

Increasing Reliability: Attracting More Clients to Microfinance Institutions

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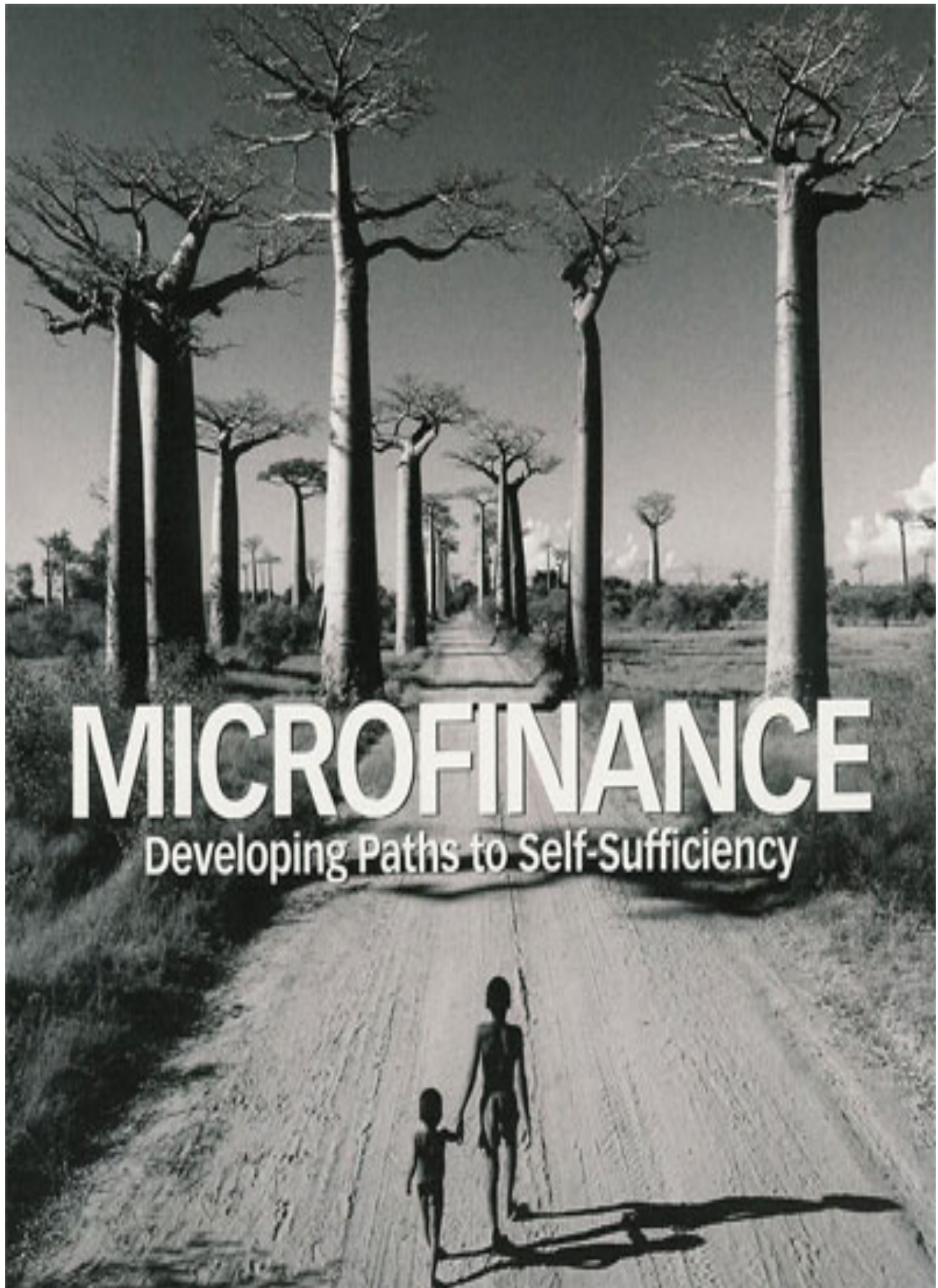
May 2011

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Introduction

Dr. Muhammad Yunus was awarded the Nobel Peace Prize in 2006 for his efforts to break large population groups out of poverty, through the formation of Grameen Bank. Grameen Bank provided small loans to the poorest of the rural population in Bangladesh. The bank's goal was to spur economic development from the bottom of the income chart. Dr. Yunus felt that making this credit available to the poor would serve as a catalyst for improving their socio-economic conditions (Grameen Bank 1998).

