (2013) used linear regressions all with single dependent variables. Mersland and Strøm (2008) used a logit model to look at the ownership effects on a range of MFI performance indicators (including depth of outreach). However, the use of the one dependent variable to measure depth of outreach in their research has led to a problem of explaining their results as there exists explanation outside their model that can explain their results- upscaling of customers, urbanization etc.

This study along the same vein is exploring the dependent relationship but instead of using loan size as the singular dependent variable, this study will use target markets in a logit regression to determine the probability that an MFI would lend to a certain group above another. This solves the problems highlighted by Schreiner (2001) in the use of loan size as a measure of depth of outreach in that even though the use of target markets are still based on loans size, it is no longer as an absolute measure of poverty but a relative measure. The results of using the target market as ordinal scales in a logit regression will be the probability of an MFI picking one sector above the others.

4.3 Research Design

In designing research, there are four main things that need to be considered- the epistemology, the philosophical position, the methodology and the procedures and techniques used in collecting the data for the research (Crotty, 1998). Closely associated with the epistemology is a fifth consideration- the ontology. Following is a description of all five as they relate to my research.

4.3.1 Ontology

The ontological questions of any research arise in an attempt to understand the nature of the subject matter or phenomenon under examination. It evaluates whether it is possible to examine social constructs separately and objectively and their reality evaluated independent of the realities of the researcher. The two main ontological positions identified by Bryman (2012) are objectivism and constructionism. An objectivist position believes that social phenomena and their meaning exist independent of social actors or according to Crotty (1998, p. 8) "That tree in the forest is a tree, regardless of whether anyone is aware of its existence or not". This study holds it that organisations are real objects with a reality external to the people that form it and it can influence the behaviour of the people in it to act in a certain way. This view is held by objectivists regarding culture, which is considered to be sources of generally shared values and customs. Culture and societies, like organisations, are considered to have the characteristics of an object and therefore have an objective reality (Hatch, 1993; Moran). In this study, meaning is derived from the measurement of the data collated, believing that the meaning of truth and knowledge lies in the objects themselves and is not subject to interpretation (Crotty 1998). It has nothing to do with the interaction between participants and their experiences. As such, the epistemological stance for this

research approach was objectivist, as the focus is more on measurements than the meaning people derived from their interactions as would be the case if a constructivist view was adopted.

4.3.2 Epistemology

Epistemology provides a philosophical foundation to help in deciding what kinds of knowledge are possible (Crotty, 1998; Maynard, Maynard and Purvis, 1994) and relates to what the researcher considers knowledge to be (Collis & Hussey, 2009; Crotty, 1998). The epistemological stance of a research affects how it is designed, its data collection methods and how its outcomes are interpreted. An objectivist ontology is usually linked with a positivist epistemology. The positivist epistemology applies the methods of natural science, assuming that the external world is objective, existing independent of human observation and pliable to measurement (Bryman, 2015; Saunders, Lewis, & Thornhill, 2011). The positivist approach works on the belief that the researcher is objective, not personally involved, does not influence the outcome in any way but rather is limited collecting, measuring and interpreting data. This process is easily observable and when repeated will give the same results. The data used for this research is historical data of a quantitative nature and econometric analyses will be used to test the hypotheses developed in the previous chapter- all falling within the positivist sphere.

4.3.3 Research Methods

Creswell and Creswell, (2017) highlight that often times the nature of enquiry and/or the nature of the data determine the method of inquiry or procedures in which the phenomenon is addressed. In the post positivist scenario this study finds itself, the procedure involves the

development of a hypothesis and the collection of data to support or refute the hypotheses and analysis using statistical procedures (Creswell, 2017). As the nature of the study is to establish a relationship between two variables (geographic locations and depth of outreach), a regression would be appropriate.

With simple and multivariate linear regression models, it is assumed that the relationship between independent and the dependent variables (or explanatory and outcome variables) is a linear relationship. In other words, for every unit increase in the independent variable, there would be a change of some fixed number of units in the dependent variable. As related to this study, it would imply that for every unit microfinance institution located in a specific geographic location, that the number of people receiving loans would either increase or decrease by a set number.

(Dey, 1993) have made an argument for the suitability of linear regression analysis. They argue that it has found a much more wider use and is better understood method than either probit or logistic methods and that it is known to be robust under widely varying conditions where its classical assumptions have been violated. They also argue that computer software available for regression analyses generally has more extensive and sophisticated options than can be found in software designed for running probit analysis or logistic regression. As valid as these reasons might be, the main issue here is that the dependent variable in this study is a discontinuous categorical variable and not a continuous variable, and as such, a linear function cannot be used. Of the non-linear functions available – logit and probit regressions lend themselves to use in dichotomous responses. Logit regressions let researchers perform regressions on data when the dependent variable is either qualitative in nature or not a continuous interval level variable (Walsh, 1987).

In addition, using a linear regression, there is a possibility of violating basic probability assumptions. That is, estimated probabilities could be higher than 1 or less than 0 (e.g. Wooldridge (2015, p 526)). Logit model employs a logistic transformation to ensure that the estimated probabilities do not violate basic assumptions and fall within acceptable range. An alternative approach would be employing a probit model, which employs a different transformation technique to keep probabilities within the appropriate range and delivers similar results.

The use of the logit regression does not come without its drawbacks. For one, the results from this study may not be comparable with other studies and secondly, comparing numerous categorical variables with continuous variables may prove some difficulty (Cross, 2001).

4.3.4 Model specification

As stated in section 4.3.3, there are three categorical dependent variables. These variables have been coded 0, 1 and 2 to allow them be analysed statistically.

This is the same model used by Hartarska and Nadolnyak (2008) in their microfinance impact assessment and Mersland and Strøm (2008) in evaluating ownership effects on outreach.

As Hartarska and Nadolnyak (2008) explained, the logit model assumes logistic distribution of the probability of an event:

$$Pr_i = (1 + \exp(-\lambda_i))^{-1} \quad \textbf{(4-1)}$$

Where λ is linearly dependent on the variables hypothesized to affect the probability:

$$\lambda_i = \alpha + \beta X_i \quad \textbf{(4-2)}$$

With the probability varying from 0 to 2 ($\lambda = \pm\infty$), and the model simplified by rearranging it into a log of the odds,

$$\ln\left(\frac{P_i}{1-P_i}\right) = \alpha + \beta X_i \quad \textbf{(4-3)}$$

for samples consisting of individual outcomes, it can be estimated with maximum likelihood. Interpretation of the coefficients can be also done by reverting to the probabilities. Thus, it is estimated

$$\Pr\begin{Bmatrix}\text{LOW} = 2\\ \text{BROAD} = 1\\ \text{SB} = 0\end{Bmatrix} = f\ (\alpha + \beta_1 \text{COMP} + \beta_2 \text{COUNTRY} + \beta_3 \text{REGIONAL} + GLOBAL + \gamma`Z \quad \textbf{(4-4)}$$

Where

- **LOW** *is* the decision to lend to low end enterprises
- **Broad** is the decision to lend to broad enterprises
- **SB** is the decision to lend to high end and small business Enterprises
- **LEGAL** is the variable for Legal Structure
- **COUNTRY** are a wide range of country macro-economic and institutional factors
- **REGIONA**L are the regional factors
- **GLOBAL** are the global factors
- and **Z** is a vector of variables that capture various characteristics of the MFI and the community in which it operates

Substituting the variables for legal structure, institutional quality, culture and control variables gives

$$\Pr\begin{Bmatrix}\text{LOW}=2\\ \text{BROAD}=1\\ \text{SB}=0\end{Bmatrix} = f\ (\alpha + \beta_1 COMPANY f(\text{OWN}, \text{ROE}, \text{PAR30}, \text{AGE}, \text{SIZE}, \text{REG}) + \beta_2\ COUNTRY\ f\ (GDP, MOBILE, INSTQUAL, CREDIT, INFLATION), + \beta_3\ \text{REGIONAL}\ f\ (\text{REGION}) + \beta_4\ \text{GLOBAL}\ (\text{REGION})\ f\ (\text{FCRISIS}) + \gamma`Z \quad \textbf{(4-5)}$$

Where

- LOW = Low end market (microenterprise)
- BROAD = (Broad end market)
- SB = High-end/Small business (Small enterprises)
- COOP, BANK, NGO and NONBANK are dummy variables that is equal to 1,2,3 and 4 if the MFI Is a Cooperative, bank, Non-Government Organization and Non-Bank Financial Institution respectively
- FCRIS
- ROE Return on equity
- PAR30 = Portfolio at risk (30 days)
- Age = grouped into NEW MFI, YOUNG MFI and MATURE MFI
- WOMEN = % of female borrowers
- REGION = Regional Location index(SSA, East Asia and the Pacific, Eastern Europe and Central Asia, Middle East and North Africa, South Asia, LAC
- REG = whether the MFI is regulated or not.
- SIZE = Size of MFI (Small, Medium or Large)
- INSTQUAL = Institutional Quality Index
- CREDIT = Domestic credit to private sector (% of GDP)
- GDP = GDP per capita growth (annual %)
- INFLATION = Inflation, consumer prices (annual %)
- MOBILE= Mobile cellular subscriptions (per 100 people)
- LABOUR= Labour force participation rate, total (% of total population ages 15-64) population growth (annual %)

4.4 Data Sources and Sample Selection

Data for this research was taken from the database of the Microfinance information Exchange (MIX Market) which is a not-for-profit private organization dedicated to the promotion of information exchange in the microfinance industry. They have tracked the microfinance industry since the 1990s and there is presently financial and social performance information, including quarterly results, on 2795 MFIs in the developing world (Table 5.2) covering over 94

million borrowers. It is also the most comprehensive data source for MFI related measures and is the used in a majority of empirical studies using secondary data.

Table 4-1: Number of Current MFIs reporting to wwww.mixmarket.org[7]

REGION	# of MFIs
Africa	195
Asia	283
Eastern Europe & Central Asia (ECA)	217
Latin America & Caribbean's (LAC)	333
Middle East/North Africa (MENA)	56
TOTAL	2795

4.4.1 Data validity & Reliability

Although it is a self-reporting website, MIX complements the data they receive from MFIs with data from audits, internal financial statements, management reports and other documents. To help improve the validity of its data, MIX staff review all data and validate it against a set of business rules before making it available to the public. This review system comprises of over 135 quality checks and 150 audit rules. The audit rules include checking whether financial statements balance or whether ratios levels are abnormally high or low for an MFI. Although participation in the Mix Market database is voluntary, many MFIs choose to consistently provide their financial and outreach information to the database, and the information provided is believed to be reliable. All the variables used in the study are based on financial statements outreach information reported as of 2006, and all monetary values are expressed in current United Sates dollars. Mixmarket is the data source for this study for the following reasons. First is that it makes the distinction between Rural banks, NGOs, Non-

[7] Taken from Microbanking Bulletin (2009), "The Microbanking Bulletin No.19", Copyright 2009, Microfinance Information Exchange, Inc

Bank Financial Institutions and Credit Unions/Cooperatives. Secondly, it also makes a distinction between the various loan sizes, which this research uses as a proxy for type of business- Micro- small or medium enterprise. This is critical to this study as it allows the data be categorized and used as categorical dependent variables.

