

**IMPROVING THE EFFECTIVENESS OF
THE GRAMEEN BANK OF UGANDA**

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An honors thesis submitted to the faculty of the
Kenan-Flagler Business School at the
University of North Carolina at Chapel Hill

Chapel Hill
2015

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ABSTRACT**Mahati Sridhar****Improving the Effectiveness of the Grameen Bank of Uganda
(Under the direction of Dr. Larry Chavis)**

Micro-finance is a lending solution for low-income and developing regions of the world. However, creating the most effective model for microfinance requires specific tailoring for each region and each target segment. One specific organization that is facing the challenges from the lack of an effective model is the Grameen Bank in Uganda. In comparison to some of its peer institutions, the Grameen Bank has much lower women outreach and rural penetration. Through my research, I provide qualitative and quantitative analyses of various microfinance ventures throughout Africa. These analyses discuss the importance of rural penetration, women inclusion, financial education, and deposit vs loan ratios. In the end, I provide solutions to the Grameen Bank of Uganda for how they can improve their outreach with more tailored solutions in line with their peer institutions.

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I. INTRODUCTION

Microfinance is a popular lending solution for low-income and developing regions of the world. However, there are many different types of institutions with a variety of methods of reporting their success. My research will attempt to provide the Grameen Foundation of Uganda with recommendations for improving their programs based on a quantitative and qualitative analysis of other similar organizations.

My interest in microfinance stems from Muhammad Yunus' *Banker to the Poor* (1999). Mohammad Yunus discussed his experiences with poverty and inequality in many of the homes and villages across Southeast Asia. He implemented a micro-lending program, called the Grameen Foundation, to stimulate the economies in these impoverished centers through short-term investments in handicrafts, farm tools, and small-scale manufacturing shops (Yunus, 1999). As a result, families gained additional income to spend on food and education for their children. The Grameen Foundation is extremely successful in Southeast Asia, but the same model is struggling in other geographic areas of the world—specifically in Africa. According to the Grameen Foundation's 2014 annual report, over 600,000 new savings accounts were created in the Southeast Asian region in comparison to 200,000 accounts in sub-Saharan Africa (Scott, 2014).

In this next section, I will give define more broadly what microfinance is and provide a brief overview of the history of microfinance, with a deeper look at microfinance in Africa, the various types of microfinance institutions, and an understanding of the current situation at the Grameen Bank of Uganda.

Microfinance Definition

Microfinance is a term defined for the “formal and informal institutions offering financial services to the poor” (Brau & Woller, 2004). Microfinance aims at providing smaller (micro) loans with low interest to low-income individuals to help further their small businesses, agricultural practices, and other needs. Microfinance is practiced all around the world—extending financial inclusion universally.

History of Microfinance

Microfinance has been around for centuries in many informal manners in different cultures. For instance, “chit funds” in India, “tontines” in West Africa, “tandas” in Mexico, and “susus” in Ghana are all names for informal microfinance lending practices deeply rooted in these cultures (Helms & Goodwin-Groen, 2006).

One of the earliest documented forms of a formal microfinance institution was the Irish Loan Fund, founded in the 1700s by Jonathan Swift (Helms & Goodwin-Groen, 2006). Swift created funds across Ireland to stimulate the growing agrarian economy (Helms & Goodwin-Groen, 2006). At one point, the Irish Loan Fund accounted for 20% of all Irish lending activity (Helms & Goodwin-Groen, 2006).

Through the Industrial Revolution, formal lending institutions developed and became the more prominent lending facility. The poor were viewed as “unreliable” populations that could not provide collateral for loans and therefore were hardly

considered as customers at these formal lending institutions (Yunus, 1999). The number of microfinance programs remained stagnant as the demand grew.

The importance of microfinance resurfaced in the 20th century with specific programs targeted at agricultural and craft markets in lesser-developed countries (LDCs). These rural programs initially failed because the rural development banks could not maintain their capital pool as a result of subsidized lending interest rates and low repayment rates. Additionally, much of this capital remained in the hands of a few fortunate farmers, while majority of the poor farmers could not gain access (Helms & Goodwin-Groen, 2006).

In the 1970s, Muhammad Yunus—the father of modern day microfinance—experimented with micro-lending in groups. By incorporating the social component, the loan repayments drastically increased and these programs brought much needed capital and credit opportunities to the poorest of communities. The social component involved creating small lending groups consisting of non-family members. These members held each other accountable for making loan repayments. If a single member did not make a payment, the entire group faced the repercussions.

Today, there are hundreds of thousands of microfinance banks and communities throughout the world. Some of the largest and most well-known institutions include:

- ACCION International
- Grameen Bank
- SEWA Bank
- VisionFund

Microfinance in Africa

Microfinance in Africa has as deep of roots as the rest of the global community — with informal group lending practices popular all throughout the continent. However, formal lending institutions, particularly those with access to the poor, never gained traction in history up until recently. Through the early part of the 20th century, the average financial inclusion rate for an African nation was a mere 25%—meaning majority of the population did not have access to a financial institution (Jarotschkin, 2013). As a result, introducing such practices has been difficult because the culture in many rural parts of Africa is not accustomed to an external party managing family and business financials (Maarse, 2014). However once more established organizations, such as the Grameen Bank and ACCION International, began to branch off with working microfinance institution (MFI) models, financial inclusion started to grow in Africa (Linthorst, 2013).

As of today, “Africa’s microfinance industry has been growing” (Jarotschkin, 2013). Since 2013, the number of microfinance institutions in Africa has increased by 5.3% (Cull, 2014). This growth is attributed to increased political stability throughout the region, and technological advances that have improved connectivity and communication from rural villages to urban settings (Basu & Blavy, 2004). This industry “weathered the financial crisis better than most industries, according to asset growth rates” and is poised to continue to grow rapidly over the next twenty years (Jarotschkin, 2013).