Economists say that, "Bottom-up initiatives like microcredit allow rural-based development," which will help halt the cycle of poverty that the poor are forced to deal with (Gleeson 2006). Stuart Rutherford states in his book, *The Poor and Their Money*, that the poor have four types of financial needs: lifecycle needs, such as weddings, funerals, and childbirth; personal emergencies such as sickness; disasters, such as fires or floods; and, investment opportunities, such as expanding a business, buying land, or buying equipment (2000). Today, the microfinance industry is most commonly known as banks lending money to groups of poor women who are interested in establishing businesses. But, microfinance also plays a big role in post-disaster relief, in which loans are extended to the poor to aid them in recovering from the disaster (Gleeson 2006). Microfinance loans are also available for lifecycle needs and personal emergencies with some collateral (Grameen Bank 1998), meaning that microfinance institutions try to cover all the financial needs of the poor.

October 2, 1983 marked the formation of Grameen Bank, the first official bank for the rural poor (Grameen Bank 1998). Since then, the industry has grown exponentially to approximately 10,000 microfinance institutions serving over 113 million clients worldwide. Though microfinance operations are prevalent in Asia, Africa, and Latin America, there are also microfinance institutions located in Europe, North America, and the Middle East (Ming-Yee 2007). In spite of this rapid growth in the reach of the industry, microfinance institutions are yet to reach a large proportion of households below the poverty line (Karlan & Mullainathan 2009). Approximately 32.6% of the world population, or 2.2 billion people, are below the poverty line (CIA 2010). Close to 750 million of these people actually have access to financial services provided by microfinance institutions (Christen et. al. 2004). But only approximately 15% of these 750 million people are actually clients of microfinance institutions.

In this paper, I seek to answer the following question: How can microfinance institutions attract more people to take advantage of the lending services provided by microfinance institutions in rural India? Much research has been conducted on the effects of interest rates on attainment of clients of microfinance institutions but little attention has been paid to other terms and conditions of lending policies such as the payment plans and also other services provided by microfinance institutions.

To address my research question, I have collected a rich dataset consisting of information on 6,798 households living in slums in Hyderabad, Andhra Pradesh (India's fifth largest city). My data comes from several datasets made available by the Centre for Microfinance. The specific data that I will be using was collected by Spandana Spoorthy Financial Limited, one of the world's largest microfinance institutions.

I expect changing payment plans and providing other services to have a larger effect on customer attainment than changing interest rates. I will be analyzing existing policies on microfinance loans using this dataset and other studies. Then, I will be using behavioral economics, specifically economic behavior anomalies, to propose new policies on microfinance loans in the hope of attracting more clients to microfinance institutions.

The rest of this paper is organized as follows. Section 2 describes the most prominent business models and existing credit lending policies in the microfinance industry. Section 3 analyzes the existing policies using previous studies. Section 4 provides information on the dataset used. Section 5 further analyzes existing policies using a model. Section 6 proposes the new policies on credit lending using economic behavior anomalies. Section 7 delivers a conclusion.

Existing Policies on Credit Lending

Business Models

Microfinance institutions are using various credit lending models throughout the world. Almost all credit lending institutions follow one of fourteen main existing credit lending models or a slight variation of one or more of these models. Also, all of these business models have been deemed successful and have existed in the industry for many years.

The first of these business models is the associations model. This is where the poor in a target community form an association and decide to provide microfinance services to the members in the association. Once formed, this association gathers capital and intermediates this capital between banks, microfinance institutions, and the association's members (Srinivas 2010).

Self Help Groups, specifically SHGs in India, follow this sort of credit lending model. These self-help groups usually comprise of 10-20 local women that share the same religion or political or cultural orientation. Members make small regular contributions over a few months until there is enough money in the group to begin lending. Then, funds can be lent back to the members when need occurs. The members of the group use peer pressure to ensure that the funds are repaid in a timely fashion. This eliminates the need for collateral in these types of microfinance loans (Reserve Bank of India 2011).

The second type of business model is the bank guarantees model. In this model, a donor or a government agency guarantees a microfinance loan provided by a microfinance institution or a commercial bank to an individual or a group of borrowers. Several international and UN organizations have been creating guarantee funds to provide this service. Banks and NGOs can subscribe to these funds to start providing microfinance loans (Srinivas 2010). Some examples of these funds are the AfriCap Microfinance Fund in Mauritius, the Bellwether Microfinance Fund in India, and the Microfinance Credit Guarantee Facility in Pakistan.

