

ABSTRACT

Title of Thesis: Microfinance and Profit Structure: A Comparison of Nonprofit and For-Profit Microfinance Institutions' Ability to Alleviate Poverty in Argentina

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How do microfinance institutions (MFIs) in Argentina affect poverty alleviation? How do nonprofit and for-profit MFIs differ in the way they do so? I conduct an analysis of the universe of nineteen MFIs in Argentina, provided by the Microfinance Information Exchange, to evaluate how different variables of financial success correlate to different variables of social outreach. The main variables I assess are average write-offs, profit, operational self-sufficiency, average loan balance per borrower and percent of female borrowers. From the analysis, nonprofit MFIs in Argentina cater towards a greater number of poorer borrowers than those of for-profit MFIs. Nonprofit organizations have a higher amount of financial success, measured by amount of write-offs, operational self-sufficiency efficiency, and profit. The evidence of the institutions studied in Argentina show that the nonprofit microfinance organizations offer more financial workshops to their clients, compared to for-profit MFIs. Overall, the thesis serves as a case study for a Latin American country with a growing microfinance industry, in which nonprofits are more successful than for-profits.

DEDICATION

“People were poor not because they were stupid or lazy. They worked all day long, doing complex physical tasks. They were poor because the financial institution in the country did not help them widen their economic base.”

-- Muhammad Yunus

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Microfinance and Profit Structure: A Comparison of Nonprofit and For-Profit Microfinance
Institutions' Ability to Alleviate Poverty in Argentina

By

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Chapter 1: History of Microfinance and The Development Puzzle

Research Question and Argument in Brief

The main question of the thesis serves to analyze the microfinance industry in Argentina as a case study as to how microfinance operates in Latin America. The three questions proposed in the thesis are as follows: How do microfinance organizations in Argentina help alleviate poverty? Are financial success and social success mutually exclusive? Additionally, and perhaps most importantly, how do nonprofit and for-profit microfinance institutions differ in the way they are able to alleviate poverty? The research aims to improve the lives of Argentineans in that it will give evidence to guide institutions on how to use financial assets to help individuals escape poverty. The research supports microfinance and builds on the idea that microfinance has been an asset to Argentinians in finding jobs, commercializing, and increasing quality of life (Renaud & Iglesias, 2008; Bekerman & Cataife, 2004). Overall, the purpose of the research is to develop recommendations to both microfinance institutions (MFIs) and government organizations so they are able to make better informed decisions that will help the betterment of Argentineans affected by poverty.

By adding evidence as to which MFIs, under which conditions, are most effective in the alleviation of poverty, my thesis serves as motivation for the government of Argentina to encourage and support the MFIs that better support both individuals and are more likely to experience financial success. In 1997, there was a group of policy makers, charitable foundations, and practitioners in the United States that started a drive to raise \$20 billion for microfinance start-ups in the next ten years (Clinton, 1997). The thesis serves as additional support to continue the implementation of these drives and other financial support towards MFIs.

Additionally, the research serves as instruction for microfinance organizations and may influence the programs and profit structure they choose.

My thesis tests the relationship between social efficiency and financial efficiency, as well as social efficiency and the profit structure of the MFIs. The single variable linear regression analysis in Chapter 3 shows that MFIs that have higher social efficiency, measured by the share of female borrowers and average loan size per borrower, also correlate with higher financial efficiency. Chapter 4 tests the relationship between social efficiency on the profit structure of the MFI, profit or nonprofit. The regression relationship shows that nonprofit MFIs often have higher social outreach than for-profit MFIs, while also offering financial workshops to their borrowers. Ultimately, from the positive relationship between financial and social efficiency, the data suggests that nonprofit MFIs have higher financial efficiency as well. Overall, the thesis explains how nonprofit MFIs serve the marginalized groups of the population, while also being financially successful.

I find that nonprofit microfinance organizations lend to the poorer population in Argentina, including a large share of women, while for-profit MFIs sometimes abandon the poorest individuals. As nonprofit MFI lend to the poor, they also experience better financial health in comparison to the for-profit MFIs. Ultimately, my thesis argues that nonprofit MFIs can operate maximizing both financial and social outreach. Their ability to reach out to the poor while also being financial self-sufficient, should suggest to governments that the nonprofit structure of MFI is more effective in alleviating poverty.

Background of Development: Washington Consensus

Unfortunately, poverty and inequality persist in states across the world. Development works to spark change and in one avenue, can successfully reduce poverty. Overtime, scholars

have approached development differently, offering examples as to what brings the most positive change, and which policies leave inequality persisting. There is a myriad of different approaches to achieve development, both from a macroeconomic and a microeconomic perspective.