The third reasons speaks to its validity as a data source and is the fact that it is a self-reporting site. Information offered is voluntary and represents an urge by MFIs to conform to certain standards, which speaks to the isomorphic forces this study is interested in.

The final sample is an unbalanced panel made up of 6825 observations from 455 MFI institutions across the seven regions and covering the 15 years of this study as represented in table 4-2

Table 4-2: Distribution of MFI types across regions

Region	NGO	NBFI	Rural Bank	Other	Cooperative	Bank	Total
South Asia	31	17	2	1	0	6	57
Africa	22	22	0	0	24	10	78
East Asia and the Pacific	15	11	5	2	1	3	37
Eastern Europe and Central Asia	8	53	0	0	6	21	88
Latin America and The Caribbean	67	50	0	0	12	24	153
Middle East and North Africa	21	7	0	2	0	0	30
TOTAL	164	160	7	5	43	64	443

This research uses a panel data approach and this allows for the observation of both cross-sectional and time-series observations, goffering added degrees of freedom and a lesser amount of multicollinearity amongst the variables (Gujarati, 2003)

4.5 Variables and measures

This section outlines the dependent, independent and control variables and their proxies. It also explains why these variables were chosen

4.5.1 Dependent Variable;

As discussed in chapter 2, while loan size remains a research favourite as a proxy for depth of outreach, it comes with its weaknesses. As Schreiner (2001) pointed out, there are several other aspects of loan size apart from average outstanding loan and the average loan size itself- term to maturity of the loan, the amount of dollars per instalment, the amount of time between the instalments, the number of required instalments till the loan is paid off and the dollar-years of borrowed resources. This study further makes the argument that loan size poses two further challenges. First is that the size of the loan is not a de facto measure for poverty or business size but instead either signifies the risk the MFI is willing to take per individual or a measure of credit restraint of the client. Experienced professionals confirm this- average loan sizes are loosely linked to the poverty of clients with poorer clients more likely to take out smaller loans, but this relationship is very far from perfect (Kwon, 2010). Secondly, the decision of what size of loan a client takes out is not solely dependent on the MFI itself. Therefore, even if the MFI wanted to give out more, they are constrained by either the decision of the client or the limit of their resources

As such, this study uses target market as a proxy of depth. Although the target market is still linked to the loan size (the ratio of their average outstanding loan per client to GNI per capita used by Quayes, 2012, amongst others) and it does not entirely solve the first problem, using the target market allows us classify what groups are being targeted. This therefore allows us to argue that the choice of target market is a strategic decision. This eliminates the second problem as the decision of which target market to serve is one which MFIs continually debate over and as the data from MIX shows, the choice of target market can change over time, either upwards or downwards (Navajas et al, 2000). Using target market allows us to capture that change and the factors affecting it. Secondly, using target markets allows for categorization and in an ordered logit regression allows us examine the probability that one target group is selected over another. Thirdly, categorically grouping loan sizes by target market allows for cross regional comparisons.

There are four main target markets as characterized MIX market and these are low end, broad, high end and small business. The low end represents loans of less 20% of the GNI or less than $150, the broad market are loans between 20% and 149% of the GNI, high end are loans of between 150 and 250% of the GNI and the small business market represents loans of over 250% of the GNI. Most research that looks at target market usually do not look at the small business market but focuses more on low end, broad and high end markets or merge the high end with small businesses which are 150% of GNI and above (Christen, 2001), this study adopts this approach.

Studies that have looked at target market include Kwon (2010) who looked at factors affecting interest rates of MFIs, dividing MFIs into the markets they target and found that those serving the low-end market have the highest interest rates, average cost of funds and average

operating costs when compared to the broad and high-end markets. However, they were also found to have the lowest average cost per loan and better profitability (apart from 2011, as they were the worst hit in the Indian microfinance crisis of that year).

The target market distribution in the sample data is shown below in Table 4-3:

Table 4-3: Distribution of Target Market across Sample

Number of Observations = 6, 645

Target Market	Proportion	Std. Err.	[95% Confidence Interval)	
Low End	0.266667	0.005425	0.256167	0.277436
Broad	0.413695	0.006042	0.401902	0.425587
Small Businesses	0.319639	0.005721	0.308529	0.330957

This indicates that 27% of the sample are low end, 41% are broad and 32% are small businesses.

4.5.2 Independent Variables

Based on the theoretical and empirical literature, the independent variables for this research are:

4.5.2.1 Company Level Variables

The variable used to represent the isomorphic pressures exerted on MFIs at the company level were-

- **Legal Structure**

  The legal structure variable is a time invariant variable and coded from 0-4 to be able to fit into the regression. Rural Banks are coded as 0, NGOs are coded as 1, Non-Bank Financial Institutions are coded as 2, and Credit Unions/Cooperatives are coded as 3.

- **Return-on-Equity (ROE)**

  While return on equity and return on assets both measure a company's performance, and return on assets is favoured by studies such as Tchakoute Tchuigoua (2014), this study favours Return-on-Equity (ROE). ROE was chosen because equity is the key constituent of Tier 1 capital as emphasised on by Basel III. The Committees reasons for preferring it include its being common to every countries' banking system, generally visible in published accounts, forms the basis on which most market decisions of capital adequacy are made; and because it has significant effect on a banks profit margins and ability to compete (Bank for International Settlements, 2011).

- **Percentage of Women in Portfolio**

  The success of the Grameen Bank and BancoSol in Bangladesh and Bolivia respectively fuelled the modern day renaissance of microfinance and they had a predominantly female client base (Quayes, 2015). There has also been several published empirical research papers showing that women are the overwhelmingly majority clients of microfinance institutions around the world with 74% of MFIs reporting MIX in 2003 say that they target women (Damania, Fredriksson, & Mani, 2004). The use of women to measure depth of outreach seems to be justified by the empirical research that highlights the greater impact there is lending to women both socially and economically and greater impact on households (Khandker, 2005). It is expected that the universal cry for more women to be included in poverty alleviation development efforts would have a normative and mimetic effect on MFIs as they try to meet international standards and donor requests.

- **Portfolio at Risk (30 days)**

  Portfolio at risk is a measure of the quality of a portfolio and indicates what share of the portfolio is affected by payments that are still outstanding with a risk that they will be defaulted on. It is measured as the Outstanding balance on arrears over 30 days + total gross outstanding refinanced (restructured) portfolio)/total gross portfolio. Is a (Tchakoute Tchuigoua, 2014). It makes business sense that business would lend to the target market that offers a lower risk of default.

- **MFI Age:**

  MFI age is usually used as a control variable in most microfinance studies and is calculated from the year the MFI was founded and has been active. Ahlin et al. (2011), Vanroose and d'Espallier (2013) and Barry and Tacneng (2014) found that the older microfinance institutions tend to have greater depth than the younger ones.

- **MFI Size:**

  Another variable used as a control variable in most studies, Barry and Tacneng (2014) find that the larger banks, cooperatives, and non-bank financial institutions tend to have greater depth of outreach than smaller ones. Other studies that confirm this are Muller and Uhde (2013), Ahlin et al. (2011) and Vanroose and d'Espallier (2013).

4.5.2.2 Country Level Variables

The variable used to represent the isomorphic pressures exerted on MFIs at the country level were-

Institutional Quality

Developed by the World Bank and taken from www.govindicators.org, The Worldwide Governance Indicators (WGI) are a set of collective and individual governance indicators for

the period 1996–2013 and for 215 countries. They represent six dimensions of governance and are described in the table 4-4

Table 4-4: World Governance Indicators[8]

Variable	Description
Voice and Accountability:	Captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.
Political Stability and Absence of Violence	This measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.
Government Effectiveness	This variable captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Regulatory Quality	This variable captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
Rule of Law	Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence
Control of Corruption	Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests

These aggregate indicators combine the views of a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. They are based on 32 individual data sources produced by a variety of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms

[8] Source: http://info.worldbank.org/governance/wgi/index.aspx#doc

Macroeconomic variables

Some form of GDP is usually used as an indicator of a countries economic health and growth. GDP per capita was used by Barry and Tacneng (2014) while Assefa, Hermes, and Meesters (2013), Vanroose and d'Espallier (2013) and Muller and Uhde (2013) used GDP growth instead of GDP per capita.

Other macroeconomic variables include Domestic Credit to the private sector (to proxy the depth of the country's financial system), Inflation, labour Force participation, mobile cellular subscription and rural population growth

4.5.2.3 Regional Variables

A dummy variable was created for the regions similar to by Vanroose (2008) to represent the regions given by MIX market-

4.5.2.4 Global Variables

The financial crisis of 2007-2009 was chosen as the global variable and a dummy FCRISIS was created as a proxy, taking a value of 1 if the year fell between 2007 and 2009 and a value of 0 if it fell outside this range.

4.6 Robustness Tests/Sensitivity Analyses

4.6.1 Issues with Multicollinearity

The table in Appendix B contains a pairwise correlation matrix of the dependent variable and all the independent variables used in this research. The correlation amongst the variables is low apart from within the World Governance Indicators (Table 4.3). However, this was expected as it has been flagged in literature using these variables. It has been established by those who have used the Silva and Chávez (2015) indicators that there is a significantly high

level of correlation between them within the same country and various researchers have tried to explain this. Muriu (2011) basing their argument on several other research papers showed that political instability makes formal rules more unstable, causes legal reforms to fail and leads to a decline in the systems needed to enforce and protect property- in summary, it leads to a decline in the rule of law. Tchakoute Tchuigoua (2014) in a study of corruption, empirically found that political stability plays an important role in shaping rule of law or judicial efficiency which in turn affects corruption. No direct link however, was found between political stability and corruption. The explanation for this was that increased corruption is brought about by lobbying for weak judicial systems, which in turn are a by-product of political instability.

This multicollinearity has been handled in various ways in research. Using a regression with panel data makes it possible to consider the strength of the correlation of these variables (after controlling for other significant covariates). However, the correlation between these governance indicators does not allow for addition of more than one of the variables in the regression equation, so a series of regressions are usually run, each with a single variable of these governance indicators (Schreiner, 2001). This approach was also used by Silva and Chávez (2015).

There are studies that group these variables together and use the resultant single index as a measure of the overall quality of a country's institution. Barry and Tacneng (2014) in their study of how external governing mechanisms affect the social and financial performance of MFIs used institutional quality as a control variable. They used principal component analysis to combine the rank values for four of the six World Governance Indicators- control of corruption, political stability, quality regulation and rule of law. This study uses this method

and the following section describes the process. The table below gives the correlation for the world Governance indicators

COR = Control of Corruption

VAC = Voice and Accountability

POL= Political Stability

RQ= Regulatory Quality

GEF= Government Effectiveness

ROL= Rule of Law

Table 4-5: Pairwise Correlation of World Governance Indicators

	COR	GEF	POL	RQ	ROL	VAC
COR	1					
GEF	0.7476***	1				
POL	0.4079***	0.2845***	1			
RQ	0.7103***	0.7419***	0.3496***	1		
ROL	0.7744***	0.7765***	0.3935***	0.6211***	1	
VAC	0.6092***	0.5599***	0.3503***	0.5755***	0.5489***	1

As seen in Table 4-5, the pairwise correlation matrix shows that the analysis indicates a high level of correlation between the variables Corruption and Government Effectiveness, Rule of Law and Voice and Accountability ranging from 0.61 to 0.77.

