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A Model for Microfinance-Supported Education Programs

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The microfinance movement has spread across the globe in an unprecedented effort to reduce poverty. The concept of lending credit to the impoverished is making its way into the public eye, with 2005 being named as the 'Year of Microcredit' by the U.N. and the 2006 Nobel Peace Award being given to the father of microfinance, Mohammed Yunus. Yunus (2006) is a staunch proponent of socially focused private firms, to the point that he advocates societies should set up separate industries for these areas. Microlending firms are on the cusp of becoming mainstream discussion for the daily business news.[1]

Much has been documented in recent research about the impact of microfinance in alleviating poverty,[2] however, more can be done than merely optimizing the process. Capital, knowledge, and opportunity are the three key items that will help in empowering the poor. While microfinance has begun to provide capital, there is a lack of adequate resources to provide knowledge and opportunity. It is the goal of this research to determine the impact when knowledge is provided to those in poverty.

According to Sperling (2005), national economic advisor under the Clinton administration, in the world's developing nations, 110 million children (60 percent girls) between the ages of six and 11 did not attend any school in 2005. In 2005, 150 million children dropped out before completing primary school. In many developing countries, the majority of populations are younger than 25. In India, for example, the UN estimated that in 2005, 52.3 percent of the population was 24 or younger, where 11.2 percent was 0 to 4 and 21.8 percent was 5 to 14.[3] Combine this data with a 15 percent ROI seen in national education efforts and the result is a great lost opportunity. To date, there are only a few documented cases with regards to how credit for the poor impacts their educational development. In addition, there is even less information with regards to how microfinance could also finance and subsequently deliver education.

Much work has been done to improve the process of extending and regulating a microfinance loan,[4] whether it is through the use of joint-liability lending or other contract restructuring, improving efficiencies by loan officers, instituting techniques for mitigating moral hazard, and or centralizing administrative tasks, etc. This paper proposes an area where enhancements can be made to improve the purpose of the loan itself and develops a program that provides a framework for microfinance clients to educate their children. Loan enhancement can be achieved by creating an education fund for a client's child with the purpose of funding current and future schooling with a portion of the client's payments, along with a matching amount from the MFI, to go toward the fund's balance. Clients who join the education program would receive normal microfinance business loans but would then get interest rate incentives for joining. In addition, the loan is initially coupled with enough money to cover the cost of tuition for the children free of charge, in the form of a scholarship for a preliminary period. Going forward, there would have to be enough subsidies to keep the loans similar to how the payments are made after the education program is implemented. Then the client will continue to receive the discounted interest rate as long as the child attends school.

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This study aims at intentionally stimulating educational development in the poorest areas of the world with more than just special program hand-outs for education by developing a theoretical framework for this program. We establish a plan after examining past programs, identifying factors critical for success, designing the loan to meet the needs of the client, and setting a structure to properly analyze the results.

Brief Literature Review

Until the past few years, offering loans to the poor has been performed by non-governmental organizations (NGOs), and the movement has largely been influenced and led by socially conscious, non-profit firms. The success of microfinance to date is due to NGOs. Goldberg (2005)[5] offers a rigorous, collective summary of a large number of quality impact studies on the performance of microfinance throughout the world. This paper only reviews the relevant research studies related to various aspects of education and microfinance.

Card (2001) and Patrinos and Psacharopoulos (2004) provide useful background knowledge and techniques to begin developing a model for estimating educational performance. Card finds that marginal returns on education are highest for the poorest, previously uneducated segments of populations. Patrinos and Psacharopoulos research data from many studies performed to calculate the returns on education across a large number of countries. The results conclude that there are significant returns for education, and to a greater degree in developing countries.

Maldanado (2005) examined the educational effects that microfinance programs have on children of clients in Bolivia. Conclusions from the study include the need for incentives to be offered to clients to keep their children in school. Gonzalez-Vega et al (2002) examined the impact of education programs provided by microfinance firms on business performance and overall education levels of clients.

Amin and Arends-Kuenning (2004) researched three incentive-for-school programs in three different countries: PROGRESA in Mexico (Programa de Educacion, Salud y Alimentacion), Bolsa Escola in Brazil, and Food-For-Education (FFE) in Bangladesh. The premise of all three programs is to provide financial incentives for families to keep their children from working and continue their education.[6] The study showed that all three programs were successful to varying degrees, where the number of children attending school increased and the average number of years of schooling increased at a greater rate for children in the programs than those not in the program. Patrinos and Psacharopoulos (2004) analyzed and compared marginal rates of returns for education in different countries and concluded that the highest returns were found in developing countries. Blom and Canton (2004) determined if increasing student loans for institutions in a country, in this case Mexico, would increase university accessibility to students and student performance. They found that undergraduate students who received the loans had a 3 percent increase in their grade point averages, versus graduate students who showed no increase.