Historically, problems of development persist, where different methods of approaching income inequality, poverty, education issues, etc. continue to change. The Washington Consensus of 1989, written by John Williamson, provided a tailored approach to Latin American economic development. The goal of the Consensus was to offer ten initiatives to summarize policy advice, institutional change, and serve as a guideline for capitalist economic development in Latin American countries that were experiencing economic crisis. The policies ranged from fiscal discipline, tax reform, instating competitive exchange rates, and macroeconomic stabilization (Birdsall, Torre, & Caicedo, 2011).

While the Washington Consensus ultimately brought some positive benefits, such as minimizing inflation in the 1990s and causing large waves of privatizations, it overall was seen as a failure (Birdsall et al., 2011; Rodrik, 2006; Stiglitz, 1998). As Joseph Stiglitz declared in his seminal lecture as the World Bank's Chief Economist, there were many "well-documented failures of the Washington consensus" (Stiglitz, 1998, p. 4). The consensus' shortcomings largely stemmed from its confusion of "means" and "ends." Specifically, it positioned aspects like privatization and trade as "methods" of development, while Stiglitz believes that they are *means* to more sustainable growth rather than intended *end* results. Additionally, the consensus wrongfully focused on price stability, controlling budget deficits, and increasing money supply, rather than growth itself (Stiglitz, 1998).

Despite the Washington Consensus' intentions to spark development, it did not create rapid development in the countries where it was implemented. Rather, financial crises remained

after the Washington Consensus in the 1990s, an outcome unexpected by economic and financial markets (Rodrik, 2006). As a result of the Washington Consensus, no significant changes appeared in outcome variables such as per capital income, poverty, and income distribution (Birdsall et al., 2011). Instead, the post Washington Consensus era faced both internal and external operational restraints in implementing policy advice due to the complexity of the agenda laid out in the consensus (Güven, 2018). Specifically, the Washington Consensus focused on privatization and liberalization but lacked guidance on policy to create institutional infrastructure (Stiglitz, 1998). Argentina had twelve consecutive quarters of economic decline starting in 1998, where unemployment increased, the country lacked competitive edge in the world economy, and public expenditure and investments stopped (Cohen, 2012). Despite the many negative results of the consensus, some positive results included a decrease in poverty from 48.3% to 43.9% and a slight increase in the non-weighted average of the Gini coefficient for income distribution. However, the overall effect, including both positive and negative aspects, were at best neutral and potentially harmful for income inequality (Birdsall et al., 2011). The Washington Consensus offered many takeaways that have been used to approach development in the years after it was implemented.

In summary, the Consensus served as an example in which one institutional framework of change cannot be implemented to all countries and economies unanimously. International Political Economy Harvard Professor Dani Rodrik comments that the evidence of macroeconomic policies increasing national growth rate is not supported, except in extremes (2006). Imposing institutional change does not bring development itself because institutions are embedded into society. Instead, institutional change should contain elements of the old as well as including the process for evolution and adaptation. Asking key questions such as “How will

societies that have traditionally discriminated against women achieve a higher degree of equality, at the same time that they maintain traditional values?” will be important in implementing new institutions (Stiglitz, 1998, p. 13). In addition to the flaws of macroeconomic policy changes, policy reforms in one country and in another cannot be copied as different countries demand different solutions. For example, to improve private investment in one country might require implementing property rights, but in another could demand improving the financial sector (Rodrik, 2006). Technology and education are also necessary to achieve development (Birdsall et al., 2011). Overall, the takeaway from the Consensus was there was a need for “humility, for policy diversity, for elective and modest reforms and for experimentation” (Rodrik, 2006, p. 974). The Consensus left many lessons for development that led policy makers to use microeconomic solutions, rather than macroeconomic policies. An example of a microeconomic solution is microfinance.