Types of Microfinance Institutions

Microfinance Institutions can be classified into four main types of organizations. These classifications stem from government requirements and product offerings by the various organizations. The four main types are:

- Microfinance Institutions (MFIs)
- Micro-depository Institutions (MDIs)
- Microfinance banks (MfBs)
- Savings and credit Cooperatives (SACCOs)

A microfinance institution is a more common term for a micro-lending institution. These organizations specialize in making loans. They do not have a depository function; therefore, they cannot store money for clients. Micro-depository institutions are a step up and include the ability to receive deposits as well as make loans. In order to take deposits, these organizations must be registered with their respective countries in order to conduct business. MFIs do not have this requirement. Microfinance banks are capable of making loans and taking deposits. These institutions are usually subgroups from a government bank or local commercial bank. As a result, these programs are more stable but follow very traditional lending practices. Finally, SACCOs also have the ability to make loans and receive deposits. However, these organizations are completely government owned and receive their funding solely from the government budgets. These organizations are popular in many African nations, included Uganda and Kenya (Kariobangi, 2012).

Grameen Bank of Uganda Current Situation

The Grameen Bank of Uganda has been present in the nation on and off since 2002. Because of various political instabilities as well as economic turmoil, there has been a significant amount of inconsistency with this program. This program is defined as a microfinance institution—meaning they do not have any formal depository practices. However, this institution—like many in the region—still accept and conduct depository practices as long as the amount is not anything large (Sharma-interview, 2015).

This program is based out of Kampala, the Ugandan capital. Most of the Grameen offices are located in the southern, more urban portion of the country. Their mission is to empower the rural through lending primarily to women (Cheston, 2002). Currently, the Grameen Bank program is popular with urban women—with over 20% women outreach. This number is much higher than other micro-lending institutions in the region. However, the Grameen Bank is suffering with its focus on improving rural villages and providing increased opportunities for these villagers.

The Grameen Bank of Uganda is trying to refocus its efforts to improve its presence in this area. The institution has set goals for the coming years in order to meet the goals and standards of the Grameen Foundation International organization. Currently, the institution is partnered with the Bill and Melinda Gates Foundation to bring a mobile money solution to the region (Sharma-interview, 2015). Because of the growing presence of mobile devices in rural Africa, the Grameen Bank believes that this program could be a solution to improving their presence in rural regions of Uganda.

II. LITERATURE REVIEW

The realm of microfinance is vast and well researched. The analyses range anywhere from historical comparisons of programs, to studies that quantify the effectiveness of these financial institutions. For this literature review, I will discuss:

- How effectiveness has been quantified
- How the Grameen Foundation model for microfinance is structured
- How other models in Africa compare
- How new innovations have stemmed in this field

This research will serve as a foundation and background for my thesis.

How effectiveness has been quantified

This section will discuss how the effectiveness of microfinance programs has been quantified with a focus on the variables measured and the limitations associated with these methods.

Variables

Multiple studies and reports have been created that quantify the effectiveness of microfinance institutions. I will group these studies and discuss their respective contributions to this space based on the variables they have. The variables are:

- Number of depositors

- Rate of repayment
- Average loan sizes
- Percentage of rural clients
- Percentage of rural automated teller machines (ATMs) / points of sale (POS)
- Percentage of women borrowers
- Contraceptive use
- Children's nutrition

The first two variables, number of depositors and rate of repayment, are the most common variables used to quantify the effectiveness of microfinance practices. These variables are used in *Measuring the Impact of Microfinance* by Odell (2010), *From Financial Exclusion to Formal Inclusion: Empirical Evidence from the Microfinance and Disability Project in Uganda* by Maarse (2014), *Financial Sector Development in Africa* by Jarotschkin (2013), and *Microfinance in Ghana: an Overview* by Asaima (2007). All of these articles cite number of depositors and rate of repayment as crucial indicators of the microfinance institution's health.

If the number of depositors does not remain constant or positive, the MFI faces the danger of a shrinking lending population (Maarse, 2014). If the rate of repayment is not positive, then the MFI is not receiving enough of its principal back through monthly payments and cannot lend additional credit out to prospective new clientele (Maarse, 2014). Additionally, these variables are easy to measure given that each MFI carefully records each depositor in the books, as well as the monthly loan payments.

The next three variables, average loan sizes, percentage of rural clients, and percentage of rural ATMs and POS were variables used by Jarotschkin (2013) in

Financial Sector Development in Africa. These variables are used to paint a demographic picture of the types of clients each MFI serves. The average loan size variable correlated strongly with the use of the loan. For instance, longer loans (36-60 months) typically involved agrarian based investments. While shorter loans (12-24 months) typically involved handicraft based investments (Jarotschkin, 2013). The percentage rural clients and the percentage of rural ATMs measured the financial inclusion of MFIs in rural African towns and villages. This metric is important because more than 70% of Africa's population live in rural areas (Rural Poverty Portal, 2009). In the past twenty years, these variables have dramatically increased (Jarotschkin, 2013).

The final three variables are: percentage of women borrowers, contraceptive use, and children's nutrition. Jarotschkin (2013) uses the first variable, while Odell (2010) uses the latter two. I decided to group these variables together because they all present a "noneconomic" method to quantify the effect of microfinance institutions by measuring related changes in the base population. It is important to look at these variables because Cheston (2002) concluded that women are the "poorest of the poor." Women generally receive lower salaries and have a higher unemployment rate than males in similar developing markets (Cheston, 2002). Of the income women make, 55% goes towards household items, 18% goes towards the children's schooling, and 15% goes towards family clothing. The remaining 12% is used for food and reinvestment for the women into their own jobs and business (Cheston, 2002). These numbers came specifically from women in rural settings who generated their income from handicrafts such as basket weaving and homemade textiles (Cheston, 2002). Both Odell (2010) and Jarotschkin

(2013) acknowledge the breadth of impact women in microfinance programs have on their families and therefore chose these variables accordingly.

Limitations

Though all these variables are popular for quantifying effectiveness, they present certain limitations when interpreting the data. First and foremost, the data collection process, especially for the noneconomic variables, is heavily reliant on self-reported data. In doing so, only certain populations that may be comfortable reporting or being submitted to medical tests in order to determine their level of effectiveness (Maarse, 2014). Additionally, many women may not feel comfortable sharing this data because of certain social stigmas in their family structure—if they are found to be too “empowered,” they could be ostracized by their families and communities for overstepping cultural bounds (Odell, 2010; Maarse 2014).

How the Grameen Bank model is structured

For my analysis, I chose the Grameen Bank model in Uganda to analyze and compare to various other microfinance models in the African region. I selected this model because I have access to data and people working within this organization. In this section, I will discuss the Grameen model in depth and discuss some of the limitations of the model as discovered through various case studies.