Due to the high level of correlation between Government Effectiveness and Corruption and Rule of Law make it, a Principal Component Analysis (PCA) was carried out and this is explained in the next section.

4.6.2 Principal Component Analysis

A Kaiser-Meyer-Olkin measure of sampling adequacy determines the suitability of data for Factor Analysis, measuring sampling adequacy for each variable in the model and for the complete model. The statistic is a measure of the proportion of variance among variables that might be common variance. The lower the proportion, the more suited the data is to Factor Analysis. The overall Kaiser-Meyer-Olkin measure of sampling adequacy for the World Governance Indicators was 0.86 (table 4-4), with the lowest value being 0.83. According to (Kaiser, 1974) values above 0.8 indicate the data is suitable for Factor Analysis.

Emara and Chiu (2016) illustrate the use of Principal Component Analysis using a data matrix **X** with **p** variables and **n** observations …

$$X = \begin{bmatrix} X_{1,1} & . & . & X_{1,p} \\ X_{2,1} & . & . & X_{2,p} \\ . & . & . & . \\ X_{n,1} & . & . & X_{n,p} \end{bmatrix}; where\ i = 1 \dots 1, j = 1 \dots p$$

The goal of principal component analysis or PCA is to project the data matrix X from p dimensions to a smaller dimension k, where k << p, while retaining as much information as possible in the dimension-reduced data matrix with the size n by k_2. In other words, PCA simplifies the description of a data set by reducing a large number of highly correlated variables (X_1, ... X_p) to a smaller number of uncorrelated variables (Principal Components; PC_1, ... PC_k) while extracting and retaining the most important information from the data (Abdi & Williams, 2010; Emara & Chiu, 2016).

4.7 Conclusion

This chapter examined the research design, which forms the basis of this study. It first examined the prevalent research methods used and showed that the general problem with

these methods was their inability to explain changes in loan sizes. This study uses categorical dependent variables to look at the problem from a different perspective. Using an ordinal logit regression goes beyond just indicating the existence of a relationship (as the previous studies have done) to showing the probability that an MFI in a certain region will lend down the poverty line. This chapter also discusses the data source and issues of data validity as well as the other statistical methods and tests used- tests for multicollinearity and the Principal Component Analysis

CHAPTER 5: RESULTS & DISCUSSION

5.1 Introduction

The previous chapter presented the methodology and data, explaining the model and the logistic regression used in this study. The Analyses and the following robustness tests were run using EViews and STATA. This chapter presents and discusses the results of the logistic and other tests. This chapter then discusses the interpretation and implications of the results presented in the preceding chapter. This discussion will compare the results of these studies with those of preceding studies and inferences drawn. Subsequently, this chapter discusses the interpretation and implications of the results, comparing the results of these studies with those of preceding studies and inferences drawn.

5.2 Descriptive Analysis

Table 5-1 shows the descriptive statistic of all the independent variables used in this study

Table 5-1: Descriptive Statistics of Macroeconomic Data

	Mean	Median	Maximum	Minimum	Std. Dev.	Obs.
Return on Equity	0.1949	0.1075	276.9735	-12.4092	4.8224	3709
Portfolio at risk	0.0567	0.0342	5.4845	0.0000	0.1336	3709
% of female borrowers	0.6497	0.6433	1.1016	0.0000	0.2555	3709
WGI	0.0015	-0.1374	9.2990	-6.2101	1.9832	3709
Growth in PC GDP	0.0372	0.0360	0.2854	-0.1659	0.0365	3709
Domestic Credit	31.9200	27.8432	148.8479	0.0000	18.6483	3709
Inflation	6.5110	5.6679	53.2310	-10.0675	5.0132	3709
Labour Force participation	69.2032	69.7000	90.8000	41.9000	9.2306	3709
Mobile cellular subscription	59.2061	55.1926	185.8216	0.0713	41.4750	3709
Rural population growth	0.6576	0.7645	6.1326	-3.2914	1.3022	3709

Table 5-2: Pairwise Correlation Coefficients

	Credit Union	NBFI	Bank	ROE	MEDIUM	PAR	YOUNG	MATURE	WOMEN	REG	SIZE	INSTQUAL	GDP	CREDIT	INSTQLAC
Credit Union	1	-0.23416	-0.13064	0.007596	0.029281	0.050625	-0.03169	0.028166	-0.27456	0.087053	-0.02477	0.007629	-0.11756	-0.12945	-0.02947
NBFI	-0.23416	1	-0.30213	0.017968	0.032142	0.010079	0.10838	-0.12459	-0.10373	0.257994	0.056905	0.068704	0.168181	-0.03576	0.016823
Bank	-0.13064	-0.30213	1	-0.00488	-0.13561	-0.04425	0.00766	-0.03027	-0.1149	0.265608	0.271445	-0.10779	0.006523	-0.0553	-0.02601
ROE	0.007596	0.017968	-0.00488	1	-0.01432	0.060715	-0.00821	0.015352	0.001248	0.021565	0.029333	0.012623	0.010604	0.015878	0.00313
MEDIUM	0.029281	0.032142	-0.13561	-0.01432	1	-0.00169	0.066148	-0.07042	0.01615	-0.11815	-0.62464	-0.00467	-0.01541	-0.00232	-0.00655
PAR	0.050625	0.010079	-0.04425	0.060715	-0.00169	1	-0.01324	0.02866	-0.05533	-0.0137	-0.01173	0.023508	-0.09129	-0.01977	0.023266
YOUNG	-0.03169	0.10838	0.00766	-0.00821	0.066148	-0.01324	1	-0.8469	-0.02087	0.067088	-0.18082	-0.05074	0.149388	-0.1352	-0.05576
MATURE	0.028166	-0.12459	-0.03027	0.015352	-0.07042	0.02866	-0.8469	1	0.009272	-0.08889	0.259467	0.067554	-0.17215	0.181623	0.064211
WOMEN	-0.27456	-0.10373	-0.1149	0.001248	0.01615	-0.05533	-0.02087	0.009272	1	-0.12896	-0.13005	-0.03306	0.007017	0.130093	-0.0705
REG	0.087053	0.257994	0.265608	0.021565	-0.11815	-0.0137	0.067088	-0.08889	-0.12896	1	0.319541	-0.15388	0.123574	-0.17947	-0.14656
SIZE	-0.02477	0.056905	0.271445	0.029333	-0.62464	-0.01173	-0.18082	0.259467	-0.13005	0.319541	1	-0.01663	0.001951	0.110927	-0.01172
INSTQUAL	0.007629	0.068704	-0.10779	0.012623	-0.00467	0.023508	-0.05074	0.067554	-0.03306	-0.15388	-0.01663	1	-0.00309	0.414882	0.654071
GDP	-0.11756	0.168181	0.006523	0.010604	-0.01541	-0.09129	0.149388	-0.17215	0.007017	0.123574	0.001951	-0.00309	1	-0.02232	0.05328
CREDIT	-0.12945	-0.03576	-0.0553	0.015878	-0.00232	-0.01977	-0.1352	0.181623	0.130093	-0.17947	0.110927	0.414882	-0.02232	1	0.266865
INFL	-0.10221	0.042919	0.051618	0.004081	0.051782	0.006711	0.06335	-0.07611	0.031734	0.036157	-0.04046	-0.19349	0.076568	-0.07807	-0.11608
LABOR	0.126613	-0.02878	0.085084	-0.02041	-0.01973	-0.04048	-0.01445	-0.00464	0.04791	0.148604	-0.05774	-0.16499	0.057981	-0.28494	-0.00758
MOBILE	0.000396	0.01586	-0.019	0.001932	-0.04028	0.016677	-0.26651	0.356587	-0.1409	-0.1517	0.20576	0.227123	-0.12691	0.427108	0.124402
RURAL	0.104886	-0.08313	0.014795	0.010409	0.023156	0.009697	0.063049	-0.09561	0.098997	0.132939	-0.00443	-0.38797	-0.11277	-0.2863	-0.30114
EAP	-0.07491	0.019816	-0.00394	-0.00571	0.00735	-0.05434	-0.00603	-0.0091	0.227771	0.084108	-0.0015	-0.04948	0.112513	0.091122	-0.02752
EECA	-0.00021	0.28293	0.047637	-0.00869	0.031486	-0.02554	0.149114	-0.17696	-0.34226	0.22889	0.026782	0.009238	0.247184	-0.07507	-0.04509
MENA	-0.07932	-0.10404	-0.10234	-0.00578	0.010164	-0.04836	0.010302	-0.00015	0.004052	-0.09324	0.056626	0.125532	-0.0637	0.330874	-0.02042
South Asia	-0.13475	-0.02853	-0.00076	0.044858	-0.03441	0.016262	-0.00578	-0.00185	0.34008	0.119631	0.126713	-0.17723	0.080272	0.117379	-0.04273
LAC	-0.0307	-0.10838	0.034448	-0.01698	-0.01947	0.010934	-0.14804	0.194266	-0.0757	-0.34567	-0.08306	0.136469	-0.17697	0.017844	0.129777
FCRISIS	0.028401	0.009682	-0.02835	-0.01111	0.036596	0.012074	-0.04771	0.081337	-0.03181	-0.00617	0.043493	0.006099	-0.09329	0.017898	-0.01045
INSTEAP	0.025391	-0.21657	0.037106	-0.00468	0.014085	0.037143	0.017519	-0.03004	0.00587	-0.06444	-0.05464	0.241385	-0.07657	0.045295	0.009569
INSTQEECA	0.026977	0.029677	-0.08619	-0.00385	0.042572	0.011924	-0.0906	0.12286	-0.037	-0.06859	-0.01287	0.432768	-0.06806	0.187783	0.006909
INSTQMENA	-0.03935	0.01732	-0.05077	-0.00258	0.01432	-0.03375	0.020026	0.017114	0.060901	-0.01709	0.015675	0.242174	-0.02558	0.339987	-0.00887
INSTQSA	0.049395	0.280192	-0.10845	0.028365	-0.03339	0.027985	0.041267	-0.04558	-0.00465	-0.00831	0.004308	0.4192	0.060851	0.115907	0.017094
INSTQLAC	-0.02947	0.016823	-0.02601	0.00313	-0.00655	0.023266	-0.05576	0.064211	-0.0705	-0.14656	-0.01172	0.654071	0.05328	0.266865	1