Background of Microfinance

Microfinance is a type of banking that offers small loans to low-income individuals to provide self-employment. These individuals would otherwise not have access to traditional financial services (Bekerman & Cataife, 2004; Karlan & Goldberg, 2007). Many microfinance institutions target microentrepreneurs, but it is not always a requirement for a loan. Microfinance loans are offered at market rates of interest so the MFIs can make up the costs but are not too high where the organization makes abhorrent profits off the poor (Karlan & Goldberg, 2007). The individuals of this sector have a high credit risk and often the amount of the loan is too small for a traditional financial institution to seem profitable (Bekerman & Cataife, 2004). Microfinance became most popular in the 1970s, with the beginning of Grameen Bank in 1976 in Bangladesh by Muhammad Yunus (Kagan, 2022). Across the world, the Microcredit Summit

Campaign reports that 80% of microfinance borrowers are female. However, this ranges per demographic area (Karlan & Goldberg, 2007). Microfinance aligns with the strategic small-steps and microeconomic approach in which an individual is assisted directly to help improve their self-sufficiency, income, and more. Microfinance ultimately has demonstrated alleviation of poverty because by reaching the poor the MFIs help improve their economic well-being and empowerment, especially in women (Hishigsuren, 2007).

Although microfinance has many benefits for the poor, there have been several studies that delineate the conditions needed for microfinance institutions to be the most successful. For example, 'Gung-ho' entrepreneurs, or those with pre-existing businesses, benefit the most from loans. A study that tracked a group of randomly chosen households exposed to microfinance in Hyderabad, India show that microfinance access brought positive effects on business creation and business spending, but minimal effects on consumption (Banerjee, Duflo, Glennerster, & Kinnan, 2015). The benefits were assessed six years post treatment and were seen in a particular subgroup, the gung-ho entrepreneurs. For this group, self-employment hours increased almost 20%, business assets increased by nearly 25%, business spending increased by 80%, revenues at least doubled, and profits increased (Banerjee et al., 2020). Thus, although microfinance has the goal of alleviating poverty and offering resources to the underprivileged, there are certain individuals who can better take advantage of these microloans.

Microfinance to Escape the Poverty Trap

Instead of initiatives brought about in the Consensus, the current approach relates to helping low-income individuals escape the poverty trap. The poverty trap explains that it is harder to grow income when starting at a lower amount. Esther Duflo and Abhijit Banerjee explain that a poverty trap exists when the scope to grow income or wealth is restricted by

having money to invest and those who do not are limited (2012). Thus, understanding the specific problems affecting the poor and trying to “identify the most effective way to intervene” will better help individuals escape the poverty trap and create affective policy (Duflo & Banerjee, 2012, p. 5). In addition, microfinance does not cause the poor to develop a dependency on government assistance and instead serves as a bottom-up approach which puts attention to community, focus on women, and helping the under-served (Morduch, 1999). The way in which affective policy will help those that live under one dollar per day is through small steps, in which there is not a huge push for marketization and democracy, but small specific initiatives that directly help the poor.

An example of this small steps analysis can be visualized through low-income individuals attempting to start a business. For example, a woman trying to start a business by making clothes will benefit from additional initial capital. She can either buy a sewing machine to have higher profits or make the clothes by hand, limiting productivity. Her low income prevents her from buying that machine and escaping poverty (Banerjee, Breza, Duflo & Kinnan 2020). A small loan could enable her to escape the poverty trap as she could increase her capital and sales. Not only does microfinance work within the textile industry, but a five-part series within the *San Francisco Examine* highlights the stories of women who were helped by microfinance. These women include a textile distributor, an artist, a street vendor, and a furniture maker (Brill, 1999). The assistance of just a \$25-50 loan in the developing world or a \$500 loan in the United States could make a huge difference in people’s lives, enabling them to escape the poverty trap. In a 2005 study that compared clients of a Ugandan microfinance institution with non-clients, Morris & Barnes also found product and market expansion were more likely among MFI clients. Additionally, these microenterprises were most likely to reduce operating costs and increase

inventory levels than were their counterparts who were not clients of a MFI (2005). Without the technology to grow their business, low-income households are left with minimal revenue and profits. A small loan enables them to escape this poverty trap (Banerjee, Breza, Duflo, & Kinnan, 2019). Additionally, small loans can impact not only the client's business, but also their well-being, family, and community because the money can gravitate from the business and the members of the household (Karlan & Goldberg, 2007). Therefore, small loans, also known as microfinance, can serve as an effective means of development as it directly gives assistance to low-income individuals to escape the poverty trap.