Grameen Model

The Grameen Bank is one of the most popular and successful MFI models. It is referenced and used as a benchmark in many research studies; therefore, I chose this model to serve as the base model for my research. This model was developed by

Muhammad Yunus in the 1970s to address the extreme poverty in Bangladesh. This organization has since gone international, with locations in many countries all across the globe (Yunus, 1999).

The Grameen Bank is a peer lending solution that relies on the idea of social capital (Yunus, 1999). Borrowers form groups of five or seven non-family members to receive a base loan amount. These individuals go through a brief training with the Grameen Bank to understand lending practices and basics of financial institutions. Following the training, the group receives a small base amount that anyone from the group, upon group consensus, may receive as a loan. Once a week, the group will meet and the member(s) with loans must repay. For every successfully repaid loan, the group receives additional principal to increase the base loan pool. For every default, the group is ineligible for a new loan (Yunus, 1999).

This model, though very successful, has been criticized by many on varying grounds. I will review several studies that analyze this specific model in Bangladesh as well as in other geographic locations.

Microfinance Studies

In Magner's *Microfinance: A Platform for Social Change* (2007), he discusses how participants with "continued access to loans have a lower rate of poverty than those without, 57% compared to 76%, respectively." He also discusses how microfinance accounted for "40% of the entire reduction of moderate poverty in rural Bangladesh" (Magner, 2007). However, the Grameen Bank does have its pitfalls. Specifically, this program has a high percentage drop out (5-30% annually for most cases) and many "ultra-poor" families never feel comfortable joining in the first place (Magner, 2007). On

average, it takes the average client eight years to rise above the poverty line, with consistent participation and lending practices with the Grameen Bank (Magner, 2007). With all of these downfalls, Magner concludes that the Grameen Bank is an effective solution, but only to a specific niche market of poverty. The poverty group that lies in the top 50% of households below the poverty line tends to see more success with the Grameen Bank model in comparison to those of extreme poverty (the bottom 50% of households below the poverty line) (Magner, 2007).

In another study, Morduch (1999) analyzes the role of subsidies in the success of the Grameen Bank. The subsidies allow the Bank to function despite low loan repayments. As a result, these subsidies created the illusion that the Bank had very high repayment rates (>98% repayment). This was not the case; close to 10% of the portfolio defaulted, meaning that the clients did not meet their loan repayment. In the following years, as the volume of loans and clients grew, so did the percentage of portfolio defaults. In 1996, there was close to 24% default rate. However, because of the continual subsidies from private donors, government entities, and interest payments, these defaults were not issued the proper repercussions as they would if the client was lending from a standard commercial bank.

In the end, Morduch concludes posing an ethical question: Should the subsidies end or should Grameen Bank end? Additionally, Morduch questions the reporting methods for microfinance institutions and proposes that a standardized method for reporting common methods (repayment rates, etc) be implemented to be able to properly assess the health of a microfinance institution.

In Odell's 2010 study, she poses the question: Does microfinance work? She analyzes this question based on a case study analysis of the Grameen Bank and a comparison of various studies on the topic. The conclusions were very similar to Magner's conclusions. Odell concluded the Grameen Bank is an effective method to alleviate poverty for the "entrepreneurial poor" (Odell, 2010). For other population segments, the success rate is much lower and not as consistent.

Odell proposes that in order for microfinance to be a "tool to alleviate poverty," a suite of programs and products must be offered. Similar to ACCION International and Kiva, institutions should provide lending and saving institutions. In doing so, these institutions are teaching their clients to be financially aware individuals (Odell, 2010).

The final study I looked at is Schreiner's *Cost-Effectiveness Analysis of the Grameen Bank of Bangladesh* (2003). In this study, Schreiner conducts a cost-benefit present value analysis of the Grameen Bank understand whether or not this industry is a lucrative investment. His findings state that this specific MFI, and more broadly, this industry, as a whole, is worth the investment.

More interestingly, Schreiner compares his analysis to Morduch (1999) and states how Morduch "misunderstood" the role of subsidies for the Grameen Bank. Instead of hindering the Bank's abilities long term, Schreiner claims that these subsidies provide a "unique" manner through which the Grameen Bank can mitigate their losses while continuing to lend out the micro-loans. Additionally, Schreiner factored in the social (noneconomic) benefits through metrics and algorithms he created. Morduch (1999) only speculated about the related noneconomic factors and did not include these variables in his calculations. For MFIs within Uganda, subsidies play a large role. The government

encourages MFIs to reach out into the rural and financially excluded areas of the country through additional subsidies (Maarse, 2014).

How other African models compare

In this section, I will look at other models that are popular in Africa and what unique innovations they have implemented to increase their outreach and overall effectiveness.

African MFIs

Within Africa, there have been several successfully implemented MFIs with very different structures and offerings. A few studies have been conducted on specific MFI organizations, analyzing their journey and their effectiveness. In this section, I will highlight examples from: Kenya, Nigeria, and Uganda.

Kenya

The first example is the Sinapi Abi Trust in Kenya. This program is sponsored in collaboration with the commercial Bank of Kenya (Asaima, 2007). Historically, the Bank of Kenya had a branch focused solely on small and medium scale enterprises (SMSEs); this branch also solicited their equivalent of microloans. However, due to high default rates, this branch was quickly shut down. As a result, many of Kenya's rural and urban poor did not have access to the much-needed funds.

In the late 1980s, the NGO, Sinapi Abi Trust, was established by a small group of philanthropic Kenyans with western education. This group structured its program on the same social capital and social liability principles as the Grameen Foundation. Slowly, this

group grew and the Bank of Kenya reached out for a partnership and offered a larger pool of capital to distribute loans from (Asaima, 2007).

Asaima (2007) analyzes this group's history and its current synergy with the government and concludes that such integration is only possible with a stable political system and a strong subsidy base. Kenya's government stabilized after the early 1980s and with the Bank of Kenya supporting the Sinapi Abi Trust, up to 20% of the defaults are backed (Asaima, 2007).

Nigeria

In Nigeria, Yahaya (2011) did a study to understand the effect of microfinance ventures in the Kwara State of Nigeria. His findings revealed that the microfinance institutions have the ability to "greatly impact the economy, for the better" (Yahaya, 2011). As a result, Yahaya recommends that the government partner with these entities to provide the proper infrastructure and transportation methods to most efficiently meet the populations in need of these financial services. Currently, 60% of all Nigerian MFIs are located in urban settings while 70% of the need for MFIs is in rural settings (Yahaya, 2011). However, Yahaya discusses how such partnership may not be possible for the near future given the political instability within Nigeria (Yahaya, 2011).