AfriCap Microfinance Fund is a \$50 million Microfinance Investment Company in Mauritius. Being initially funded by developmental organizations ten years ago, AfriCap has grown to be the largest of its kind in Africa and is now funded by private investors. AfriCap invests in microfinance and microfinance-related organizations that are determined to provide traditional

financial services to the poor. While being successful in meeting their objective, AfriCap has also been able to provide an attractive return for its shareholders (Mecene Investment 2010).

Bellwether Microfinance Fund also invests in microfinance institutions and microfinance enablers throughout India. It is similar to AfriCap in that it provides the same services and is also successful in providing excellent returns for investors (Caspian 2010).

The Microfinance Credit Guarantee Facility in Pakistan is different from the other two investment funds in that it was designed by the State Bank of Pakistan in order to facilitate banks and developmental organizations in easing credit constraints for microfinance institutions. This, in turn, would help maximize the outreach of the microfinance institutions. Also, these guarantees help form links between microfinance institutions and formal financial institutions (State Bank of Pakistan 2005).

The third type of credit lending model is the community banking model. Community banks are formal versions of associations that are created by people in a certain community who wish to improve their living standards. These community banks seek to develop their communities by offering microfinance services, using finance as an inducement for action.

An example of an institution that follows the community banking model is Mufindi Community Bank (MuCoBa) in Tanzania. MuCoBa was the first community bank in Tanzania, established in 1998. It provides financial services to low and medium income earners in Mufindi district. MuCoBa aims to spur community development through creating employment and wealth for its clients (Mufindi Community Bank Tanzania 2010).

The cooperatives model is a credit lending model that is very similar to the associations model and the community banking model except that ownership does not include the poor. A group of middle or upper class individuals may form a cooperative in order to meet common economic, social, and cultural needs and aspirations. A cooperative then may offer financial services to its members or microfinance services to the poor (Srinivas 2010). Two examples of cooperatives are the Co-operative Bank in England and the Cooperative Rural Bank of Bulacan in the Philippines.

The next type of credit lending model is the credit unions model. In this model, members of a group or organization save their money together and make loans to each other. A credit union is a smaller version of a cooperative and it is owned and governed by its members. It is also a not-for-

profit institution; therefore, loans are given at reasonable interest rates that merely allow sustainability (Srinivas 2010). The Union Progresista Amatitlaneca in Guatemala and the Vancity Credit Union in Canada both follow this model.

One of the most successful models in microfinance, the Grameen model, was developed by Dr. Muhammad Yunus of Grameen Bank in Bangladesh. In the Grameen model, a bank is set up covering an area of about 15 to 22 villages. Then, it offers 12-month loans to groups of five poor women. In the first stage, only two of the women actually receive a loan. If these two borrowers repay the loan principal and interest in full within the 12-month borrowing period, then the remaining three women become eligible to receive a loan in the next period. These restrictions spur individual repayment through the use of intense group pressure. Also, collective responsibility of the loan serves as collateral for the microfinance institutions (Grameen Bank 1998).

In the next model, the group model, a group is formed, consisting of individuals with collective responsibility and security. The basic philosophy behind this model is that shortcomings and weaknesses at the individual level can be overcome at the group level. It is believed that while individuals may face many difficult situations throughout their lives, it is less likely that all members of the group will face difficult situations at the same time. So, members of this group have the ability to help out other members of the group in a time of need. This model is successful due to peer pressure (Srinivas 2010). What differs the group model from the associations model is that while in the associations model, microfinance services are provided in the form of loans, in the group model, repayment is done through supporting the other members of the group when they are in need.

The individual credit lending model is the most straight-forward credit lending model. These individual microfinance loans were provided to the moderately poor rather than the extremely poor. In this model, microfinance loans are given directly to the borrower. Because there is no forming of groups or generating peer pressures, it is not unusual that these individual borrowers needed some form of collateral, either in the form of possessions or a cosigner. At first, they would be given smaller, shorter-term loans. But, if they repaid their loans, they would become eligible to receive larger loans with a longer time frame. An institution that often uses this type of model is ACCION International. While it is headquartered in the United States of America, it provides microfinance services throughout the world (ACCION 2007).

The intermediary model works to build links between lenders and borrowers. These intermediaries play a critical role in that they generate credit awareness among potential borrowers. Services that these intermediaries provide can include funding, training and education, or research for the lenders. These intermediaries include individual lenders, NGOs, and microfinance institutions, while lenders include government agencies and international donors (Srinivas 2010).