Background of Microfinance in Argentina

Compared to other countries in Latin America, microfinance in Argentina is relatively small and growing. In 1998, the number of microenterprises in Argentina was about two million with just under five thousand having MFI Credit, a 0.26% share of microenterprises. This share of microenterprises with MFI credit compares to 27.83% in Bolivia and 20.18% in Nicaragua (Westley, 2001). In addition to the small number of MFIs in Argentina, most MFIs in Argentina are under ten years old (Renaud & Iglesias, 2008). Although MFIs are less populated in the country, they have shown some growth, as in 2010 there was about 39,000 active borrowers and \$40.4M (2010 USD) outstanding loans (Washington & Chapman, 2014). Accounting for inflation by using the GDP Deflator provided by the Federal Reserve of Economic Data, the amount of outstanding loans adjusts to \$23.8M USD for 2010, compared to the \$641.4K USD outstanding loans in 2004 with only about 7,000 active borrowers. Despite the increase of MFIs in the last ten years, poverty and inequality in Argentina has been increasing for twenty years and Argentina is still being affected by the 2001 financial crisis (Renaud & Iglesias, 2008). Thus, due to the new focus on microfinance and the increase of poverty in Argentina, an important

question remains on how effective microfinance is in alleviating poverty and what structure will bring the most change.

Prior Scholarship on the Debate of Microfinance

Microfinance Debate on Profit Structure

Microfinance works to help alleviate poverty, but at the same time needs to be profitable by reaching financially self-sufficiency or instead receiving loans from donors. Many scholars throughout the literature debate if having high financial performance and social performance are trade-offs to each other, or compliments (Bos & Millone, 2013; Diaz Martin et. al, 2021; Niels and Hudson, 2018). Mission drift, an idea recently emerged from studies published from Copestake (2007) and Jones (2007), explores the idea that MFIs which put a greater emphasis on profits, efficiency, and portfolio quality may see a lack in their development and social goals (Cervelló-Royo, 2019). There are critics that believe higher profits lead to lower social outreach, but authors Mersland & Strom themselves find no evidence for mission drift (2010). While in Hishigsuren's (2007) study of a MFI in Bangladesh finds no statistically significant evidence of mission drift, a country study conducted by Paxton Graham and Thraen (2000) find that there is a tradeoff between financial efficiency and serving the poor. Christen (2001) finds no evidence that mission drift has not taken place in the studies of commercialized and transformed MFIs in Latin America. Additionally, Cull, Demigüç-Kunt, and Morduch (2007) discover in their study of 124 MFIs across 49 countries that MFIs can be committed to their mission and achieve their financial goals. Although the concept of mission drift has been studied, there still seems to be contradictory findings that would be beneficial from additional research. In addition, Mersland & Strom (2010) state that there is a greater need for efficiency studies to understand the cost drivers

of MFI. This thesis provides as an expansion to the current research on the trade-off between social outreach and financial outreach.

Although there may be a consensus the MFI can be helpful in reducing poverty, there remains a debate in which type of MFI, nonprofit institutions or for-profit institutions can be the most helpful. Mersland and Strom (2009) did not find any differences between nonprofit and for-profit MFIs based upon social and financial performance. Copensake (2007) studied an action research program Imp-Act that looks at a global sample of specifically poverty oriented MFIs, and finds that they have both strong social and financial performances. Cull et al. (2009) found that for-profit MFIs had less capacity compared to nonprofit MFIs to outreach to the poor and nonprofit MFIs were also more financially self-sustainable. The debate of which institution is more effective, in a scale of reaching more impoverished borrowers, seems to be inconclusive. The literature offers some evidence that the structure of nonprofit and for-profit do not have an effect on the level of social and financial performance. However, scholars also argue that nonprofit MFIs may be more effective in both. My thesis will add on to this debate, comparing the effectiveness of nonprofit and for-profit MFIs on their ability to overcome mission drift by evaluating MFIs in Argentina.

Microfinance Debate on Profit Structure in Argentina

Two studies conducted on MFIs in Latin America, including Argentina, highlight the ability for MFIs to grow financially and improve the lives of the borrowers. Martha Bekerman and Guido Cataife conduct a field study of fifteen MFIs in Argentina in which they assess the type of loan, characteristics of the borrowers, and outcome of the loan. The loans had an average age of 4.85 years and an average loan size of \$2,212 USD. Along with these MFIs offering financial credit to those excluded from the financial system, 60% also had other objectives described as

improving the life of the beneficiaries, increasing confidence, creating jobs, and improving the process of commercialization. The 53% of MFIs the authors were able to track showed a growth rate of 195% on average. The main commentary the authors offer on their study is that to unlock the potential of MFIs in Argentina, donors, the state, and the university and technological spheres must see the potential of microfinance institutions (2004).