	INFL	LABOR	MOBILE	RURAL	EAP	EECA	MENA	South Asia	LAC	FCRISIS	INSTEAP	INSTQEECA	INSTQMENA	INSTQSA
Credit Union	-0.10221	0.126613	0.000396	0.104886	-0.07491	-0.00021	-0.07932	-0.13475	-0.0307	0.028401	0.025391	0.026977	-0.03935	0.049395
NBFI	0.042919	-0.02878	0.01586	-0.08313	0.019816	0.28293	-0.10404	-0.02853	-0.10838	0.009682	-0.21657	0.029677	0.01732	0.280192
Bank	0.051618	0.085084	-0.019	0.014795	-0.00394	0.047637	-0.10234	-0.00076	0.034448	-0.02835	0.037106	-0.08619	-0.05077	-0.10845
ROE	0.004081	-0.02041	0.001932	0.010409	-0.00571	-0.00869	-0.00578	0.044858	-0.01698	-0.01111	-0.00468	-0.00385	-0.00258	0.028365
MEDIUM	0.051782	-0.01973	-0.04028	0.023156	0.00735	0.031486	0.010164	-0.03441	-0.01947	0.036596	0.014085	0.042572	0.01432	-0.03339
PAR	0.006711	-0.04048	0.016677	0.009697	-0.05434	-0.02554	-0.04836	0.016262	0.010934	0.012074	0.037143	0.011924	-0.03375	0.027985
YOUNG	0.06335	-0.01445	-0.26651	0.063049	-0.00603	0.149114	0.010302	-0.00578	-0.14804	-0.04771	0.017519	-0.0906	0.020026	0.041267
MATURE	-0.07611	-0.00464	0.356587	-0.09561	-0.0091	-0.17696	-0.00015	-0.00185	0.194266	0.081337	-0.03004	0.12286	0.017114	-0.04558
WOMEN	0.031734	0.04791	-0.1409	0.098997	0.227771	-0.34226	0.004052	0.34008	-0.0757	-0.03181	0.00587	-0.037	0.060901	-0.00465
REG	0.036157	0.148604	-0.1517	0.132939	0.084108	0.22889	-0.09324	0.119631	-0.34567	-0.00617	-0.06444	-0.06859	-0.01709	-0.00831
SIZE	-0.04046	-0.05774	0.20576	-0.00443	-0.0015	0.026782	0.056626	0.126713	-0.08306	0.043493	-0.05464	-0.01287	0.015675	0.004308
INSTQUAL	-0.19349	-0.16499	0.227123	-0.38797	-0.04948	0.009238	0.125532	-0.17723	0.136469	0.006099	0.241385	0.432768	0.242174	0.4192
GDP	0.076568	0.057981	-0.12691	-0.11277	0.112513	0.247184	-0.0637	0.080272	-0.17697	-0.09329	-0.07657	-0.06806	-0.02558	0.060851
CREDIT	-0.07807	-0.28494	0.427108	-0.2863	0.091122	-0.07507	0.330874	0.117379	0.017844	0.017898	0.045295	0.187783	0.339987	0.115907
INFL	1	-0.01466	-0.15087	0.085391	-0.05733	0.073362	-0.05561	0.127238	-0.15987	0.191793	-0.01083	-0.10947	-0.12326	-0.05618
LABOR	-0.01466	1	-0.1285	0.1066	0.243647	-0.06227	-0.5234	-0.15849	0.046696	0.010662	-0.16759	-0.10129	-0.28908	-0.04551
MOBILE	-0.15087	-0.1285	1	-0.26359	5.17E-05	0.216055	0.059986	-0.23766	0.217421	0.01522	0.046615	0.125099	0.045699	0.10864
RURAL	0.085391	0.1066	-0.26359	1	0.144358	-0.22967	0.108761	0.062281	-0.36032	0.010498	-0.01828	-0.35467	0.017009	-0.03378
EAP	-0.05733	0.243647	5.17E-05	0.144358	1	-0.1368	-0.07686	-0.13057	-0.23525	-0.02993	-0.18695	-0.00253	-0.03813	0.047864
EECA	0.073362	-0.06227	0.216055	-0.22967	-0.1368	1	-0.1106	-0.18788	-0.34368	0.00235	0.025574	0.018482	-0.05486	0.068872
MENA	-0.05561	-0.5234	0.059986	0.108761	-0.07686	-0.1106	1	-0.10557	-0.18871	0.003402	0.014369	-0.00204	0.496039	0.038697
South Asia	0.127238	-0.15849	-0.23766	0.062281	-0.13057	-0.18788	-0.10557	1	-0.33197	-0.02625	0.02441	-0.00347	-0.05236	-0.36657
LAC	-0.15987	0.046696	0.217421	-0.36032	-0.23525	-0.34368	-0.18871	-0.33197	1	0.004327	0.05248	-0.00575	-0.09137	0.124495
FCRISIS	0.191793	0.010662	0.01522	0.010498	-0.02993	0.00235	0.003402	-0.02625	0.004327	1	-0.01294	-0.0004	0.014488	0.029809
INSTEAP	-0.01083	-0.16759	0.046615	-0.01828	-0.18695	0.025574	0.014369	0.02441	0.05248	-0.01294	1	0.000473	0.007128	-0.00895
INSTQEECA	-0.10947	-0.10129	0.125099	-0.35467	-0.00253	0.018482	-0.00204	-0.00347	-0.00575	-0.0004	0.000473	1	-0.00101	0.001273
INSTQMENA	-0.12326	-0.28908	0.045699	0.017009	-0.03813	-0.05486	0.496039	-0.05236	-0.09137	0.014488	0.007128	-0.00101	1	0.019195
INSTQSA	-0.05618	-0.04551	0.10864	-0.03378	0.047864	0.068872	0.038697	-0.36657	0.124495	0.029809	-0.00895	0.001273	0.019195	1
INSTQLAC	-0.11608	-0.00758	0.124402	-0.30114	-0.02752	-0.04509	-0.02042	-0.04273	0.129777	-0.01045	0.009569	0.006909	-0.00887	0.017094

As seen in Table 5-2, the pairwise correlation matrix shows that the three financial system development variables, specifically DCP, DMB, and DMBOFI, are highly, statistically significantly correlated, with correlation coefficients above 0.90. Table 4.2 also shows that the historical and current institutional variables that are statistically significantly correlated with the financial system development variables generally have the signs as hypothesised, except Islamic law that is positively associated with financial system development instead of being negatively associated with financial system development as hypothesised in H3c.

5.3 Principal Component Analysis Results

The results from the Kaiser-Meyer-Olkin measure of sampling adequacy are presented in table 5.3. From the table, it can be seen that the overall Kaiser-Meyer-Olkin measure of

Table 5-3: Kaiser-Meyer-Olkin measure of sampling adequacy

Variable	kmo
COR	0.8763
GEF	0.8237
POL	0.8683
RQ	0.8614
ROL	0.8314
VAC	0.9401
Overall	0.8608

sampling adequacy for the World Governance Indicators was 0.86 with the lowest value being 0.83. These values meet the 0.8 requirement set by Kaiser (1974) and imply the data is suitable for Factor Analysis.

Using Factor Analysis (FA) to first determine the underlying structure of the six governance indicators, the results are shown in table 5-4 and 5-5

Table 5-4 : Principal Components/Correlation

	Number of obs	=	6073
	Number of comp.	=	6
	Trace	=	6
Rotation: (unrotated= principal)	Rho	=	1

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	3.8998	3.09658	0.65	0.65
Comp2	0.80322	0.289258	0.1339	0.7838
Comp3	0.513962	0.136248	0.0857	0.8695
Comp4	0.377714	0.14125	0.063	0.9325
Comp5	0.236465	0.06763	0.0394	0.9719
Comp6	0.168835	.	0.0281	1

Table 5-5: Principal Components (Eigenvectors)

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Unexplained
COR	0.4554	-0.0684	-0.1275	-0.1492	-0.8068	0.3138	0
GEF	0.4452	-0.2887	-0.2326	0.0391	0.5417	0.6077	0
POL	0.2653	0.9394	-0.137	0.0835	0.1127	0.0936	0
RQ	0.428	-0.1464	0.0087	0.8009	-0.047	-0.3894	0
ROL	0.4412	-0.0856	-0.3342	-0.5342	0.1708	-0.6097	0
VAC	0.3823	0.0285	0.8939	-0.2058	0.1075	-0.0069	0

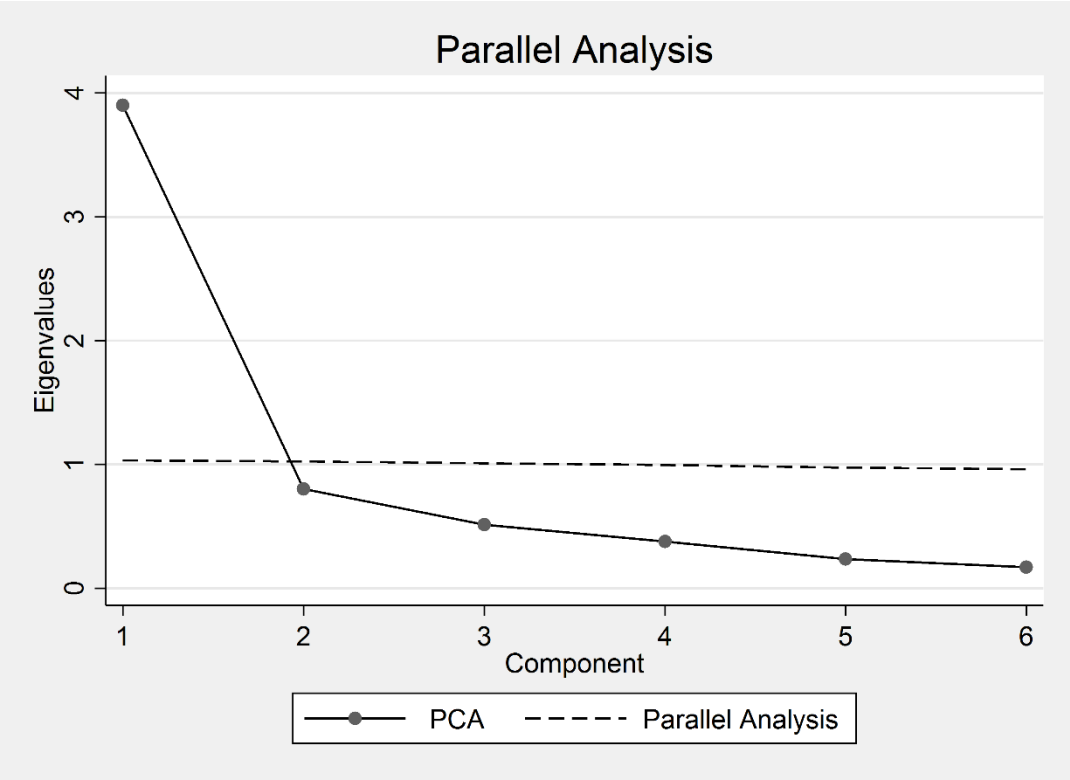
According to Table 5-4, initial Eigenvalues indicate the first component explained 65% while the second, third, fourth, fifth and sixth components have Eigenvalues below one and explained 13.39%, 8.57%, 6.3%, 3.94% and 2.81% of the variance respectively. To determine which of the factors are retained, several methods were used. The Kaiser-Guttman method uses only eigenvalues greater than the average eigenvalue, retaining these on the basis that these axes summarize more information than any single original variable (Jackson, 1993). From Table 5-4, this is only the first component. Using the Cattell (1966) Scree test, the eigenvalues are plotted against their component numbers *p*. If there is a drastic change in direction, the components before this change will be retained.