Another type of credit lending model is the Non-Governmental Organizations (NGOs model). NGOs play a key role in the microfinance industry; their role could include starting and participating as microfinance institutions, creating awareness of the importance of microfinance within the community and within various donor agencies, or, as mentioned before, serving as intermediaries between donors and borrowers (Srinivas 2010). Some NGOs that have played a key role in the microfinance industry are KIVA, which is headquartered in the United States of America, and the Kashf Foundation in Pakistan.

KIVA is a non-profit organization that uses the internet as a means of connecting lenders with borrowers across the globe. Lenders can lend money using the internet and through the infrastructure that KIVA has in place through 60 different countries worldwide, it provides these loans to borrowers. Since its foundation in 2005, KIVA has been very successful, ensuring a 98.71% repayment rate (KIVA 2011).

The Kashf Foundation began in 1996 by performing research on the demand for microfinance by poor women in Pakistan. Since then, it evolved into a microfinance institution, Pakistan's first, providing loans to women from low-income communities. It has successfully performed the roles of funding and research, and has also served as intermediary between banks worldwide and impoverished women in Pakistan, providing close to \$36 million in loans (Kashf Foundation 2007).

The next model is the peer pressure model. In this model, the peers could be borrowers, where, unless the initial borrowers in a group repay, the other members do not receive loans, like the Grameen model, where pressure is put on the initial borrowers. The peers could also be community leaders, who identify the defaulters and request them to repay the loans. Finally, pressure could originate the NGOs themselves and their field officers, through frequent visits to

the defaulter (Srinivas 2010). Most microfinance loans follow this peer pressure model in some way.

Another type of credit lending model is the Rotating Savings and Credit Associations (ROSCAs) model. In the ROSCAs model, a group of women come together and make regular cyclical contributions to a common fund. Then, at the start of the cycle, the entire contribution is given as a lump sum to one member of the group. This way, members of the group will lend to other members of the group. The member that receives the lump sum at the start of the cycle then repays the loan in the form of additional regular cyclical payments. At the start of the next cycle, another member of the group is given the entire lump sum collected in the previous cycle. This way, the loan can match the members' cash flows and, also, loans can be given without interest rates and over-head costs. Additionally social collateral works to ensure repayment of the loans (Srinivas 2010).

The penultimate credit lending model is the small business model. In this model, microfinance loans are provided to small- and medium-sized enterprises (SMEs). More and more, it is believed that these SMEs will help generate employment, increase income, and provide goods and services which are lacking the community. So, importance has been placed on these types of loans to help these SMEs grow and succeed (Srinivas 2010). Many microfinance loans are also provided for entrepreneurial reasons in the hope that one day they will help form successful SMEs.

The final credit lending model is the village banking model. One key follower of this type of credit lending is FINCA, which uses this model in 21 countries throughout the world. In the village banking model, a shorter-term, approximately four-month long, loan is divided among a large group of about 30 poor women. The members of this group are solely responsible for the administration of smaller individual loans within the group during this four-month period. Again, there is no material collateral behind this loan but rather moral collateral, in which each individual is responsible for the group (FINCA 2010).

Existing Policies

The rest of this paper focuses specifically on analyzing loans provided by one microfinance institution in India, Spandana Sphoorty Financial Limited. Spandana Sphoorty is one of the largest microfinance institutions in the world with 1,533 branches, providing microfinance loans

to 4.17 million clients in 176 districts throughout India. In just the first quarter of 2010, Spandana Sphoorty had loans of amount 58.09 billion rupees (Spandana Sphoorty Financial Limited 2010).

While being one of the largest microfinance institutions, it is also one of the most successful. It has received a rating of mFR₁, the highest grading for microfinance institutions, from CRISIL and a rating of $\alpha+$, (the highest rating) from M-CRIL, the world's largest specialized microfinance rating agency. Also, while Spandana Sphoorty deploys 91% of its total funds as loans, it has a 99.8% cumulative repayment rate. It has received been assessed as high safety, based on risk (Spandana Sphoorty Financial Limited 2010).

The main loan product that Spandana Sphoorty offers is called the General Loan (Abhilasha). The loan is designed for low-income households who are determined to improve their economic well-being. Therefore, the focus of this loan is income-generating activities. The loan is offered in a group mechanism. So, the loan is disbursed to a group of women and the group decides on how to divide the loan among the group members; this loan follows the associations credit lending model. The first loan disbursed is for Rs 5,000 and each subsequent loan cycle allows an increase in the loan amount (Rs 7,000 – Rs 10,000 – Rs 12,000) given timely repayment during each former loan cycle by the group. Each loan cycle lasts for 50 weeks and the loans are repayable weekly, starting one week after disbursement. The interest rate on the loans is 15% plus a 1% fee. Other loan products, aside from the General Loan are provided, but are very insignificant in number compared to the amount of General Loans (Spandana Sphoorty Financial Limited 2010). Therefore, this paper focuses on only the General Loan.