Another study of microfinance in Latin American highlighted that microentrepreneurs were able to carry out projects that would be nearly impossible without microcredit (Renaud & Iglesias, 2008). The study was of 100 loaners and a control group of sixty from the Civil Association Avanzar por el Desarrollo Humano, 31 percent coming from Argentina. The authors conclude that obtaining microcredit allows microentrepreneurs to reduce costs, recruit labor, increase savings, improve household income and the well-being of the home, such as living conditions (Renaud & Iglesias, 2008). From both studies, Argentinean MFIs help improve self-sufficiency, income generation, and reducing costs for a business. An area of research remains to be which type of MFIs in Argentina, nonprofit or for-profit, can offer loans that benefit both the borrower and lender to ultimately persuade legal authorities to develop support for the microfinance industry in Argentina.

Another debate is how MFIs can achieve the impact and increase their potential to improve the life of the micro-entrepreneur (Renaud & Iglesias, 2008). One debate is between the goal of the MFI, if its goal is to reduce poverty (social impact) or improve self-sufficiency (financial sustainability). To find the optimal lending preferences, it is important to compare the impact differential and the operating cost differential of the MFI (Berkman & Cataife, 2004). The literature on Argentina does not discuss the different impact non-profit and for-profit

microfinance institutions have on their ability to reach more borrowers and offer lower interest rates. This will be a main area of study for the thesis.

Overall, the reason why analysis of the microfinance industry in Argentina is important is due to the need to persuade legal authorities to support the industry to continue MFIs positive impact. Impact evaluation is not just about having a positive effect on participants, but also to guide policy makers and practitioners on what practice policies MFIs can adopt (Kagan & Goldberg, 2007). Doing an impact evaluation on the different profit structures of MFIs in Argentina will offer more policy ideas and suggestions as to what microfinance can look like in Argentina to be more successful.

Therefore, the two main conditions of success for MFIs that will be focused on this study include the profit structure of the microfinance institution and the type of outreach. Microfinance institutions are either for-profit organizations or serve as a non-profit organization whose main mission is to help the poor. In addition, microfinance institutions can have either a holistic or minimalist structure. A minimalist MFI only has the goal to provide credit as the form of assistance. Given the idea that the credit enhances the life of the microentrepreneurs, it may be assumed that this method would reach and help the most borrowers. However, individuals can be limited as they do not have access to specific training which can minimize their ability to generate surpluses due to lack of business knowledge. The holistic method is a mix of credit and other development offerings to improve the beneficiaries' income, assets, health, nutrition, education, etc. (Renaud & Florencia, 2008). My thesis will serve as an analysis of the benefits of both the profit structure of the MFI, as well as a qualitative assessment of the outreach the MFI offers, based upon their profit status.

Conclusion

Economic development in Latin America, initially in the perspective of the Washington Consensus, was seen to be best accomplished with a set of policy and institutional changes applicable to all countries similarly. However, as the changes of poverty and income inequality in the 1990s were not improved, development has changed towards a small-steps perspective. Microfinance loans serve as an opportunity for its beneficiaries to escape the poverty trap, increasing self-sufficiency, business assets, and revenue. Microfinance offers both individual and group loans, as well as loans that offer just microcredit, or include other benefits such as financial training. There remains a gap in the literature as to whether offering services in addition to the loan can increase microfinance effectiveness.

In Argentina, microfinance is relatively new and growing compared to other Latin American countries and has enabled borrowers to improve self-sufficiency. However, there is little research done on the different non-profit and for-profit microfinance institutions in Argentina and how their loans, processes, and results differ. My thesis will offer a detailed analysis of the MFIs in Argentina and ultimately serve as a suggestion for the structure of future MFIs in Argentina.

Chapter 2: Argument, Data and Methods

Argument

According to the paper *Are microfinance institutions' financial performance gender driven? Evidence from Argentina*, the current literature describes two ways MFIs will operate depending on their goals. One defines success based upon “social improvement and immediate well-being of clients,” where there is a social demand for poverty reduction (Díaz-Martin et al., 2021, p. 2). For my research, this type of success will be referred to as social efficiency or social outreach. The other measurement of success is based upon the economic viability of the institution, as in their ability to achieve financial self-sufficiency (Díaz-Martin et al. 2021). For the thesis, the economic viability of a MFI will be referred to as financial efficiency.

In addition to the goals of MFIs, the profit structure varies as well. MFIs can be a nonprofit, for-profit, or a ‘social’ for profit that aims to maximize profits while also doing good (Bos & Millone 2013). The ability to be a successfully operating MFI with a dual mission, achieving maximum financial efficiency and social efficiency, remains to be up for debate (Bos & Millone, 2013; Díaz Marin et al. 2021). My argument is that nonprofit MFIs can maximize their social efficiency while also being financially self-sufficient because of who their borrowers are and how they interact with them. I also argue that nonprofit MFIs are able to perform better, both socially and financially, over for-profit MFIs.