All these criteria indicate that the first principal component should be retained. The results in Table 5-4 indicate that only the first factor has an eigenvalue greater than 1.0 and it explains

approximately 65% of the cumulative variance of all six variables. In table 5-5, all the weights of this first component are positive and close in magnitude. Figure 5-1 is the Scree plot diagram confirming that only the first component should be considered for interpretation (Kaiser's criterion).

This suggest that the first component strongly explains the positive role on institutional quality of the original six World Governance Indicators.

Figure 5-1: Scree Plot/Principle Component Analysis of World Governance Indicators



As a result, a new variable INSTQUAL was created as a proxy for institutional quality

5.4 Results

5.4.1 Ordered Logit Regression & Discussion

The results of the ordered logit regression are in table 5-6 below:

Table 5-6: Ordered Logit Regression Model Results

Explanatory Variables	Equation 1			Equation 2		
	Coefficient	Test Statistic	Marginal Effects	Coefficient	Test Statistic	Marginal Effects
Credit Union	-0.38571	-2.50321***	-0.22785	-0.40375	-2.58569***	-0.09224
NBFI	-0.13316	-1.2367	-0.07866	-0.07324	-0.63677	-0.01673
Bank	-0.58516	-4.29473***	-0.34567	-0.63541	-4.57499***	-0.14517
Return on equity	0.008466	0.491697	0.005001	0.009215	0.470736	0.002105
Portfolio at risk (30 days)	-0.1837	-0.63028	-0.10852	-0.37172	-1.26767	-0.08492
YOUNG MFI	0.280784	1.379432	0.165866	0.350038	1.69207*	0.079971
MATURE MFI	0.149044	0.759688	0.088044	0.227582	1.131823	0.051995
% of female borrowers	4.331447	21.75071***	2.558696	4.412785	21.45463***	1.008167
Regulated INDEX	-0.26374	-2.53019***	-0.1558	-0.24207	-2.30161**	-0.0553
Medium size index	-0.81419	-7.10411***	-0.48096	-0.84753	-7.31261***	-0.19363
Large size index	-1.48535	-12.0555***	-0.87743	-1.55153	-12.4375***	-0.35447
General governance	0.280306	11.14526***	0.165584	-0.04696	-0.80515	-0.01073
Growth in GDP	3.280806	2.944335***	1.938055	2.418319	2.132143**	0.552501
Credit to private sector	-0.01926	-6.78669***	-0.01138	-0.02268	-7.46987	-0.00518
Inflation	0.010213	1.274408	0.006033	0.007394	0.915402***	0.001689
Labour force	-0.03234	-5.68308***	-0.0191	-0.02203	-3.60612***	-0.00503
Mobile cellular	0.010277	8.130148***	0.006071	0.010462	8.144515***	0.00239
Rural population growth	0.067295	1.703379*	0.039753	0.032225	0.761648	0.007362
East Asia and the Pacific	0.960093	5.407369***	0.567151	1.550309	7.138528***	0.354191
EECA	-0.33102	-1.89632**	-0.19554	-0.22526	-1.24947	-0.05146
Middle East and North Africa	1.698344	6.512849***	1.003255	2.539961	8.602561***	0.580292
South Asia	2.620904	13.96589***	1.548234	3.339527	13.1983***	0.762965
Latin America	0.417952	2.994685***	0.246895	0.495417	3.356939***	0.113185
FCRISIS	0.113263	1.314938	0.066907	0.138406	1.58766	0.031621
GOV * East Asia &	-	-	-	1.058444	7.553747***	0.241817
GOV * EECA	-	-	-	0.214749	2.854099***	0.049063
GOV * MENA	-	-	-	-0.0746	-0.62104	-0.01704
GOV * South Asia	-	-	-	0.631169	5.985749***	0.1442
GOV * Latin America	-	-	-	0.425659	6.307634***	0.097248
LIMIT_1:C(25)	-3.00506			-2.27456		
LIMIT_2:C(26)	0.860759			1.66093		

Pseudo R-squared	0.302059	0.319392
LR statistic	2119.464	2241.085
Prob(LR statistic)	0	0

5.4.2 Global factors

The first hypothesis developed to explore the relationship between global factors and depth of outreach.

H_1: Global Factors affect the depth of outreach

The only global variable used, FCRISIS was shown to have no significant impact on lending to the low-end markets. As Pearce (2010) explained, this could be because the microfinance market is yet to reach equilibrium between demand and supply, reflective in the high levels of unmet demand for microfinance and its seeming lack of sensitivity to high interest rates. He further suggested that because volume in a majority of the microfinance markets is predominantly as a result of available funding and of the capacity of microfinance institutions to expand sustainably and manage risks and because these funding levels were maintained throughout the period of the crisis, this could have served as an insulation from the global financial crises. As such, there is no evidence support H_3, so the hypothesis is rejected and the alternative accepted

5.4.3 Regional Characteristics

The Marginal Effects Column section gives the likelihood of the event to occur in comparison to a base. For this analysis, Sub-Saharan African was taken as the base region and the likelihood of other regions lending to the low-end market compared to Sub-Saharan Africa.

Looking at the hypothesis and the results:

- *H_{2b}: Locating an MFI in East Asia and the Pacific affects its depth of outreach*- The Hypothesis is accepted and alternative rejected. Results are significant at the 1% level.
- *H_{2c}: Locating an MFI in Eastern Europe and Central Asia affects its depth of outreach:* The Hypothesis is accepted and alternative rejected. Results at the 5% level.
- *H_{2d}: Locating an MFI in Latin America and the Caribbean affects its depth of outreach:* The Hypothesis is accepted and alternative rejected. Results are significant at the 1% level
- *H_{2e}: Locating an MFI in Middle East and North Africa affects its depth of outreach:* The Hypothesis is accepted and alternative rejected. Results at the 1% level.
- *H_{2f}: Locating an MFI in South Asia affects its depth of outreach* The Hypothesis is accepted and alternative rejected. Results at the 1% level.

The regional location of MFIs were a significant factor in all the regions, at the 1% level for East Asia and the Pacific, Middle East and North Africa, South Asia and Latin America and at the 5% level for Eastern Europe and Central America. The results indicate that for an additional MFI added to each region. MFIs in South Asia were 1.54 times more likely to lend to the low end markets; MFIs in Middle East and North Africa were 1.003 times more likely to lend to low end markets; MFIs in East Asia and the Pacific were 0.56 times more likely to lend low end markets and MFIs in Latin America were 0.25 times more likely to lend to low end markets than MFIs in Africa. However, MFIs in Eastern Europe and Central America were 0.2 times likely *not* to lend to low end markets when compared to their African counterparts.

5.4.4 Country Level Characteristics

The third hypothesis:

H_3: The Country an MFI is located in affects its depth of outreach

Of the country level factors, growth in per capita GDP (in constant 2010 US$) was found to have the most significant effect on lending outcomes, with a 1% increase in GDP per capita increasing the probability of lending to the by 1.93 times. Rural population growth and increase in mobile cellular use were also found to have a positive and significant effect on lending to the Low-end markets. Credit to the private sector and the labour force were both found to have significant negative effects on lending to low end markets with a 1% increase in credit to the private sector reducing the probability that a MFI would lend to the low end market by 1%. A 1% increase in the labour force decreased the probability by 1.93%. The results for Inflation indicated that it had no significant effect.

A major revelation to take away from these results is the fact that Institutional Quality/Governance on its own does not affect lending behaviour apart from in Eastern Europe and Central America when the regional contexts serve as moderating factors. In fact, it decreased the probability of lending to the low-end markets, implying that improvement in institutional quality makes MFIs lend higher up the poverty line.

5.4.5 Company level Characteristics

While Non-Bank Financial Institutions appear to have no significant relationship with lending patterns when compared to Non-Government Organizations, Credit Union and Banks are both less likely to lend to low end markets. For each additional Bank added to the sample, the probability of lending to the low end of market decreases by 34.6% while for Credit Unions, it reduces by 22.8%.

For the variables Return on equity, the portfolio at risk (30 days) and MFI age, no significant relationship was found. The marginal effects for regulation indicate that addition of a regulated MFI to the data sample would decrease the probability of lending to the low-end sector by 15.6%. When considering the effect of MFI size on lending down the poverty line. Results indicated that the probability of both the medium and large size MFIs lending to the low-end market was less than the probability of the small MFIs lending to the low end market. For medium MFIs, the probability was 0.48 times less while for large MFIs, the chances were 0.87 times less. The greatest significant positive impact on improving lending to the low-end market was the percentage of female borrowers in the MFI loan portfolio. There is a 2.56 improved chances of lending to the low end market with the addition of a single female borrower to a MFIs portfolio.

5.4.6 *The Moderators*

Beyond just looking at the regional impact on MFI lending behaviour, one of the key aims of this study was to see what role regional factors play in the relationship with Institutional quality/Governance. On introducing the regional dummies as an interaction term in the second model, the general governance variable itself became insignificant. The breakdown into regions indicate that governance affected lending behaviour in East Asia and the Pacific, Eastern Europe and Central America, South Asia and Latin America while the interaction between governance and the region of the Middle East and Northern Africa indicates that governance has no significant effect on lending to the low end market in that country. The explanatory power of the model represented by the Pseudo R squared also improved by 2% in the second equation.

5.4.7 Ranking Predictors

Of the several methods available to rank predictors in a logistic regression, this study will use the standardized coefficients. Menard (2011) explains that standardized coefficients are coefficients adjusted to the same scale to enable them be compared and ranked. The greater the absolute value of the standardized coefficient, the greater the predicted change in the probability of the outcome given a 1-standard deviation change in the corresponding predictor variable, holding constant the other predictors in the model. Taking the absolute value of the standardized coefficients enables them to be ranked from highest to lowest, in order of strength of association with the outcomes. The standardized coefficients were obtained using the **listcoef, std help** command in STATA and the results of the second model reported below in table 7-7 (full results are presented in the appendix)

Table 5-7: Standard Coefficients (Ranked)[9]

		b	z	bStdXY
1	South Asia	3.340	13.198	0.428
2	% women	4.413	21.455	0.403
3	Middle East	2.540	8.603	0.213
4	GOVLAC	0.426	6.308	0.195
5	GOVSouthAsia	0.631	5.986	0.183
6	GOVAsia	1.058	7.554	0.180
7	East Asia	1.550	7.139	0.156
8	Mobile Cell	0.011	8.145	0.155
9	LAC	0.495	3.357	0.086
10	GOVEECA	0.215	2.854	0.066
-11	Young MFI	0.350	1.692	0.044
12	Growth in	2.418	2.132	0.032
13	Regulation	-0.242	-2.302	-0.041
14	Credit Union	-0.404	-2.586	-0.042
15	Labour Force	-0.022	-3.606	-0.073
16	Bank	-0.635	-4.575	-0.080

[9] Only significant relationships were reported

17	East Asia	-0.848	-7.313	-0.136
18	Domestic Credit	-0.023	-7.470	-0.151
19	Size Index	-1.552	-12.437	-0.277

The key implication of this result is that it indicates that of the group of variables- COMPANY, COUNTRY, REGION and GLOBAL, the REGION has the strongest effect on the lending behaviour.