Analysis of Existing Policies

One potential problem with these existing policies is the price of the loan, or interest rates charged for the loan. Microfinance institutions have been criticized of charging exorbitantly high interest rates (MicroCapital 2006). Currently, the interest rate on the General Loan provided by Spandana Sphoorty is 15%. Rajeev Dehejia, Jonathan Murdoch, and Heather Montgomery conducted a study on the elasticity of interest rates in Dhaka slums. They found that increasing the annual interest rates by 1% reduced demand for the loan by about 36.5%-44% (2009).

Another problem that may drive away potential borrowers is the rigidity of the payment schedule. The General Loan forces clients to make weekly payments starting only one week after receiving the loan. Dean Karlan and Sendhil Mullainathan argue that this repayment timeframe is not ideal as most borrowers do not have the ability to generate returns on the loans so quickly (2009). In fact, payment collectors hired by the microfinance institutions are harassing clients due to their inability to make these earlier payments (Morduch 2010). This is driving away even more potential clients of microfinance institutions.

Two policies of the General Loan are that only women are given loans and loans are given to a group rather than an individual. A study was conducted by Bert D'Espallier, Isabelle Guerin, and Roy Mersland on differences between female and male borrowers. They concluded that that focus on female clients enhances microfinance repayments and women are a better credit risk (2009). Group mechanisms allow microfinance institutions to extend loans without needing physical collateral.

Data

My data came from multiple datasets made available by the Center for Micro Finance. The dataset consists of information on 6,798 households living in slums in Hyderabad, Andhra Pradesh (India's fifth largest city). It was collected through three surveys conducted by Spandana Sphoorty on 1) household composition, 2) household characteristics, and if the household owned any business, 3) general questions about the business. The study was conducted from 2005-2008.

The sample consists of households living in 1 of 120 slums that were selected by Spandana Sphoorty as areas in which they were interested in opening branches. These slums were selected on the basis of having residents who were desirable potential borrowers. That is, they were poor, but not "the poorest of the poor," and there was not a large concentration of migrant residents. Once the slums were selected, 6,798 households were randomly selected conditional on the household having a woman between the ages of 18-55. Then, information was collected on household compositions, education, employment, asset ownership, decision-making, expenditure, borrowing, saving, and any businesses currently operated by the household or stopped within the last year.

From this large dataset of thousands of variables, I selected variables that were relevant to microfinance loans. Specifically, the variables include education, employment, expenditure, and borrowing. Education is an indicator variable that takes a value of 1 if the head of the household is literate and a value of 0 if the head of the household is illiterate. Employment is an indicator variable that takes a value of 1 if the household owns and operates a business and a value of 0 if the household does not own a business. Expenditure is a quantitative variable whose value is the total value of purchases made by the household in the last month. Finally, borrowing is a quantitative variable that measures the amount of funds currently borrowed by the household.

Model and Results

I used a linear regression model to predict the amount borrowed from the variables, education, employment, and expenditure. The descriptive statistics of the variables, borrowing and expenditure, are shown in Table 1. Conducting a bivariate analysis, we see that there may be interaction between some of the explanatory variables. So, I added interactions between each of the explanatory variables to the model. The full model is

$$\text{borrowing} = \beta_0 + \beta_1 \cdot \text{education} + \beta_2 \cdot \text{employment} + \beta_3 \cdot \text{expenditure} + \beta_4 \cdot \text{education} \cdot \text{employment} + \beta_5 \cdot \text{education} \cdot \text{expenditure} + \beta_6 \cdot \text{employment} \cdot \text{expenditure}$$

Results are provided in Table 2.

I found that the interaction between education and employment and the variable employment are statistically insignificant. In the next model, I removed the interaction but keep employment as there is a statistically significant interaction between employment and expenditure. The new model is

$$\text{borrowing} = \beta_0 + \beta_1 \cdot \text{education} + \beta_2 \cdot \text{employment} + \beta_3 \cdot \text{expenditure} + \beta_4 \cdot \text{education} \cdot \text{expenditure} + \beta_5 \cdot \text{employment} \cdot \text{expenditure}$$

Results are provided in Table 3.