Achieving Financial and Social Efficiency Through Lending to Women

Nonprofit microfinance institutions experience financial success because they loan to female borrowers who are more reliable, as they default less on their loans. Across earnings performance of MFIs in Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Azerbaijan, Mongolia, Afghanistan and China from 1998 to 2011, women were found to be safer borrowers for MFIs in

terms of a better repayment rate or lower portfolio risk (Janda and Turbat, 2013). Women default less on their loans compared to men because they are more conservative with their investing strategies and are more willing to be swayed by advice from loan officers (Aghion et al., 2007). In Argentina, Díaz-Martin et al. (2021) found while examining eighteen MFIs, that gender is one of the main drivers of financial performance based upon the comparison of different social variables and other components of returns on assets. Gender was found to be the third relevant predictor of returns on assets. In this study, returns on assets was the variable tested for financial performance.¹ My research will serve as an expansion for both Janda and Turbat and Díaz-Martin et al. findings, as I will compare the number of female borrowers with multiple determinants of financial success, described below in the methods section. I expect that when nonprofit MFIs lend to more women, they will see higher financial returns.

In addition to financial success, nonprofit MFIs maximize social efficiency by lending to women due to their marginalization. Goal five of the Social Development Goals from the United Nations General Assembly includes gender equality; thus, when MFIs loan to women, they provide women empowerment (Díaz-Martin et al, 2021). Also, because women are known to be the most affected by poverty and unemployment in Argentina, the non-profit MFIs in Argentina maximize their social outreach by offering loans to women (Díaz-Martin et al, 2021). However, microfinance loans improving the lives of female borrowers is contingent on cultural norms in a country. For example, if a woman's household role of cleaning and cooking continues as they receive a microfinance loan, it may prevent them from fully adopting the employment opportunities from the loan (Zhang and Posso, 2017). Thus, when analyzing the microfinance

¹ Returns on assets is calculated by $\frac{\text{Net Operating Income} - \text{Taxes}}{\text{Average Total Assets}}$ (MIX Market).

industry in Argentina, it is also important to compare the industry to the role of women in society.

Achieving Financial and Social Efficiency Through Smaller Loans

Another hypothesis is that nonprofit MFIs have lower average loan balances per borrower which allows them to reach more lower-income borrowers and achieve financial efficiency. Cull et al. (2007) found that smaller loans and higher interest payments do not lead to lower repayment rates. In other words, MFIs that have higher social efficiency does not limit or reduce the financial efficiency of a MFI. If a MFI has higher average loan size per borrower, it suggests they are abandoning their poor borrowers and minimizing their social outreach (Bos & Millone 2013; Cervelló-Royo, 2019; Cull et al, 2009; Diaz Martin et al, 2021; Lam et al., 2019; Mersland and Strom, 2010). Overall, studies show that a lower average loan balance per borrow indicates improved social efficiency and does not negatively impact a MFI's financial efficiency.

Hypotheses

I hypothesize that nonprofit MFIs have a higher social outreach and an increased financial efficiency compared with for-profit institutions. The following three hypotheses are shown in Table 2.1, with sub-hypotheses including three variables for financial efficiency. As MFIs lend to more women, it increases their likelihood of improved financial efficiency (H1). Another social outreach variable, loan balance, is predicted to increase the likelihood of greater financial efficiency (H2). Lastly, it's expected that nonprofit microfinance institutions will have more social outreach compared to for-profit MFIs (H3). The hypotheses are as follows:

Hypothesis 1 (H1): *Lending to women increases the likelihood of improved financial efficiency.*

Hypothesis 2 (H2): *Offering lower loans, or having a lower average loan balance per borrower, increases the likelihood of higher financial efficiency.*

Hypothesis 3 (H3): *Nonprofit microfinance institutions have a higher social outreach than for-profit MFI.*

Nonprofit MFI's social outreach is attributed to lending to more woman and poorer borrowers (demonstrated by the lower average loan balance). As the nonprofit MFIs will have higher social outreach according to H3, in conjunction with H1 and H2, I hypothesize that non-profit MFIs in Argentina will see better financial outreach because the correlation to an increased lending to women and offering smaller loans to their poorer borrowers.