5.4.8 Validity Tests

The Prediction Evaluation function of Eviews checks for the accuracy of classicisation of the variables used in the equations. Tables 5-8 and 5-9 present the results of the Prediction Evaluation for both models.

Table 5-8: Prediction Evaluation for Ordered Specification for Model 1

Estimated Equation					
Dep. Value	Obs.	Correct	Incorrect	% Correct	% Incorrect
0	368	78	290	21.196	78.804
1	1777	1429	348	80.416	19.584
2	1564	1193	371	76.279	23.721
Total	3709	2700	1009	72.796	27.204
Constant Probability Spec.					
Dep. Value	Obs.	Correct	Incorrect	% Correct	% Incorrect
0	368	0	368	0.000	100.000
1	1777	1777	0	100.000	0.000
2	1564	0	1564	0.000	100.000
Total	3709	1777	1932	47.910	52.090
Gain over Constant Prob. Spec.					
		Equation	Constant		

Dep. Value	Obs.	% Incorrect	% Incorrect	Total Gain*	Pct. Gain**
0	368	78.804	100.000	21.196	21.196
1	1777	19.584	0.000	-19.584	NA
2	1564	23.721	100.000	76.279	76.279
Total	3709	27.204	52.090	24.885	47.774

*Change in "% Correct" from default (constant probability) specification
**Percent of incorrect (default) prediction corrected by equation

Table 5-9: Prediction Evaluation for Ordered Specification for Model 2

Estimated Equation					
Dep. Value	Obs.	Correct	Incorrect	% Correct	% Incorrect
0	368	61	307	16.576	83.424
1	1777	1437	340	80.867	19.133
2	1564	1202	362	76.854	23.146
Total	3709	2700	1009	72.796	27.204
Constant Probability Spec.					
Dep. Value	Obs.	Correct	Incorrect	% Correct	% Incorrect
0	368	0	368	0.000	100.000
1	1777	1777	0	100.000	0.000
2	1564	0	1564	0.000	100.000
Total	3709	1777	1932	47.910	52.090
Gain over Constant Prob. Spec.					
Dep. Value	Obs.	Equation % Incorrect	Constant % Incorrect	Total Gain*	Pct. Gain**
0	368	83.424	100.000	16.576	16.576
1	1777	19.133	0.000	-19.133	NA
2	1564	23.146	100.000	76.854	76.854
Total	3709	27.204	52.090	24.885	47.774

*Change in "% Correct" from default (constant probability) specification
**Percent of incorrect (default) prediction corrected by equation

Each row in Table 5-8 and 5-9 represents a distinct value for the dependent variable. The second column indicates the number of observations with that value. Of those, the number

of observations in the correct column are those for which the predicted probability of the response is the highest. Thus, 61 of the 368 Target Markets listed as HIGH end were correctly specified. Overall, 73% of the observations were correctly specified for the fitted model versus 48% for the constant probability model in Models 1 and 2.

5.4.9 Goodness-of-fit

To estimate the suitability of both models, Stata provides the command **fitstat** that produces a series of goodness-of-fit tests presented in Table 5-10.

Table 5-10: Goodness of fit Table for Model 1 and 2

	Model 2	Model 1	Difference
Log-likelihood			
Model	-2387.816	-2448.627	60.81
Intercept-only	-3508.359	-3508.359	0
Chi-square			
D (df=3678/3683/-5)	4775.632	4897.253	-121.621
LR (df=29/24/5)	2241.085	2119.464	121.621
p-value	0	0	0
R^2			
McFadden	0.319	0.302	0.017
McFadden (adjusted)	0.311	0.295	0.016
McKelvey & Zavoina	0.58	0.534	0.046
Cox-Snell/ML	0.454	0.435	0.018
Cragg-Uhler/Nagelkerke	0.534	0.513	0.021
Count	0.728	0.728	0
Count (adjusted)	0.478	0.478	0
IC			
AIC	4837.632	4949.253	-111.621
AIC divided by N	1.304	1.334	-0.03
(df=31/26/5)	5030.406	5110.935	-80.528
Variance of			
e	3.29	3.29	0
y-star	7.834	7.055	0.78

Note: Likelihood-ratio test assumes saved model nested in current model.

Difference of 80.528 in BIC provides very strong support for model 2

Of particular interest in table 5-10 are the values of the McFadden R^2 and BIC. The McFadden's R^2 which is also called the likelihood-ratio index compares a model with just the intercept to a model with all parameters (Long, 1997). Similar to the R in Ordinary Least Square regressions, the McFadden's R^2 is possibly the most widely used Pseudo-R. It can be interpreted as the log-likelihood owing to the explanatory variables in relation to the maximum possible achievable gain (Veall & Zimmermann, 1996).

The Bayesian Information Criterion or BIC has is used as a measure of overall fit (Long, 1997; Raftery, 1996). The more negative the BIC'_k, the better the fit. When used to compare two models, the difference in the BIC's indicates which model is more likely to have generated the observed data. If $BIC_1 - BIC_2 > 0$, the second model is preferred and if $BIC_1 - BIC_2 < 0$, the first model is preferred (Long, 1997). In choosing the strength of evidence favouring one model over the other, Raftery (1996) suggested that if the absolute difference is between 0-2, the evidence is weak; if it falls between 2-6, positive; 6-10, strong and greater than 10, the evidence is seen as very strong.

5.5 Other findings

There are several other issues of note that this study has shed light on and these will be disused in the sub sections below.

5.5.1 Women and Microfinance

Ever since Prof. Yunus and the Grammen bank started with his initial experiment with the women of Bangladesh, the role of women in the development of microfinance is one that has been well documented in literature. Consistent with the studies that focus on women and microfinance such as (D'Espallier, Guérin, & Mersland, 2011), and those focused on depth of

outreach such as (Quayes, 2012), this study found a positive, significant relationship between the ratio of female borrowers in a MFIs portfolio and depth of outreach. Studies have identified women as less risky than man (D'Espallier et al., 2011), possibly because they are more likely to spend their loans on productive outcomes for their families (Lott, 2008; McCarter, 2006). The difference from these studies is the interpretations of our results. Grouping the variable used in this study allows us to draw the inference that the ratio of women to total borrowers is the singular strongest influencer to depth of outreach. In other words, if an MFI wants to deepen its outreach, it should target more women. This also presents a troubling picture because if depth of outreach is measured by the access of the poorest to credit (Quayes, 2012) then this paints a picture of credit worthy women being underserved-a mirror to the present challenge of microfinance.

5.5.2 Technology and Microfinance

South Asia utilizes mobile technology in delivering microfinance products and boasts some of the highest financial inclusion rates. How much of this is linked to technology? This was the question this study sought to answer. The results confirm there is a significant positive relationship between mobile penetration and depth of outreach.

Asongu (2013) examined the relationship between mobile phone penetration and the development of financial intermediation in Africa and found that mobile banking has a positive correlation with the informal financial intermediary development. This link is likely as a result of the growth of m-banking, m-payments, m-transfers, m-payments, and m-finance – a collective for the set applications that facilitates the use of mobile phones to manipulate their bank accounts, store value in an account linked to their handsets, transfer funds, or even access credit or insurance products (Donner & Tellez, 2008).

5.5.3 *Institutional quality impact on the depth of outreach*

The premise for the first model is twofold. First, from practise and the works on return on capital (S. De Mel et al., 2008; Suresh De Mel, McKenzie, Woodruff, & World Bank., 2008; McKenzie & Woodruff, 2006; McKenzie & Woodruff, 2008) indicate the ability of the poor to repay loans, sometimes at above market interest rates. Secondly, as the neo-institutional theory postulates, the environment exerts mimetic, normative and coercive isomorphic pressures on organizations, which influences their behaviour. As such, the differences in lending behaviour is due therefore to the institutional distance (difference in quality of the institutional environments) of the various countries. A positive relationship was predicted as the aim and purpose of several of the identified isomorphic forces was to improve depth of outreach. A positive significant relationship was found at the 1% level. The results yield interesting insights when compared to the results of Müller and Uhde (2013) who found a significant positive relationship at the five-percent level between loan sizes and institutional quality. Contrary to their results and others that make claims that improved institutional quality leads to lower depth of outreach, this study shows that improved institutional quality increases the chances of an MFI targeting the smaller, poorer markets. The results of this study makes a case against the use of loan size as a proxy for depth of outreach by buttressing the assumption that there could be a different explanation for the relationship between institutional quality and loan sizes. This study favours the theoretical assumption that the increase in loan sizes is a reflection of the growing confidence/reduced information asymmetry and/or as a result of improved welfare of the MFI clients.

There has been difficulty explaining the differences in the performances of MFIs across the globe and the differences in results obtained from various studies in different regions. The

second hypothesis was developed based on the institutional theory and the argument that MFIs within certain institutional fields would tend to behave the same way, targeting the same markets and having similar problems. The results from the second model support this with show that the effect of institutional quality is depth of outreach is stronger in Asia (East Asia and the Pacific and South Asia), followed by Latin America and Caribbean's and then less for Eastern Europe and Central America. The relationship between institutional quality and depth of outreach in the Middle East and North Africa is negative but not significant. As such, to look for improvements to depths of outreach in the Middle East and North America, institutional quality would not be one of the critical areas to be considered. The results from the logistic regression with moderators explains the variation in results obtained from the various studies that have looked at the relationship of governance with depth of outreach

These differences in the effect that institutional quality has on the depth of outreach raise the questions as to the nature of the role institutional quality play in depth of outreach. Whereas previous studies such as Müller and Uhde (2013) suggest that improved institutional quality increases costs associated with microfinance, this study argues that improved institutional quality creates a better environment for microfinance lending. Contracts that are enforceable, government that can be held accountable. Reduced corruption, freedom of expression all would help not just in reducing information asymmetries and moral hazard but a greater push towards the development goals associated with microfinance.

5.6 Discussion of Results

The results of this analysis offers some new knowledge and hold several implications for theory, empirical research and policies. These are discussed below.

5.6.1 Implication for Research

5.6.1.1 Theoretical Contributions

The neo-institutional theory provided a framework with which to explore the behaviour of MFIs in terms of their lending practises. The institutional fields exert normative, coercive and mimetic pressures on organizations, which in a bid to find legality, leads to homogenization. However, the levels of homogenization varies with Microfinance institutions being similar in certain ways and dissimilar in others. The isomorphic pressures exerted in an institutional field come from various sources acting across different levels- global, regional, country and organizational. Current literature has not looked at the *loci* of these isomorphic forces and the role of distance in influencing organizational behaviour to conform. Looking at these forces from a global, regional and country perspective, the results of this study indicate that the financial crisis had no effect on how microfinance institutions' choice of target market. The results also indicate that the regional indices ranked higher than the other variables indicating that isomorphic pressures emanating from the regions are stronger than that from both the global and country institutional fields. This *loci of pressure* would seem to imply that pressure lines are formed around the regions and that the strongest isomorphic forces emanate at this level.