Blondal, et al (2002) examined the importance of investing in human capital in OECD (Organization for Economic Cooperation and Development) nations. This study uses a simple model to determine the rate of return on tertiary and upper-secondary education by comparing it with lower levels of education and concludes that investment in human capital provides higher returns than investing in other physical capital. Tooley (2000), based on results from the PROBE Report,[7] makes the case that the governments of developing countries, to date, have been putting most educational public funds towards higher learning public universities, as opposed to primary public schools. As a result, the poor are left out of quality primary education and the rich actually get access to cheaper, higher education. An essay by Chowdhury et al (2004) on primary schools in Bangladesh confirms these conclusions.[8]

Tooley's (2005) survey of private schools in India, Ghana, Kenya, and China fared much better. His conclusions were that the privatization of primary schooling could be a solution to alleviate the schooling problem for the poor, because schools where microfinance is prevalent "generally" have a history of underinvestment, misallocation of funds, are short on quality, and lack accountability.

Government-funded public schools offer many challenges and obstacles. Reinikka (2004) sites that one concern is the amount of leakage occurring of monies designated for education. Teacher absenteeism is another major problem for public schools. Kremer, et al. 2005 study of 3,700 Indian public schools had three unannounced visits made to each of them and found only 45 percent of teachers actively engaged with their class (which required physical presence). Dixon and Tooley (2003) seek to show examples of private schools in a developing country that can service poor families. The importance of this study is that it shows how the poor students can overcome challenges in obtaining admission into private schools and proves that quality education can be brought to the poor, and demonstrates how they can pay for it.

Many programs have been designed to extend loans to students and have failed. Otienno (2002) documented a student loan program offered by the Republic of Kenya and the results displayed a history of failures to administer higher education loans successfully. The study reflects how many developing nations' governments have similar types of programs but often don't equip them with personnel who are well-trained at debt recovery. Salmi (1997) performed a study through the World Bank in 16 countries on their government and private-organization student loan programs and expressed the same sentiments brought up by the other authors for developing countries.

Based on the literature review, it is clear that there is a need to combine the work that has been done in microfinance business efforts with educational development. While education improvements have always been linked to the development of countries and their economies, microfinance and primary education improvement have been thought of as separate issues. Even though education has proven to be profitable on a macro-level, specific educational programs, especially ones that require the poor to eventually pay by themselves, must be validated in their ability to achieve positive results. The Grameen Bank (Yunus 2003), and likewise many other firms following in Grameen's footsteps, offer loans for higher education at interest rates of around 5 percent. However, research has not yet been performed to examine their performance or their effects on the clients.

This research study proposes a possible solution to meeting these challenges. To improve the needs of the poor on a long-term basis, the financial benefits of microfinance lending programs must be combined with the assurance of their educational development. The key to this program is that it is designed specifically to stimulate clients to pay for their children's education themselves. New programs must be monitored for performance in both areas of business and education and should help to validate the performance of individual education programs.

Program Framework

Research Objective

The objective of this research is to develop a model that provides a framework for microfinance clients to educate their children. The goal is to implement this program and determine the effectiveness of an educationally focused microfinance lending program.

Proposed Model

The aim of the lending program is to provide capital for business initiatives by the client and concurrently see that the client's children receive the proper education in the process. The program will also provide the necessary incentives for the client to forego any additional income that a working child could provide in order to receive the loan. It will focus on clients who receive business loans that, in turn, qualify them for participation in the program.

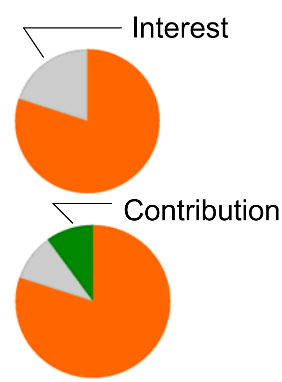
The client will originally go through a trial period of receiving business loans to establish that they pay their loans back reliably. Once the program begins, the client will then begin to receive the loan at a discount. A scholarship fund will be created for the client's child. In paying their loans back, a portion of this payment will go towards the scholarship fund. The MFI and potentially other sources will match the client's contribution into the fund. The scholarship fund serves two purposes: pay the tuition of the child's current schooling needs and save the remainder towards the child's tertiary education. Tuition is paid directly to the school to ensure that the school is paid and to guarantee attendance.

The proposed model (see below) includes the following structural modification to the loan. The goal is to make the difference between the original payment (P_o) and the new payment (P_e) as minimal as possible. In this case, P_o and P_e should be as close as possible, if not nearly equal.

In terms of a timeline of the program, there are three milestones. After the trial period, the program begins and all the benefits of a scholarship fund balance, discounted interest rate, and contribution matching can begin as well. If the client attains economic sustainability and no longer requires loans from the MFI, then contributions can continue to be made to the fund for the children's future, tertiary education. The funds would not be available for the current education, which would be the client's responsibility. The MFI could still match the contributions as an incentive to the client while managing the fund. Once the child reaches a tertiary age, then the funds can be disbursed to those institutions. In many cases, MFIs are restricted from holding savings accounts and thus

Original Payment: $$P_o = \frac{C(1+R_o)^Y}{n}$$

New Payment: $$P_e = \frac{C(1+R_e)^Y}{n} + F_e$$



R=Interest Rate, n= number of payments, Y = number of years for loan, F = Fund Contribution creative measures will need to be taken to allow their clients to be able to deposit excess resources into something that will provide a return in the future. In the case of the education program, the funds would need to be distributed directly to the educational institutions; this allows for the return to be a 'commodity' and not cash in the same way a savings account would work.