Operational self-sufficiency provides information as to the ability for the MFIs to cover costs with revenues and is an indicator of financial performance that is more specific to microfinance (Damian, 2003; Hermes & Hudon, 2018). Write-offs represent the amount of the MFI's loans that have been removed from the gross loan portfolio because they do not expect to be paid back (MIX Market). Write-offs can be an indicator of the quality of the MFI portfolio, as a higher ratio of write-offs rate may indicate that the MFI has issues in collection (Damian, 2003). Profit (loss) is "the total of income less expenses, excluding the components of other comprehensive income" (MIX Market).

A higher operational self-sufficiency and profit (loss) indicate greater financial efficiency, thus should have a positive relationship with an increased lending of female borrowers. The opposite applies for average loan balance per borrower, as an increased average loan balance indicates a lower depth of social outreach, thus the negative relationship. Increased write-offs should have a negative relationship with increased lending to females. The opposite

relationship should apply with average loan balance per borrower and write-offs, given the hypothesis that lending to poor borrowers should increase financial efficiency.

Holistic Social Outreach

An important indicator of social efficiency can be whether the MFIs have a holistic structure in which they provide other development offerings in addition to financial resources. By adding the qualitative data about each MFI, when possible, it provides supporting evidence to the claim that nonprofit MFIs are more socially efficient than for-profit MFIs. For example, Alternativa3, a nonprofit MFI, describes on their website their model of intervention. Beyond providing microcredits, they work with their borrowers on expanding their reach network, training, and professionalization (Alternativa3). The webpages describing the additional services MFIs provide to their borrowers offers information about the type of relationship the institutions create with their borrowers. However, unless coupled with evidence from the borrowers directly, there is a limitation of bias that a MFI may claim they help their borrowers beyond the loan, but do not in actuality. Thus, this information will provide important context about the social efficiency about the MFIs but is not the only measurement.

Table 2.1: Summary of Predicted Relationships

Financial Efficiency Variables	Social Efficiency Variables	
	<i>Female Borrowers</i>	<i>Average Loan Balance per Borrower</i>
<i>Operational Self Sufficiency</i>	(H1a) Positive	(H2d) Negative
<i>Profit (Loss)</i>	(H1b) Positive	(H2e) Negative
<i>Write-offs</i>	(H1c) Negative	(H2f) Positive

Data

The main evidence being used throughout this research study was gathered by the Microfinance Information Exchange (MIX), a global resource for inclusive finance. The MIX Market database (MIX Market) is hosted on the World Bank's website and is used widely in literature (Ahlin et al. 2011; Bos & Millone, 2013; Cull et al. 2009; Hermes et al 2011). The MIX Market database has information collected between June 1999 and September 2019 with data on 19 MFIs in Argentina. The data is provided in USD, rather than Argentinean pesos. All units will be adjusted for inflation.² The years observed will be from 2002 to 2018 because that was the period when MFI took off in Argentina (Díaz-Martin et al., 2021). I will be testing the following variables of social efficiency and financial efficiency represented in the Table 2.2 below, defined by the field definitions given by MIX Market.

² To adjust for inflation, I will take each nominal dollar value and divide it by the USD GDP Deflator in the given year, provided by the Federal Reserve Economic Data (FRED). The adjustment takes inflation out of nominal dollars yielding current prices allowing a comparison amongst years (Mankiw, 2019).

Table 2.2: Variables Used

Variable	Definition	Dimension
% Female Borrowers	$\frac{\text{Number of Active Female Borrowers}}{\text{Number of Active Borrowers}}$	Social Outreach
Average loan balance per borrower	$\frac{\text{Gross Loan Portfolio}}{\text{Number of Active Borrowers}}$	Social Outreach
Operational Self Sufficiency	$\frac{\text{Financial Revenue}}{\text{Financial Expense} + \text{Net Impairment Loss} + \text{Operating Expense}}$	Financial Outreach
Profit (Loss)	The total of income less expenses, excluding the components of other comprehensive income.	Financial Outreach
Write-Offs	Value of a financial institutions loans that have been removed from the balance of the gross loan portfolio because they are highly unlikely to be repaid	Financial Outreach

MFIs in Argentina

Out of the nineteen MFIs in Argentina, eleven are nonprofits, seven are for-profits, and one profit status is unknown (MIX Market). The organizational metadata (including their legal status) and the financial & social data (including the number of borrowers by gender) was all self-reported by the MFIs, but the MIX team instated a set of checks to review and validate the MFIs' responses. Table 2.3 below offers summarized information about each MFI, their profit status, when they were founded, if they are currently in business, and averages of the financial outreach variables. An operational self-sufficiency average above one entails that the MFI is able to cover their losses with financial revenue. To determine if the MFI was still in business, I looked for an active website or Facebook page. If the MFI had an active presence online, it was marked as in business. If the MFI did not have a presence online, it was labeled as no longer in business. The majority of the webpages also provided the year founded of the MFI, and if there was no information, alternative news sites were used.