I found that all the variables are statistically significant except for employment. But, I leave it in the model because the interaction between employment and expenditure is significant.

From the final model, it can be seen that there is a significant positive relationship between borrowing and education and borrowing and expenditure. What that implies is that households that are borrowing more are spending more. Also households that are headed by literate individuals are more likely to borrow than households that are headed by illiterate individuals.

Also, literate households borrow less for each rupee that they spend than illiterate households. Finally, households that operate their own businesses borrow more for each rupee that they spend than households that do not operate their own businesses.

Proposed Credit Lending Policy

Goals

We established from previous studies that interest rates and the rigidity of the payment schedule, both the length between payments and the length between disbursement of the loan and the first payment, as potential setbacks to maximizing the potential of the microfinance industry. Later, using data collected by Spandana Sphoorty of 6,798 households in Hyderabad slums, a linear regression model was used to look deeper into the issues of attracting more clients to microfinance institutions. It was found specifically, that education and expenditure were positively correlated with borrowing. Now, the feasibility of changing any of these policies is observed.

First, let us look at interest rates. It was already seen through previous studies that demand for the microfinance loans is highly elastic in that a slight increase in the interest rates led to a huge decrease in demand for the microfinance loan. But, is it feasible to lower interest rates to attract more clients? Nimal Fernando says that the interest charged on a loan is the main source of income for microfinance institutions; because of the huge costs of microfinance lending, the interest rates are correspondingly high. Interest rates on microfinance loans are determined by the cost of funds, the microfinance institution's operating expenses, loan losses, and profits needed to expand their capital base and fund expected future growth. So, lowering interest rates may put at risk the sustainability of the microfinance institution. These high interest rates have helped the industry grow and enabled millions of poor and low-income households to get loans. So, lowering may actually do more harm than good as it will decrease the reach of microfinance institutions by lowering supply (2006).

Next, let us look at the effects of changing the frequency of payments, that is, we want to see if lowering the frequency of payments is an option. It is generally believed that reducing the frequency of the repayment schedule will lead to an increased amount of delinquency and defaults in loan payments. But, a study conducted in India showed no evidence of irresponsible repayment of small loans for first-time borrowers. But, research has not been done on the effect of less frequent repayment schedules on larger loans (Field & Pande 2007). Another study concludes that there may be benefits of more frequent repayment schedules. More frequent repayment

schedules is said to build social capital amongst the borrowers as well as between the borrowers and the microfinance institution (Pande et. al 2010). So, while no harm has been found in reducing repayment frequency, there are benefits of a higher frequency of repayments.

Now, we will look at the effects increasing the grace period between disbursement of the loan and the first repayment. It was found through a study that increasing the grace period between repayments begin led to an increased amount of delinquency and defaults. On the other hand, it was found that though increasing the grace period would be riskier, it would also be a more profitable investment for microfinance institutions (Field et. al 2009).

Finally, we observed in the linear regression model that there was a significant positive correlation between borrowing and education. So, we will check if it is feasible to increase education levels among potential clients. A randomized trial conducted in India found that women who received training in business took out twice as many loans as women who did not receive the business training (Pande et. al 2009). Additionally, in another study, it was found that many of the borrowers do not understand the concept of interest rates, but they do understand the concept of weekly repayments (Tiwari et. al 2008).

Esther Duflo states that the poor “face a very risky environment: the weather is uncertain, crops fail for all sorts of reasons, prices are volatile, illness strikes often, etc” (2003). When establishing the first microfinance institutions in the 1980s, their developers’ primary goal was reliability: to help the poor cope with Duflo’s “risky environment”. Today, microfinance institutions seem to be moving away from that original aim as more players enter the industry. The goal of reaching as many unbanked customers as possible has led microfinance institutions to pursue profitability. To maximize the potential of the microfinance industry, I believe that it should attempt to reestablish this reliability.

New Business Model: CARE

The new policy can be broken down into four parts: Consolidation (C), Attraction (A), Repayment (R), and Essentials (E).

Consolidation (C)

I propose that microfinance institutions be forced to increase the transparency of the loans. The majority of individuals targeted by microfinance institutions have very low financial literacy levels. This serves as an obstacle when dealing with the complexity of the terms of the loans. This lack of understanding can lead clients to underestimate the loan's costs and risks. The "trust" factor plays a large role in close-knit communities such as those found in a majority of rural, microfinance-practicing areas. Regulation must help protect these customers in the microfinance industry (Naeem 2010). This will reduce the fear of the inability to repay the loans. So, each client should be explained exactly how much the microfinance loan will cost in terms of weekly payments rather than in terminology foreign to them such as the interest rate he/she will be charged.