In both of these sources, Yahaya (2011) and Asaima (2007) highlight the importance of government interaction and government synergies in order to further the reach of microfinance institutions.

Uganda

In Uganda, there have been several noteworthy studies completed on various microfinance entities as well as the industry as a whole. First, I will discuss Kagaba and

Kirya's overview of *The State of Microfinance in Uganda* (2013). Then, I will compare Jarotschkin's (2013) specific examples from the space, as well as the Grameen Bank's presence in Uganda.

Kagaba and Kirya (2013) present an overview of the financial sector of Uganda and discuss how microfinance plays a large role in the country's financial activities. However, the Ugandan government poses unique requirements of such organizations within the country. These organizations must be recognized and registered with the government in order to serve as depository institution (MDIs) (Kagaba & Kirya, 2013). Without this government recognition, MFI organizations can only lend; they cannot hold the savings of individuals or accumulate interest from payments for an increased principal base (Kagaba & Kirya, 2013).

Additionally, Kagaba and Kirya (2013) recognize the major problem within Uganda—majority of the microfinance need lies in the northern rural populations while most of the microfinance institutions are based in southern urban areas. This issue appears to be a consistent theme throughout the entire African region.

Jarotschkin (2013) discusses how certain microfinance institutions within Uganda have implemented interesting partner programs to grow their depositor rates. One noteworthy initiative focused on women empowerment. Jarotschkin (2013) found that one MFI with 68% women borrowers had a much higher repayment rate in comparison to an MFI with a rate closer to 50% women borrowers.

Kendall (2012) discusses how mobile banking is a popular microfinance program being implemented in Uganda and several other African nations. The number of mobile phones per household in sub-Saharan Africa was 65% in 2013, up from 26% in 2008,

with 27% of the growth in rural regions (Tortora, 2014). These devices increase access to rural Africa, regions that Basu and Blavy (2004) describe as “financial deserts” or regions with little to no access to financial institutions. Understanding that this was a problem, the Bill & Melinda Gates Foundation funded a mobile money initiative in Uganda (Kendall, 2012). Mobile money has been a rapidly growing program all over the world to help increase access to financial services; this industry has predicted growth of 63% by 2017 (Kurkinen, 2012). This program utilizes virtual money to facilitate financial obligations between various parties (Kendall, 2012). This program provides a secure and safe alternative to the typical brick and mortar lending facility while increasing ease of access through a secure wireless network.

Finally, Linthorst (2013) discusses why the Grameen Bank of Uganda is not as successful as many of its other global locations. The structure of the Grameen Bank MFI relies on social capital of non-family members and the interaction with a financial loan officer once a week (Yunus, 1999). Linthorst (2013) found that the family unit is very strong within Uganda and the base population prefers to lend within family than without. Additionally, given the political instability outside urban settings, the loan officer may not be able to travel to the various groups and centers for the weekly meetings. Though the Grameen Bank has made constant strides to reach out to the rural populations, the inconsistency has cast a negative light on the reputation of the Grameen Bank in Uganda (Linthorst, 2013).

After understanding all of the existing literature, I recognize that there is a need to fix the Grameen Bank’s model, specifically for Uganda. Many of the researchers discussed above, provide “best practices” and methods for analyzing the effectiveness of

various microfinance institutions, but none of the researchers attempt to take a specific model and improve the institution within Uganda. Additionally, many of the researchers look solely at quantitative variables or qualitative variables. I hope to analyze the Grameen Foundation in Uganda, by comparing this MFI to other MFIS in a peer group, quantitatively and qualitatively, and make recommendations on how to best improve this microfinance program through programs better targeted at the Ugandan demographic. My research will be structured as a case study, combining many of the research methods mentioned above in a quantitative and qualitative analysis.

III. RESEARCH METHODOLOGY

My research methodology will include both qualitative and quantitative analysis to determine how to best improve the Ugandan Grameen Bank model. A quantitative analysis will be conducted first to group together similar microfinance institutions to better compare the Grameen Foundation to others in its peer group. Once these groups are established, I will conduct a qualitative analysis to highlight the similarities and differences across the groups and institutions.

This section will discuss: data selection, quantitative analysis, qualitative analysis, and limitations.

Data Selection

My quantitative approach to my research involves comparing various microfinance institutions, of the hundreds that exist, to the Grameen Bank of Uganda to gauge a sense of its effectiveness against similar organizations. I chose my microfinance institutions based on the following criteria:

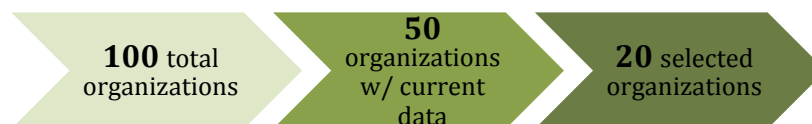
- 1) Organizations that lie in the central and eastern regions of the African subcontinent
- 2) Organizations that are classified as microfinance institutions (MFIs), micro-depository institutions (MDIs), and bank-owned micro-lending practices

3) Organizations with data reported on the Microfinance Information Exchange (MIX, 2014a, b, c, d)

I am looking at the countries in this geographic location because the demographics and geographic layout of the countries are fairly similar to Uganda—with a large percentage of the microfinance organizations located in urban settings and a large percentage of the need located in rural villages (Linthorst, 2013). The countries I chose are: Kenya, Nigeria, Tanzania, and Uganda because Linhorst (2013) used a similar set of countries in his comparison for his research on microfinance inclusion and policy.

I narrowed my scope to three specific types of organizations—MFIs, MDIs, and banks—because both the micro-depository and the bank-owned organizations seem to be gaining popularity in other countries and may present possible solutions for the Ugandan Grameen Bank. Please refer back to the literature review for more in depth explanation for the differences between these three types of organizations.

Finally, the selected organizations have some data present in the Microfinance Information Exchange (MIX, 2014a, b, c, d). There are more than 100 different institutions that offer microfinance products in each of the four countries I am looking at. However, most of these organizations have outdated data and no updated profiles. After filtering the data, only 50 organizations have consistent published data from 2013. From there, I excluded organizations labeled as SACCOs (savings and credit cooperatives). These organizations are collaborated institutions that are typically partnered with government entities (Kariobangi, 2012). Additionally, these entities are only found in two of the four of my chosen countries. Finally, I included organizations that have appeared in prior microfinance literature as noteworthy institutions.