5.6.1.2 Empirical Contributions

A key contribution to this study is that it calls into question the use of loan sizes in studies relating to factors affecting depth of outreach. The problem with using loan sizes in linear regressions has always been with the interpretation of the results as relationships that were found to exist between loan sizes and various factors lacked proper context. The results obtained using categorical variables and ordinal logit or probit regressions represent the

chances of an MFI choosing one category of another and makes for a better interpretation of results. For instance, when examining the effect of rising interest rates on profit of group-lending MFIs, Cull et al. (2007) used the average loan size and average loan size to GNP per capita of the poorest 20%, while Nwachukwu (2014) used target markets. Cull et al. (2007) found a negative relationship while Nwachukwu (2014) found it had no effect. This study Whereas it is logical that with increasing interest rates, loan sizes would increase to cover costs, it would be a stretch to assume that the increased loan size implies they are lending less to a profitable group. The results of Nwachukwu (2014) offer alternative explanations.

Using a larger database than has been used thus far in similar studies has also shown that contrary to other studies, the positive relationship found between institutional quality and certain regions is not an indication of lack of depth as this study finds that improved institutional quality creates an environment that encourages lending lower down the poverty line.

5.6.2 Implication for industry practice and regulation

In their 2015, report on their Millennium Development Goals the United Nations (2015) highlighted that their targets for the Goal 1 (which was to halve the number of people in extreme poverty) and Goal 3 (Eliminating gender disparity in all levels of education) had been met. However, this study shows a link between these goals and suggests that policies ensuring women have equal access to finance as their male counterparts. Apart from the gender targeted microfinance programs and development schemes, governments should improve the conditions under which female micro-entrepreneurs work ensuring they are offered equitable rights and access to information, education, technology and opportunities that their male counterparts are. In their new Sustainable Development Goals, the United Nations

should add indictors to Goal 1 that would drive reduction of the incidence of poverty amongst women and indicators to Goal 5 that would drive equal access to microfinance for women.

5.7 Conclusion

This chapter empirically tested the hypothesis developed in Chapter 3. First, we ran a test for correlation on the indicators for governance and in light of the high correlation; a Principal Component Analysis was carried out. Secondly, a correlation test on all the independent variables and results indicated there was no strong correlation between the variables. Thirdly, to test the hypothesis, this study ran two sets of logit regressions and the results reject the first hypothesis linking global forces and depth of outreach while accepting the second and third hypothesis linking regional and country characteristics with depth of outreach. A ranking of factors indicates that regional factors have the greater influence on lending to the low-end market than country effects. The country characteristics with the greatest influence on lending to the low-end markets were number of women, GDP per capita and technology. The implications of these results were discussed. For research examining isomorphic pressures, establishing loci of pressure would help in ascertaining what forces have the most influence on conformity. For policy makers, the implications at the country level indicate a strong link between reduction of poverty amongst women and the reduction of the overall incidence of poverty implying a need to link the two in policy formation.

CHAPTER 6: SUMMARY AND CONCLUSION

6.1 Introduction

The studies trying to explain depth of outreach of microfinance have focused on several areas, especially on the effects of macroeconomic, macro institutional and policy changes on depth of outreach. This study is a departure from the previous methods based on two important issues. The first is that it approaches depth of outreach as an organizational behaviour issue and as such uses organizational behaviour theory to explain the phenomena. The neo-institutional theory argues that organizations within similar institutional fields would tend to behave the same way. Secondly, the study departs from the use of loan size (or one of its variations) which have been most common as a proxy for depth of outreach in favour of using target markets as categorical variables. This choice was made to make for better explanation of the outcomes. The relationship between macroeconomic, institutional and policy variables have been accepted *de facto* to imply that MFIs are not reaching down the poverty line whereas this could simply be an indication of an improvement in the welfare of the clients or a reduction in asymmetric information. Using target markets classification of low end, high end and small businesses allows the use of an ordered logit regression. The results of this regression indicate the probability that an MFI would choose one group over the others.

The rest of the chapter looks at the results in light of the hypothesis developed for this study in Chapter 3, the limitations of this study, the implications and directions for future research based on this study and finally, concluding remarks.

6.2 Summary of Results

6.2.1 *Global Factors effects on the depth of outreach*

The first hypothesis explored whether global factors had any effect on how MFIs lend to the poor using the 2009 financial crises as a proxy. The results indicated that the crises had no effect on their lending practises. This would seem to indicate that the microfinance industry is not as connected as we thought. This study offers the following explanations. First is that according to (Ming-Yee, 2007), most of the funding for Microfinance came from Microfinance Investment Vehicles and they seem unperturbed by financial crises as the economic downturn in 2001-2002 did not appear to have had any impact on them. To the contrary, there was an increase in number of Microfinance Investment Vehicles. Secondly, of the top 10 MIVs, 5 were from Luxembourg up till 2015 where Switzerland now controls 36% of the Microfinancing market valued at 13.5 billion USD (CGAP, 2017). Following Switzerland, Netherlands owns 23% of the market share, Germany has 15% and the USA has 9% (CGAP, 2017). The economic stability of the top three could have insulated the MFIs from the economic downturn of 2009. Another possibility is that the Microfinance market is poses *less* of a risk than mainstream banking. After the financial crises of 2009. There was increase in funds in the microfinance market. These could explain why the financial crises had no direct effect on how MFIs target their clients, rejecting the hypothesis.

6.2.2 *The Regional effects on MFI depth of outreach*

The second hypothesis (H_2) postulated that *The Region an MFI is located affects its depth of outreach.* The dummies for the regions all turned out significant in the regressions, supporting

the general hypothesis. However, the introduction of regional dummies as interaction terms, highlighted several differences across the regions.

H_{2a}: Locating an MFI in Sub Saharan Africa affects its depth of outreach

One of the disadvantages of using an ordered regression is that one of the dependent variables has to be used as a base to compare the relationships of other dependent variables with the independent variables. As such, we lose out some detail. However, when compared to the other regions, it seems that the Sub Saharan African region is less likely to lend down the poverty ladder than the other regions.

H_{2b}: Locating an MFI in East Asia and the Pacific affects its depth of outreach

The results were significant for this hypothesis and MFIs located in this region are 0.56 times more likely to lend low-end markets than their African counterparts. The results from the second model support this but show that institutional quality does not improve this ratio, on the contrary, it weakens the likelihood of lending down the poverty line but by less than the other regions. This could be because government plays a critical role at all levels in the financial system in this region.

H_{2c}: Locating an MFI in Eastern Europe and Central Asia affects its depth of outreach

The Eastern Europe and Central Asia region was the only one that changed in significance after the interaction term was introduced, becoming insignificant. The choice of target market for this region is not as a result of inherent cultural or other geographically associated characteristics but as a result of its strong institutional quality as reflected in the results. Interestingly, an improvement in Institutional Quality decreases the probability that an MFI located in this region will lend down the poverty line to the low-end market.

H_{2d}: Locating an MFI in Latin America and the Caribbean affects its depth of outreach

The results indicate a significant positive relationship, indicating that MFIs located within this region will likely lend down the poverty line to the low-end market. Institutional quality plays an important role decreases the likelihood of reaching down the poverty line. This region has been one of the most successful in terms of commercialization and their philosophy has been focused on reaching those down the poverty line. It can be argued that their business logic has paid off and as such, it is traditional to target the poor as it has been proved to be financially rewarding.

H_{2e}: Locating an MFI in Middle East and North Africa affects its depth of outreach

The relationship between institutional quality and depth of outreach in the Middle East and North Africa is negative but not significant indicating that in spite of their weak institutional structures; the MENA region has developed a strong lending culture. The second implication is that the argument that institutional reforms must be accelerated to be able to achieve stable and inclusive economic prosperity for all (Akobeng, 2016) does not hold water. Within the MENA region are other institutional codes of practise that influence the MFI behaviour. A possible explanation would be the strong influence of religion on business practises. (Abdelkader & Salem, 2013) found that when Islamic MFIs are compared to conventional MFIs, that they compete favourably on efficiency. This idea is not new as religious and cultural norms in Muslim countries has been postulated to drive the preference of Islamic microfinance over conventional microfinance (Ali and William, 2014) and Ahmed (2002) argues that Islamic MFIs have some inherent characteristics that can mitigate some of the problems faced by conventional MFIs.

H_{2f}: Locating an MFI in South Asia affects its depth of outreach

Results indicate that MFIs in South Asia were 1.55 times more likely to lend to the low-end markets than their Sub-Saharan counterparts. This probability is higher than for all the other regions. The implication of this would be that South Asia has a better lending culture to low end markets than the other regions. As is consistent with the other results, institutional quality reduces the likelihood of lending down the poverty line and in this region that reduction is by almost 50%. This region has some of the lowest costs but also some of the lowest profits in the industry (Thapa, 2007). This could be because of the higher costs and bureaucracy involved in dealing with the government or 'over-regulation' of the system

6.2.3 *Effect of Country of Location an MFI depth of outreach*

The third and final hypothesis H_3 put it that

The Country an MFI is located in affects its depth of outreach

Of the several country level variables used, the distinguishing factors that affected MFI lending were growth in per capita GDP (in constant 2010 US$), rural population growth and increase in mobile cellular. Credit to the private sector and the labour force were both found to have significant negative effects on lending to low end markets with a 1% increase in credit to the private sector reducing the probability that a MFI would lend to the low end market by 1%. A 1% increase in the labour force decreased the probability by 1.93%. In summary, countries that have growing per capita GDP, an increase in rural population and increase in mobile cellular are likely to lend down the poverty line. This would seemingly imply a growing economy, increase in microfinance market (in the rural areas) and the necessary technology to implement products.

6.3 Research Contributions

This study also calls into question the use of cross regional research studies that have examined the issues relating to microfinance on a global scale, leading to generalized results that could be misleading. Such studies include the studies of Quayes (2012) who established a relationship between the depth of outreach and financial sustainability based on a cross-country study of 702 MFIs from 83 countries. This study directly challenges the cross-country study by Müller and Uhde (2013) and their assertion that improvement in institutional quality negatively affects depth of outreach. The argument this study makes is that the effect of institutional quality on depth of outreach varies and is dependent on the regional context of the Microfinance Institution.

This study adds to the growing literature on the impact of gender roles in deepening microfinance that includes the works by Pitt and Khandker (1998). Using an ordered logistic regression allows for a different narrative from previous studies, showing that the presence of poor women in a target market would increase the chances of MFIs lending to that market.

6.4 Research Limitations

The source of the data for the microfinance institutions was MIX market, which is a self-reporting website. The MFIs that report to MIX are not mandated to do so or under any obligation to do so. As not all MFIs within the countries used for this study report to MIX Market, the data obtained represent trends. A more representative sample would include all the microfinance institutions. However, MFIs reporting to MIX Market are those seeking to meet international standards and/or attract funding. As such in a bid to attain legitimacy, they

come under normative and mimetic pressures. This introduces a level of bias, as the sample would have been more robust if it contained MFIs that were not as susceptible to these isomorphic pressures as those indicating conformity by registering with MIX market.