A counterargument to this policy may be that once clients learn about the true costs and risks of the microfinance loans, they will be less attracted to borrow from a microfinance institution. But, one of the main biases in behavioral economics is overconfidence (Agrawal 2008). So, clients will be overconfident about their financial situations when repayment of the loan initiates. Based on this bias, demand for the microfinance loan should not be adversely affected by this policy.

Ultimately, customers are more likely to use the financial services of a trustworthy institution. Increasing the transparency of the loans will help increase the trustworthiness of the microfinance institutions and may, in fact, lead to increased demand for microfinance loans.

Attraction (A)

Next, the microfinance institutions should educate the local poor community in topics such as nutrition, effective farming methods, and financial literacy. This education should increase the demand for microfinance loans as all of the topics mentioned above require a financial investment. For example, educating potential clients in effective farming methods may convince them to purchase fertilizers to increase their crop yield. Given the financial situation of the majority of the rural population where microfinance institutions exist, this purchase of fertilizers will require additional financial support. Also, as seen from the randomized trial conducted, business training had an incredible effect on the demand for microfinance loans (Pande et. al 2009).

Standard economics states that the magnitude of incentives matter, but not how the incentives are delivered. Behavioral economics says that both the magnitude of the incentives and how the

incentives are delivered matter (Loewenstein 2010). This is called the framing bias (Thaler & Sunstein 2008). According to behavioral economists, there are two types of framing effects, positive and negative. This policy is based on positive framing effects, which result from presenting options as sure gains (Bradley 2010). Conveying the importance of socioeconomic prosperity will have the effect of making microfinance loans seem as sure gains since they will be advertised as a solution to improving conditions in all of these fields. This will increase the attractiveness of microfinance loans and hence, could lead to a higher demand for microfinance loans.

Repayment (R)

Repayment plans should be changed so that borrowers have an adequate amount of time to generate revenue from their investments. So, I propose a plan to start repayment approximately 2-4 weeks after the borrower receives the loan compared to the 1 week that microfinance loans currently are associated with. Minimizing the length of time between distribution and repayment was a way of minimizing the risk of default. Assuming that the social pressure in the group loans has a larger effect on the repayment rates than the early commencement of the repayment schedule, repayment rates should not change by much. I hypothesize that the increased flexibility will reduce repayment pressure on clients and hence, attract more clients to borrow from microfinance institutions.

We use prospect theory to analyze this policy through the eyes of the microfinance institution. One implication of the prospect theory is that people exhibit present-biased preferences. They overweight the present costs and benefits, but are more even-handed when it comes to future costs and benefits (Loewenstein 2010). So, the microfinance institution will weight receiving payments 2-4 weeks after the disbursement of the loan almost the same as receiving the loan payments 1 week after the extension of the loan. This is because the microfinance institution will weight all future receipts similarly. This acts against the counterargument that the microfinance institutions will be concerned with a later repayment schedule. Additionally, as mentioned earlier, an increased grace period between disbursement and repayment will be more profitable for the microfinance institutions. Moreover, because of this increased flexibility, the repayment rates may increase due to the fact that more clients are able to make timely payments. Therefore, there may be a higher magnitude of payments at a later time.

Essentials (E)

Finally, I propose that each microfinance institution should set a certain amount of money aside for aiding the local poor population in obtaining necessities such as safe drinking water. Every year, waterborne diseases claim the lives of approximately 1.8 million people (WHO 2004). Microfinance institutions should provide interest-free loans for tools to obtain safe drinking water, such as automatic water filters. Willingness to help the community will help microfinance institutions become part of the community rather than act as outside entities.

Professor Dan Ariely conducted a study in which he had fliers made with the following three options: “Subscribe to a full year of online access to *The Economist* for \$59”, “Subscribe to a full year of the print edition of *The Economist* in print for \$125”, and “Subscribe to a full year of both the online and print editions of *The Economist* for \$125”. The results of this study showed that most students selected the third option. But, when the second option was removed, most students selected the first option. People have no internal value meter tending to focus on relative advantage of one thing over another. Providing an obviously better or worse option will skew peoples’ decisions (Ariely 2008). Based on this reasoning, providing interest-free loans for necessities will make these loans seem more attractive to clients. This should lead to an increased demand for microfinance loans and also to an increased social welfare.