Figure 3.1: Narrowing Data

In the end, I have 20 selected organizations. Below is a table with my selected organizations, their location, and their type of microfinance organization.

Table 3.1: Initial Data Selection

Organization Name	Location	Type
Sinapi Abi Trust	Kenya	bank
SMEP MFB	Kenya	bank
U&I MFB	Kenya	bank
VisionFund Kenya	Kenya	MFI
Rupia	Kenya	MFI
Rafiki MFB	Kenya	bank
Kwara State Bank	Nigeria	bank
Accion MfB Nigeria	Nigeria	bank
Babura MFB	Nigeria	bank
Hasal MFB	Nigeria	bank
MicroCred-NGR	Nigeria	MFI
Equity Tanzania	Tanzania	MFI
Mwanga Community Bank	Tanzania	bank
Opportunity Tanzania	Tanzania	MFI
VisionFund TZA	Tanzania	MFI
Grameen Bank of Uganda	Uganda	MFI
Centenary Bank	Uganda	bank
FORMA	Uganda	MFI
UGAFODE	Uganda	MDI
VisionFund Uganda	Uganda	MFI

(MIX, 2014a, b, c, d)

Of the 20 organizations, about 60% (12 out of 20) have full MIX-market profiles; including a comprehensive profile and metric information. About 50% (10 out of 20) publish annual reports separate from the MIX-market database. 75% (9 out of 12) of the

organizations that publish data on MIX-market also have separate annual reports available off the organizations' websites. 20% (4 out of 20) of the organizations provide only basic metrics and do not have any form of reporting extensive financial data.

All of the data I will be analyzing is self-reported data from each of the institutions; therefore, the data may contain some bias in terms of what data each institution chooses to report and withhold. Additionally, I understand that by limiting the types of organizations and the locations of these organizations, I may not be addressing all of the possible factors that contribute to successful MFIs.

Quantitative Analysis

My quantitative analysis serves as the first step for my research. I have used some commonly used financial ratios as well as a few variables I created to help quantify the effectiveness of my selected microfinance institutions. My goal is to find a relationship between any of these variables to help segment my data for my qualitative analysis of the programs offered by these institutions. I will run regressions to determine the correlations between the different variables to find out if there is any causal relationship between any two factors. In the end, I will compare the various segmented groups to the Grameen Foundation to best provide recommendations for how the Grameen Bank of Uganda can improve its operations and outreach.

The variables I will be using in my analysis are:

- Capital Asset Ratio
- Debt/Equity Ratio
- Deposits/Loans
- Cost/Borrower

- Cost/Depositor
- % Women Outreach
- % Rural Penetration
- % Technology Integration

The capital-asset ratio compares a financial institution's risk by comparing the capital available to the risk weighted assets. This ratio is often represented as a percentage to promote the “stability and efficiency of various financial systems and institutions” (“CAR”, 2013). This rate is calculated by:

$$\frac{\text{Total Capital}}{\text{Total Assets}}$$

Ultimately, this variable is assessing whether or not a financial institution or business has enough capital to support its assets. A higher capital-to-asset ratio indicates the organization is more stable than a lower ratio.

The debt/equity ratio is another popular financial ratio. This ratio is used to assess what proportion of equity and debt the organization is using to finance its assets (“Debt Equity Ratio”, 2013). This metric assesses the microfinance organization's internal efficiencies. This ratio is calculated by:

$$\frac{\text{Total liabilities}}{\text{Shareholders equity}}$$

The deposits/loans variable compares the volume of deposits to the volume of loans held by each institution. This metric describes the lending practices of each institution; it is common for microfinance institutions to participate more heavily in loans instead of deposits (Odell, 2010). However, growing trends for personal finance

education is increasing the amounts of deposits and depository institutions, particularly in Africa (Basu & Blavy, 2004). This ratio is calculated by:

$$\frac{\text{Total Volume of Deposits}}{\text{Total Volume of Loans}}$$

The next two variables are cost per borrower and cost per depositor. These ratios describe how much each institution invests in their depository and loan practices.

Typically, larger and more established institutions have lower costs. These ratios are calculated by:

$$\frac{\text{Total Cost of Providing Deposits}}{\text{Total Number of Depositors}}$$

$$\frac{\text{Total Cost of Providing Loans}}{\text{Total Number of Borrowers}}$$

The next three metrics are measure the social and demographic impact of the institutions; the first is % women outreach. This metric measures how many outreach programs each institution offers specifically targeted towards women. This variable is calculated by dividing the number of programs for women by the total programs offered by each institution:

$$\frac{\text{Number of programs for Women}}{\text{Number of total programs offered}}$$

The next variable is % rural penetration. First, I found a geographic map of an institution's locations throughout a specific country and then I cross-listed this map with a map showing the population breakdown by region. These resources were available on the MIX market. Any location established in a region where the total population is less than 20% of the overall population is classified as rural. Finally, I took the rural office locations over the total number of offices established to calculate the % rural penetration:

$$\frac{\text{Number of Rural Office Locations}}{\text{Number of Total Offices}}$$

Rural penetration describes the amount of offices that are located outside the main populated regions within each nation. For many of the countries in Africa, the need for financial inclusion is strongest in rural settings (Jarotschkin, 2013). It is important for MFIs to have a presence in these regions in order to bring about the most change for these populations.

The final variable is % technology integration. This variable describes the amount of new technologies that have been integrated into the programs of these institutions to better reach and serve their clientele. Such technologies include utilizing mobile banking and mobile money; this is a growing field of access, especially in Africa, because as of 2013, nearly 65% of all African households owned at least one mobile device (Tortora, 2014). This variable is calculated by:

$$\frac{\text{Number of programs with technology integration}}{\text{Number of total programs offered}}$$

After analyzing all these variables, I will run correlations to see what variables have the strongest relationships and use those variables to classify my data into two groups to compare and contrast with the rest of the variables.