The use of an unbalanced panel data also posed several issues. It would have been of interest and in line with this study if the interaction between regions and legal structure could have been explored. However, with a

Ideally, adding cultural variables to the second model would have allowed us to examine the effect on the overall model. However, to the lack of variability in Hofstede's culture variables, exploring how the moderator (regions) affected its effect on death of outreach would have led to problems with singularity and as such wasn't explored.

6.5 Recommendations

Quayes (2012) suggests that lack of outreach to women has not been a major issue with researchers or practitioners likely because they are the major recipients of microcredit. However, while studies continue exploring factors affecting the depth of microfinance outreach, as women make up a large portion of these borrowers, studies focusing on depth of outreach to women are also important.

The issues of culture continue to be a relevant study in organizational behavioural studies. The major problem with culture is its lack of variability making it hard to carry out quantitate studies. However, selecting data of a continuous nature to serve as proxies for the various dimensions of culture would enable better examination.

This study has opened the door to re-examining what proxy's depth of outreach in microfinance research. In light of this, it is recommended that research studies that have used loan size in the past be re-examined using target markets.

One of the challenges of using unbalanced data and the unprecedented number of observations was the amount of missing data made it impossible to use some other variables that had been used in other studies or were of interest to this study from literature. For instance, to proxy the technological culture of a country, this study used number of mobile phone subscriptions per 1,000,000 people. There however exist several other variables such as number of computers, internet subscription and number of ATMs. As advancements in technology continue to grow in leaps and bounds, understanding the relationship between technology and microfinance is important.

The results indicate that although Microfinance Institutions in the Middle East and North African are more likely to lend to the low-end market segment, institutional quality has no impact on this, implying that there are other factors at work. The study by Bassem (2012) is the only empirical work we are aware of that empirically examines depth of outreach in the MENA region. Apart from the already mentioned issue of using loan size as a proxy for depth of outreach, the study used data covering only three years (2008-2010) and yielding only 192 observations. The study could do with a larger sample size and using the target markets as the proxy for depth of outreach.

6.6 Conclusion

The research surrounding microfinance has received a lot of attention due to its relevance across political, developmental and business circles. The microfinance renaissance led by Prof.

Yunus challenged the general notion that poor people were incapable of paying back loans and led to a paradigm shift. Microfinance research has gone through various phases in a bid to understand and improve microfinance offerings. Presently, due to the interest of the United Nations and its global reach, research has moved towards sustainability - finding ways to ensure that microfinance gets to those who need it and to do so in a profitable manner. The key objective of this study was to gain an understanding as to why microfinance funds were not reaching those down the poverty line despite the fact that lending down the poverty line had been shown to be not only possible but profitable. The thesis turned to institutional theory to find an explanation and hypotheses developed in order to answer the research question. Organizations are made up of people and people within certain locations hold on to belief systems and ways of doing things. This study has found that certain geographical locations in the developing world embody certain characteristics, histories and trends that affect how MFIs target their customers that goes beyond simple commercial logic. Depth of outreach in the Eastern European and Central America region however, is affected more by institutional quality.

In conclusion, there are two main points to take away from this study. First, the research findings of this study point to a need for a re-examination on how studies on microfinance institutions are conducted. A one-size-fit-all approach would lead to misguiding conclusions and as much as microfinance is a global phenomenon, how the finer details are interpreted, are greatly affected by the context of their locations and should be taken into consideration in policy and research. Secondly, the effect that the various regions have on organizations. The isomorphic pressures are strongest around the regions and as such, monetary and fiscal policies should consider regional characteristics when formed and implemented.

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APPENDIX

APPENDIX A: List of Developing Countries used in the Study

1. Afghanistan
2. Albania
3. Argentina
4. Armenia
5. Azerbaijan
6. Bangladesh
7. Benin
8. Bolivia
9. Bosnia and Herzegovina
10. Brazil
11. Bulgaria
12. Burkina Faso
13. Burundi
14. Cambodia
15. Cameroon
16. Chad
17. Chile
18. China, People's Republic of
19. Colombia
20. Congo, Democratic Republic of the
21. Congo, Republic of the
22. Costa Rica
23. Cote d'Ivoire (Ivory Coast)
24. Dominican Republic
25. East Timor
26. Ecuador
27. Egypt
28. El Salvador
29. Ethiopia
30. Georgia
31. Ghana
32. Guatemala
33. Guinea
34. Haiti
35. Honduras
36. India
37. Indonesia
38. Iraq
39. Jordan
40. Kazakhstan
41. Kenya
42. Kosovo
43. Kyrgyzstan
44. Lebanon
45. Macedonia
46. Madagascar
47. Malawi
48. Mali
49. Mexico
50. Moldova
51. Mongolia
52. Morocco
53. Mozambique
54. Nepal
55. Nicaragua
56. Niger
57. Nigeria
58. Pakistan
59. Palestine
60. Panama
61. Papua New Guinea
62. Paraguay
63. Peru
64. Philippines
65. Romania
66. Russia
67. Rwanda
68. Samoa
69. Senegal
70. Serbia
71. South Africa
72. Sri Lanka
73. Swaziland
74. Syria
75. Tajikistan
76. Tanzania
77. Togo
78. Tunisia
79. Uganda
80. Ukraine
81. Uzbekistan
82. Vietnam
83. Zambia

APPENDIX B: *Ordered-Logit Regression for Equation 1*

Variable	*Coefficient*	*Std. Error*	*z-Statistic*	*Prob.*	*Marginal Effects*
Credit Union	-0.38571	0.154085	-2.50321	0.0123	-0.22785
NBFI	-0.13316	0.107676	-1.2367	0.2162	-0.07866
Bank	-0.58516	0.13625	-4.29473	0	-0.34567
Return on equity	0.008466	0.017218	0.491697	0.6229	0.005001
Portfolio at risk (30 days)	-0.1837	0.291457	-0.63028	0.5285	-0.10852
YOUNG MFI	0.280784	0.203551	1.379432	0.1678	0.165866
MATURE MFI	0.149044	0.196191	0.759688	0.4474	0.088044
Percent of female borrowers	4.331447	0.19914	21.75071	0	2.558696
Regulated INDEX	-0.26374	0.104237	-2.53019	0.0114	-0.1558
Medium size index	-0.81419	0.114609	-7.10411	0	-0.48096
Large size index	-1.48535	0.123209	-12.0555	0	-0.87743
General governance	0.280306	0.02515	11.14526	0	0.165584
Growth in GDP per capita	3.280806	1.114278	2.944335	0.0032	1.938055
Domestic credit to private sector (% of GDP)	-0.01926	0.002838	-6.78669	0	-0.01138
Inflation, consumer prices	0.010213	0.008014	1.274408	0.2025	0.006033
Labour force participation	-0.03234	0.00569	-5.68308	0	-0.0191
Mobile cellular subscriptions	0.010277	0.001264	8.130148	0	0.006071
Rural population growth	0.067295	0.039507	1.703379	0.0885	0.039753
East Asia and the Pacific	0.960093	0.177553	5.407369	0	0.567151
Eastern Europe and Central Asia	-0.33102	0.174558	-1.89632	0.0579	-0.19554
Middle East and North Africa	1.698344	0.260768	6.512849	0	1.003255
South Asia	2.620904	0.187665	13.96589	0	1.548234
Latin America	0.417952	0.139564	2.994685	0.0027	0.246895
FCRISIS	0.113263	0.086135	1.314938	0.1885	0.066907
	Limit Points				
LIMIT_1:C(25)	-3.00506	0.495729	-6.06191	0	
LIMIT_2:C(26)	0.860759	0.493682	1.743548	0.0812	
Pseudo R-squared	0.302059	Akaike info criterion		1.33439	
Schwarz criterion	1.377982	Log likelihood		-2448.63	
Hannan-Quinn criter.	1.349902	Restr. log likelihood		-3508.36	
LR statistic	2119.464	Avg. log likelihood		-0.66019	
Prob(LR statistic)	0				

APPENDIX C: *Ordered-Logit Regression for Equation 2*

Variable	Coefficient	Std. Error	z-Statistic	Prob.	Marginal Effects
Credit Union	-0.40375	0.156148	-2.58569	0.0097	-0.09224
NBFI	-0.07324	0.115021	-0.63677	0.5243	-0.01673
Bank	-0.63541	0.138888	-4.57499	0	-0.14517
Return on equity	0.009215	0.019575	0.470736	0.6378	0.002105
Portfolio at risk > 30 days	-0.37172	0.293227	-1.26767	0.2049	-0.08492
YOUNG MFI	0.350038	0.206869	1.69207	0.0906	0.079971
MATURE MFI	0.227582	0.201076	1.131823	0.2577	0.051995
Percent of female borrowers	4.412785	0.20568	21.45463	0	1.008167
Regulated INDEX	-0.24207	0.105172	-2.30161	0.0214	-0.0553
Medium size index	-0.84753	0.1159	-7.31261	0	-0.19363
Large size index	-1.55153	0.124746	-12.4375	0	-0.35447
General governance	-0.04696	0.058324	-0.80515	0.4207	-0.01073
Growth in GDP per capita	2.418319	1.13422	2.132143	0.033	0.552501
Domestic credit to private sector	-0.02268	0.003036	-7.46987	0	-0.00518
Inflation, consumer prices	0.007394	0.008078	0.915402	0.36	0.001689
Labor force participation rate,	-0.02203	0.006108	-3.60612	0.0003	-0.00503
Mobile cellular subscriptions	0.010462	0.001285	8.144515	0	0.00239
Rural population growth (annual %)	0.032225	0.04231	0.761648	0.4463	0.007362
East Asia and the Pacific	1.550309	0.217175	7.138528	0	0.354191
Eastern Europe and Central Asia	-0.22526	0.180283	-1.24947	0.2115	-0.05146
Middle East and North Africa	2.539961	0.295256	8.602561	0	0.580292
South Asia	3.339527	0.253027	13.1983	0	0.762965
Latin America	0.495417	0.14758	3.356939	0.0008	0.113185
FCRISIS	0.138406	0.087176	1.58766	0.1124	0.031621
INSTQUAL*East Asia &Pacific	1.058444	0.140122	7.553747	0	0.241817
INSTQUAL*EECA	0.214749	0.075242	2.854099	0.0043	0.049063
INSTQUAL*MENA	-0.0746	0.120128	-0.62104	0.5346	-0.01704
INSTQUAL*South Asia	0.631169	0.105445	5.985749	0	0.1442
INSTQUAL*LAC	0.425659	0.067483	6.307634	0	0.097248
		Limit Points			
LIMIT_1:C(30)	-2.27456	0.525696	-4.32677	0	
LIMIT_2:C(31)	1.66093	0.525901	3.158255	0.0016	
Pseudo R-squared	0.319392	Akaike info criterion		1.304296	
Schwarz criterion	1.35627	Log likelihood		-2387.82	
Hannan-Quinn criter.	1.32279	Restr. log likelihood		-3508.36	
LR statistic	2241.085	Avg. log likelihood		-0.64379	
Prob(LR statistic)	0				

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