Finally, providing the interest-free loans on necessities such as safe drinking water may have the opposite of the intended effect. It may make the other loans provided by the microfinance institutions seem less attractive. Therefore, these interest-free loans may cannibalize the microfinance institutions’ markets. But, hopefully, the education policy will offset this by increasing the importance of other microfinance loans in the eyes of the client.

Strengths

According to Rick Weaver, two ways to increase trust are to view others as partners and to participate in dialogue (2009). These policies would all allow the microfinance institutions to treat their clients as “partners”, as if the lenders are vested in their clients’ success in their fight against the hardships of poverty. The interest-free loans on safe drinking water would reduce the spread of disease and improve the health of the community. Providing education in nutrition, effective agricultural methods, and financial literacy would again improve the socio-economic

conditions of the community. Framing the terms and conditions of the loan in a way that the borrower understands would also increase the trust between client and lenders.

Additionally, framing the terms of the loans differently should lead the microfinance institutions to eliminate the hidden costs that they are charging to clients, in the form of interest rates. In fact, they may also be forced to lower interest rates. The Los Angeles Hygiene Grade Cards study was a study conducted in which grades, based on hygiene, were assigned to all restaurants in Los Angeles. Grade cards were then posted near the entrance of these restaurants. This was very successful in that this study had a true effect on the demand of restaurants. Because of this restaurants strived to improve their hygiene to ensure getting a high grade (Simon et. al. 2005).

Lastly, increasing the grace period before repayment begins will increase the clients' ability to repay the loan. This will, in turn, reduce harassment issues as repayment will occur with more frequency and also reduce fear in the borrowers (Morduch 2010).

Limitations

One limitation of this policy is that aside from the providing the interest-free loans on safe drinking water, this policy has very little effect on the actual interest rates provided on the loans. It was stated that though interest rates are very high, much of it is due to the risk of providing the loans and not receiving sufficient collateral in return (MicroCapital 2006). So, decreasing the interest rates on the loans is not a very valid option.

Another limitation of this policy is that it could have a perverse effect on repayment. While relaxing the terms on repayment should act to increase repayment, it could have an opposite effect. The rigidity of the terms in the microfinance industry is one of the main factors that has kept the repayment rates at the level at which it currently is at and flexibility of the repayment could seriously increase the default and delinquency rate in the industry.

Conclusion

The microfinance industry is growing at a rapid rate but it is still not maximizing its potential as there are millions of people that are under the poverty level who are not utilizing the services provided by the microfinance industry. To expand its reach, I have proposed a four-part policy (CARE) based on behavioral economic implications that will provide interest-free loans for water filters, make the repayment policy more flexible, practice full disclosure prior to distribution of the loans, and provide education in nutrition, agriculture, and financial literacy. These policies should make the microfinance institutions seem more reliable to the poor rural population. Also, they work to increase the education level and increase the grace period between loan disbursement and repayment, two potential problems with the existing policies.

There will be costs associated with implementing these new policies. Providing education for the rural communities will be a particularly expensive policy. But in the long run, these costs would be canceled by revenue increases for the microfinance institutions through increased clientele. Additionally, the amount of goodwill that the microfinance institutions will be able to build up will be priceless.

In conclusion, I feel that to attract more clients to microfinance institutions, the microfinance institutions should go back to their roots, in providing a form of reliability for the poor. They need to do this not just through changing credit lending policies. But, they also need to adopt roles that are not characteristic of a typical financial institution and become a part of the community.

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Appendix

<u>Variable</u>	<u>Observations</u>	<u>Mean</u>	<u>Minimum</u>	<u>Maximum</u>
Borrowing (Rs)	6,798	27,828	0	2,500,000
Expenditure (Rs)	6,798	7,466	0	1,200,000

Table 1: Descriptive Statistics of Variables

<u>Variable</u>	<u>Coefficient</u>	<u>p-value</u>
Education	6.106e+03	0.004582
Employment	3.967e+03	0.323382
Expenditure	9.748e-01	<2e-16
Education*Employment	-4.917e+03	0.298707
Education*Expenditure	-8.534e-01	<2e-16
Employment*Expenditure	2.327e-01	0.000515
Constant	2.039e+04	<2e-16

Table 2: Results of Full Model Regression

<u>Variable</u>	<u>Coefficient</u>	<u>p-value</u>
Education	5.172e+03	0.008224
Employment	4.983e+02	0.823574
Expenditure	9.785e-01	<2e-16
Education*Expenditure	-8.575e-01	<2e-16
Employment*Expenditure	2.314e-01	0.000552
Constant	2.102e+04	<2e-16

Table 3: Results of Final Model Regression