Qualitative Research

Once the two groups have been formed, I will compare them based on other quantitative factors, but I will also dive deeper into the various facets and differentiating factors of these institutions based on their programs and product offerings. The specific types of offerings I will be looking into include:

- Programs specifically targeted at women

- Technology integrated programs
- Programs for student education
- Programs for improving personal finance skills

Financial programs for women are targeted initiatives that many microfinance organizations implement in order to reach out to women entrepreneurs. Women in microfinance tend to have higher loan repayment rates and tend to bring more income home to the family (Basu & Blavy, 2004). As a result, many microfinance organizations want to focus on women in order to bring about a greater impact in rural African communities (Basu & Blavy, 2004).

Mobile banking and mobile money are technology-integrated programs that provide a banking platform synced through mobile devices with “virtual money.” These types of programs are more readily available and secure than other banking infrastructures in rural Africa (Kendall, 2012). Given the increasing amount of mobile devices found in Africa, many microfinance and mobile phone providers have been jumping to meet the demand in this market (Tortora, 2014).

Another popular program offering is for student education. Some MFIs believe that one of the top ways to improve a nation’s economy is to provide more opportunity and education for the youth (Asaima, 2007). Therefore, investing in the youth early on may reap benefits in years to come. These programs sponsor and assist with student loans and schooling fees for families that want to educate their children.

The final type of program offering is a program for improving personal finance skills. These programs are highly educational and encourage clientele to engage in both borrowing and depository practices. As previously mentioned, the culture in these

African nations is not keen on allowing an external party to handle financial matters; therefore, these sorts of programs have not done very well in these regions (Maarse, 2014).

In addition to comparing and contrasting the program-based data, I will also compare using averages and medians of the variables previously mentioned to understand how the two groups are differentiated and see if there are any overlaying trends in the data. Finally, I will use this data analysis to discuss how my data relates to the pre-existing literature in this space. I will also make some recommendations for the Ugandan Grameen Bank for how they can best improve their operations to match the success of their peer group.

Limitations

One of the biggest limitations of my research is the potential bias present in all the raw data I am analyzing. Because there is no standardized manner or need for microfinance institutions to report data, every institution only reports what they feel is necessary, or what they may excel in. These institutions can very easily hide any flaws in their programs and cover up any shortcomings their programs may face.

As a result, there is a lack of institutions that report consistent data. I only have 20 observations that I will be analyzing in this paper. Because this sample size is so low, an outlier in the group can easily skew these numbers. However, I hope my careful selection of institutions will help alleviate this issue and generate noteworthy results.

V. RESULTS

The first step in conducting my research is to run a regression analysis between different combinations of the variables I have data for to see if any strong relationships materialize. These regressions helped determine whether or not there is an actual causal relationship between any of these given variables. For this exercise, I analyzed the following relationships:

- Rural penetration vs Loan size
- Rural penetration vs Deposits/Loans
- Rural penetration vs Women outreach
- Technology involvement vs Rural penetration
- Volume of deposits vs Technology involvement
- Cost/Borrower vs Rural penetration
- Cost/Loan vs Rural penetration

I chose to look at these relationships because they have been cited as important and related factors in some of the literature including Jarotschkin's *Financial Sector Development in Africa* (2013), Basu and Blavy's *Microfinance in Africa: Experience and Lessons from Selected African Countries* (2004), and Odell's *Measuring the Impact of Microfinance* (2010). Additionally, the Grameen Foundation values women

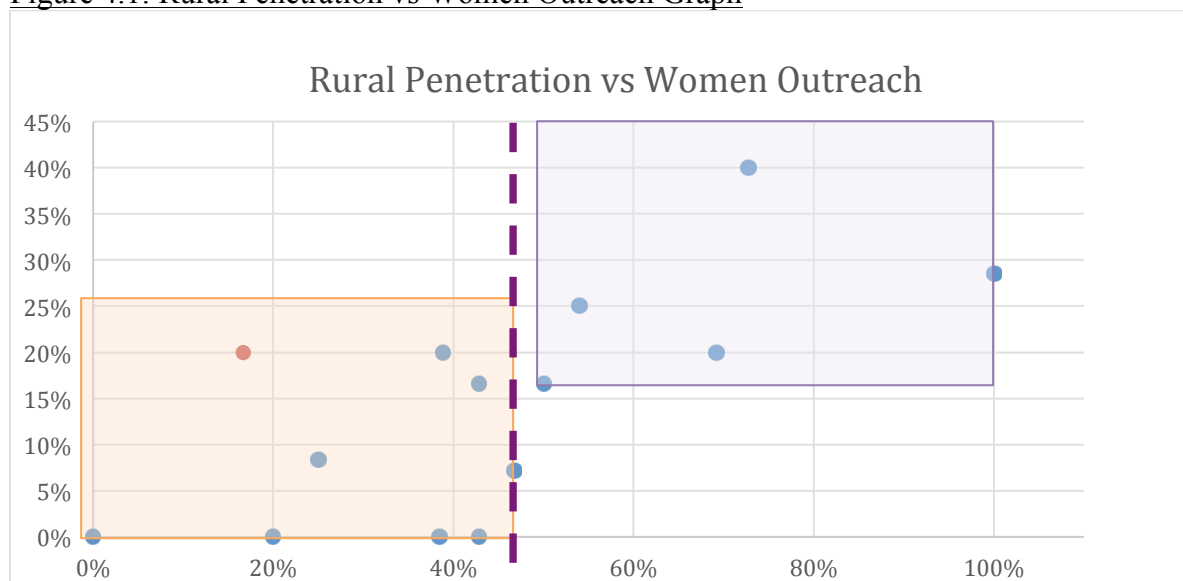
empowerment and rural outreach. Therefore, I chose to look more closely at these two variables and their relationships with other factors. I ultimately selected Rural penetration vs Women outreach as the variables to define the two groups for my research because this relationship had the strongest correlation.

Below is the data table generated from the regression of these variables as well as a scatter plot representing with my institution data.

Table 4.1: Regression Results

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.78293823
R Square	0.8127216
Adjusted R Square	0.72305992

Figure 4.1: Rural Penetration vs Women Outreach Graph



After running the regression of rural penetration vs women outreach, it becomes somewhat apparent that this set of institutions is segmented into two groups—low women outreach with low rural penetration (group A), and high women outreach with high rural

penetration (group B). Group A is to the left of the line in the scatterplot above and Group B is to the right. The Grameen Foundation of Uganda is in Group A. The dividing line is marked at 45% rural penetration.