Participants can, but do not have to be, a current microfinance client prior to entering the education program. If the client is already in a lending program, then their contract can be modified according to the needs of the education program contract. If the client is part of a self-help group, a joint-liability contract[9] where each loan's terms are the same should be used, so that each client in the self-help group can apply for the program; minor modifications will be made during those periods where the program client is utilizing the group's loan.

The discrete terms for the contract design in the program are intentionally left ambiguous at this point. It is the intention of this program to collaborate with existing microfinance lending organizations that already have established contract designs and methodologies in place.

Initial Considerations

An important consideration is choosing someone to manage the fund. If the MFI can legally maintain the fund, this will provide for additional capital. The intensity of the subsidies will also play a major role in the discount of interest rates and the MFI's ability to match. Other factors to take into consideration are: the increase in the MFI's expenses to run the program, the current cost of tuition for children, and the costs for tertiary education. The challenge in all of this, from the MFI's perspective, is to keep this sustainable in terms of funding the program. With respect to moral hazard related scenarios on how clients might respond to lower interest rates by "shirking" their end of their businesses, requiring the scholarship fund contributions upon threat of eliminating the fund's existence should mitigate this risk.

In terms of government cooperation, partnerships could be developed with public schools by admitting large numbers of MFI client students. Government would realize subsidies for fund creations and contribution-matching incentives as a commitment by the MFI to support its investment in schools by supplying students who will consistently attend and participate. Partnership terms would require full teacher attendance and curriculum standards (potential MFI monitoring). The MFI can leverage its services for the ability to manage the scholarship fund, which should provide more working capital.

Other considerations include the potential for using the pooled funds for investment by the MFI, deciding on the selection of schools, the degree of involvement by the MFI with the schools, and whether or not parent-teacher associations should be created or involved in the program.

Implementation

Existing microfinance firms will be used to add the education program feature to their portfolio. A formal application process will be used to apply for the program scholarship for children. Most loans will require some degree of personalization in identifying sustainability levels and the degree to which the interest rate should be reduced.

Clients will be statistically organized into the three groups. To evaluate the success of the program, the metrics developed by Khumawala and Frazier (2007) will be used throughout the study for all three groups: client income level prior to the program's start and during each stage, total asset value before and after the program, family living conditions before and after, tuition requirements for children once sustainability is reached, the number of children attending school, and the children's performance in school. These measurements will be then compared from one group to the other.

Conclusion

Great prospects exist for potential growth, in terms of poverty reduction, in the area of microfinance. Ensuring that the doors of capital, opportunity, and knowledge are allowed to be opened for the poorest populations is a challenging task. Expansion from a base of capital extension into these populations in order to create opportunities for that capital to grow is the next step. The prospects to this point appear promising as the microfinance infrastructure grows in developing countries as incentives for education programs have a successful track record.

Endnotes

1. Microloans for the Gulf Coast? Three years after Katrina, one-quarter of New Orleans small businesses are still closed.

   http://www.csmonitor.com/2008/1007/p04s02-usec.html

2. A recent study by Goldberg (2005) is the most comprehensive study on compiling the results of microfinance studies worldwide. The results show poverty alleviation, but they do not always conclude that each microfinance program is solely responsible for the improvement.
3. Source: UN Population Information Network www.popin.org
4. Much of this work is well documented by Armendariz de Aghion and Morduch (2005, Chapters 3-5) in establishing how to design efficient processes, while some recent studies on specific institutions have come from Kanter and Reisen de Pinho (2005) and Chu (2005).
5. Goldberg's major purpose in this research is to bring together the performance results from the multitude of studies that have been executed, so that comparisons can be made across geographic areas, ethnic backgrounds, political situations, lending and service methodologies, etc.
6. Each program is implemented differently. Some are implemented by

government officials, while others join with NGOs and provide subsidies to implement the program. One such example is the FFE program in Bangladesh, which utilized BRAC's infrastructure and schools by providing subsidies to BRAC so that incentives such as wheat could be provided to families with children in BRAC's schools.

7. The PROBE Report (Public Report on Basic Education in India, 1999) was sponsored by the Indian government in an effort to determine the conditions of primary schools in India.
8. This essay did conclude that improvements have been seen in poor areas and for female children. Both demographics showed improvement from 1993 to 1998; however, attendance rates for boys across all demographics in the study decreased during that time period.
9. In many joint-liability contracts, loan amounts are the same for the group and the group will decide how the money is allotted, based on the needs of each group member. In other cases, the administering agent knows which member is receiving the funds (whether they are different in contract design to other group members or not). For both cases, accommodations will have to be made for that group member that enters the program, especially in the case where other group members may not enter into the program.

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