Table 4.2: Data Segmented Groups

Group A	Group B
Babura MFB	Accion MfB Nigeria
Grameen Bank of Uganda	VisionFund Uganda
Opportunity Tanzania	SMEP MFB
Equity Tanzania	Hasal MFB
UGAFODE	Mwanga Community Bank
Rafiki MFB	
MicroCred-NGR	
VisionFund Kenya	
Centenary Bank	

Now, I juxtapose these groups with certain key variables discussed earlier that have been commonly used to measure the effectiveness of microfinance institutions. These data points are averages of each institution's data point for the measure. The table below summarizes some of these comparisons, including the Grameen Foundation's metrics separately in the rightmost column.

Table 4.3: Segmented Group Data Averages

Variable (Averages)	Group A	Group B	Grameen Foundation
Number of Programs	4.78	5.67	5.00
Number of Total Offices	14.89	22.60	6.00
Technology Integration	9.74%	16.98%	20.00%
Women Outreach	8.02%	25.04%	20.00%
Rural Penetration	30.17%	69.19%	16.67%

Urban vs Rural Programs

Based off this data, it is clear that Group A contains smaller and more urban MFI institutions that do not stress the importance of women outreach through their program offerings. Looking more qualitatively at the program offerings of these two groups,

Group A tends to have more programs focused on youth education and schooling than Group B. For instance, Opportunity Tanzania offers an education finance program that includes school fees loans and school improvement loans and VisionFund Kenya offers their Mkopo Sokomi loan program with youth empowerment loans (Opportunity Tanzania, 2014; KADET, 2013). These programs are heavily promoted by these MFIs through their community outreach tactics and internet presence (Interview data, 2015).

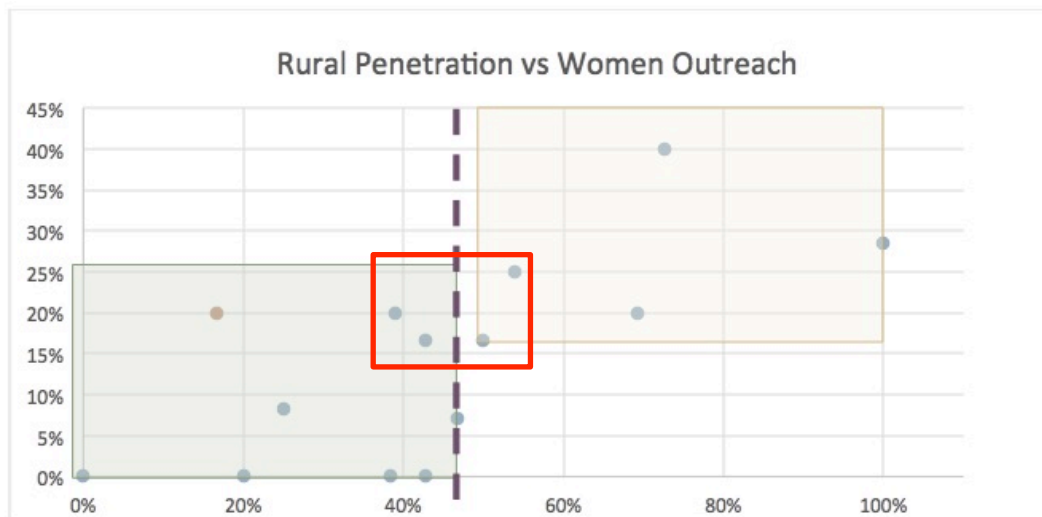
Group B institutions offer primarily agriculture based finance loan programs, small business programs, and personal finance programs. Many of the women outreach programs fall under the small business programs umbrella, with programs encouraging women to sell/trade their “womencrafts” to bring more money to their households (Cheston, 2002). Additionally, four of the five MFIs with a strong rural presence are classified as banks; these institutions not only offer microfinance products, but also function as a community bank. As a result, these entities are more stable, with higher volumes of loans and a greater ability to branch into rural areas.

Looking at the Grameen Bank relative to these two groups, the Grameen foundation lies in Group A and follows similar trend in this group. The Grameen Bank has similar women outreach, but much lower rural penetration than other institutions in Group A. In contrast to the Grameen’s well known model of empowering rural women, this specific group has been heavily involved in educational programs and technological integration programs. Currently, this Grameen Bank is working with the Bill and Melinda Gates Foundation to conduct a new initiative that teaches the importance of personal finance and banking with collaborations with regional mobile money providers. This new initiative could be one of the primary reasons this chapter is lagging in performance—too

much emphasis on this new program with not enough attention on other ventures (interview data, 2015).

Central Institutions Analysis

Figure 4.2: Four Central Institutions



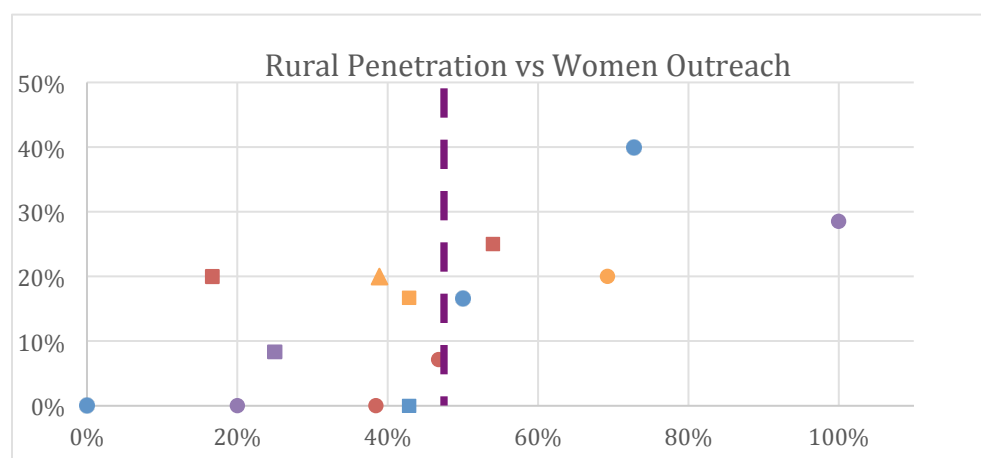
Another point of interest from these results are the four institutions right around the dividing line separating Groups A and B. These points are highlighted in the red box above. These four institutions are MicroCred-NGR, Rafiki MFB, Accion MfB Nigeria, and SMEP MFB. The first two are in Group A and the latter two are in Group B. I selected to look at these institutions more closely because they all are very similar in terms of their performance in rural penetration and women outreach. Interestingly, all four of these institutions are located in either Nigeria or Kenya. Three out of four of them are classified as MFBs or microfinance banks—with synergies and partnerships with national banks and government entities.

Institution Type and Location Breakdown

This next graph highlights each of the plotted institutions by what type of institution they are (MFI, MDI, or MFB) and where they are located (Nigeria, Kenya, Tanzania, or Uganda).

Figure 4.3: Data Graph Broken down with Bank Type and Location

Key:



The different countries are spread pretty evenly across the different rates of rural penetration and women outreach. The most successful and unsuccessful institutions are all classified as MFBs; these institutions are found in the top right corner and bottom left corner of the graph. Most of the MFIs and MDIs are found just left of center in the graph; all but one are classified in Group A.

One cause for the MFBs' levels of success could be their age. These organizations have been around much longer than the MDIs and MFIs because they are government sponsored (Jarotschkin, 2013). As a result, these institutions are more stable and have a

better reputation in these nations. The MFBs that are not doing so well are primarily based out of urban settings; their mission is not to spread into rural areas (Babura, 2013).

Deposits and Loans Analysis

The last finding involves data surrounding the deposits and loans made by these various institutions. Below are the group averages for deposits, loans, and the deposits/loans ratio for Group A, Group B, and the Grameen Bank of Uganda.

Table 4.4: Borrower and Depositor Group Averages

Variable (Averages)	Group A	Group B	Grameen Foundation
Number of Borrowers	6740.13	21702.67	3,057.00
Volume of Loans	\$ 4,056,068.11	\$ 11,125,915.17	\$ 1,590,734.00
Number of Depositors	34324.44	87376.00	9,500.00
Volume of Deposits	\$ 6,649,101.44	\$ 7,645,645.50	\$ 617,761.00
Number of Programs	4.78	5.67	5.00
Number of Total Offices	14.89	22.60	6.00
Deposits/Loans	64.78%	68.12%	38.38%

Group A has just over \$4 million in loans and \$6.6 million in deposits, while Group B has \$11 million in loans and \$7.6 million in deposits. It is interesting to note that Group A has a higher volume in deposits while Group B has a higher volume in loans. Both groups also have their loans and deposits averages within one standard deviation of each other. The Grameen Foundation, though categorized into Group A, follows a similar pattern with the deposit and loan volumes as Group B. However for both groups, the deposits/loans percentage is within ~4% of each other.

Looking at the same data and taking the median instead of the average, we see that Group B has significant outliers with one entity, SMEP MFB, being much larger than the rest. This institution skews the average numbers accordingly.

VI. DISCUSSION

In this section, I will discuss the implications of my results, their relation to existing literature for microfinance research, and my recommendations for the Grameen Foundation of Uganda.

My results support the overall idea that women outreach is closely related with rural penetration. Both Jarotschkin (2013) and Basu & Blavy (2004) found similar findings with their research. Jarotschkin (2013) discussed how women in rural situations find “house money” harder to come by. This house money helps provide clothing and assistance for women and the children of the family. Yunus (1999) reaffirms this finding in his book. As a result, Yunus (1999) founded the Grameen Bank’s model to aid primarily women in these settings because the greatest change for the family can be felt through the mother figure.

Basu & Blavy (2004) determined that rural settings provide a better starting point for these organizations because of the trust and cultural changes that occur as a result of a microfinance institution coming to an area. For traditional African families, many of the personal and business financial matters are kept to the male elders of the family; trusting an outside entity, such as an MFI or bank, with this information is a huge step away from “normal business practices” (Basu & Blavy, 2004). However, women in these areas are

more prone to participate such programs despite what the men in their family say with hopes for a better future for their offspring (Jarotschkin, 2013).

The higher loan amounts in rural areas also reflects the shift in culture and the growing trust rural individuals have with financial institutions. For the institutions with higher rural penetration (categorized as Group B in my research), the loan volume is higher than the deposits volume. The rural population is more comfortable receiving loans from an external party than letting the external party hold their money safe through deposits. Maarse (2014) supported this finding and expanded on the hesitation of rural populations to work with financial institutions by looking specifically at another disadvantaged population—the handicapped and disabled individuals of rural Africa. This minority faced the same oppression as many of the rural women and therefore were also early adapters of new programs promising a better quality of life (Maarse, 2014).

Looking at institution popularity, my research differed from some of the research in this field—namely pertaining to the types of microfinance institutions that are popular in comparison to the less successful ventures. Morduch (1999) and Linhorst (2013) discuss the role that government subsidies play and the popularity of government-supported programs. These resources cited these types of programs, such as SACCOs and MFBs are less popular due to their allegiance with the governments. Because government entities tend to be polarizing forces, countries and regions are often divided as to whether or not they will lend with a given institution. Additionally, these institutions are heavily reliant on government subsidies to function; because there are no external supporters for capital, the government must absorb all defaults and faulty payments from these

institutions. As a result, governments often shut down these programs and these programs have short lives (Morduch, 1999).

However, my research supports MFBs as the more popular and successful entities, particularly within rural populations of my select nations. Four of the main institutions in Group B are classified as MFBs. These institutions had the highest women outreach, highest rural penetration, and larger average loans and deposits. These institutions have also been in existence longer than most of the organizations in Group A. The Group B institutions average ten years old while Group A averages around five years old. Their age and government link may be a reason for their success and presence in more rural parts of these African nations.

Recommendations

Taking all my research and findings into consideration, I have a few recommendations for the Grameen Bank of Uganda in order to improve efficiencies and outreach. The biggest place for improvement for this institution would be their rural penetration. This institution needs to focus on manners through which they can reach the villages of Uganda. Recently, the Bill and Melinda Gates Foundation have partnered with this institution to help bring mobile money to the region and help reach more individuals.

In conjunct with this effort, the Grameen Foundation should also work towards improving their depository practices. The more successful practices have gained their strong holds in various communities—and maintained them—through building trust with clients primarily by developing a strong depository institution (Kagaba & Kirya, 2013). Yunus (1999) also stresses the importance of cultural fit and trust between the program

members and employees in order to facilitate growth and longevity of programs in new areas.

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