Table 2.3: Descriptive Statistics of MFI in Argentina

Firm	Year Founded	Does the MFI show Evidence that they are in Business?	Profit or Non-Profit	Average Operational Self Sufficiency	Average Profit (Loss)	Average Write Offs (USD)
Alternativa 3	2001	Yes	Non-profit	0.52	\$ 123,836.31	\$ 11,988
Avanzar	2001	Yes	Non-profit	1.13	\$ 47,120.10	\$ 3,239
BMM Córdoba	Unknown	No Active Website	Non-profit	0.90	\$ (22,336.06)	\$ 8,508
Entre Todos	2002	No	Non-profit	0.27	\$ 31,594.81	\$ 1,914
FPVS	1992	Yes	Non-profit	0.17	\$ 47,402.97	\$ 0
Fundacion Sagrada Familia	2001	Yes	Non-profit	N/A	N/A	N/A
Grameen Chaco	2001	No Longer in Argentina	Non-profit	-5.08	\$ 1,412.03	\$ 179
Grameen Mendoza	2002	No Longer in Argentina	Non-profit	0.38	\$ 6,238.50	\$ 7,245
Pro Mujer - ARG	2005	Yes	Non-profit	0.95	\$ 364,610.87	\$ 3,663
Progresar	2002	Yes	Non-profit	0.55	\$ 25,850.97	\$ 2,602
Techo	2003	Yes	Non-profit	0.12	\$ (56,760.50)	\$ 450
Columbia Microcreditos	2005	No Active Website	Profit	1.17	\$ 74,672.75	\$ 0
Contigo Microfinanzas	2007	Yes	Profit	0.44	\$ (420,665.00)	\$ 21,170.67
Cordial Microfinanzas	2011	Yes	Profit	0.84	\$ (498,204.03)	\$ 257,505
Emprenda	2006	Acquired by OMLA in 2016	Profit	0.80	\$ (865,775.64)	\$ 270,155
FIE Gran Poder	2001	No Active Website	Profit	1.13	\$ 146,789.21	\$ 162,433
Intihuaca - BMM Argentina	Unknown	No Active Website	Profit	1.01	\$ (30,800.09)	\$ 10,939
OMLA	2008	Yes	Profit	0.87	\$ (152,709.05)	\$ 17,726
CEFAM	2004	No Active Website	Unknown	0.93	\$ 149,506.13	\$ 2,848

Data Trends for Argentine Microfinance Industry

To better understand the industry of microfinance in Argentina, I provide graphs of trends over the years being studied, 2002-2018. Each graph below tracks the averages or total of the given variable for all MFIs in Argentina.³ In the charts, there are major changes in average loan balance per borrower, write-offs, and profit (loss) during 2009, which corresponds to the global financial crisis from 2007-2009. The average loan balance per borrower sharply increased in Figure 2.1 during these years, suggesting that overall, MFIs in Argentina were beginning to abandon their poor borrowers. Figure 2.3 shows how write-offs also increased during 2009, highlighting the unreliability of borrowers, as more loans were not being paid back. Perhaps consequently, the profit for Argentine MFI dropped significantly during this time.

The overall trends of each graph show that the MFIs in Argentina have been growing overtime, year by year. Figure 2.1 shows that there is a steady increase in Average Loan Balance per Borrower, until 2015, when the values drop. An indication of the increased average loan balance per borrower could be that the MFIs are starting to loan larger amounts to richer borrowers. In 2015, the drop in average loan could be due to a myriad of confounding factors. During 2015, the Argentine government went through a transition of leadership, changing the political party of the presidential party from Peronism, with protectionist economic policy, to electing a center-right leader Mauricio Marci, who promised reforms with international investment (Ciara, 2019). Marci focused his term on starting investment, expanding trade, reducing subsidies, and strengthening law. The pivots in policy could have been a factor contributing to the drop in average loan balance per borrower in 2015, as it suggests additional investment in lower income groups (Haass, n.d). Both operational self-sufficiency in Figure 2.2

³ Accounted for inflation by dividing by the GDP Deflator of the key variable being examined.

and profit in Figure 2.4 show a steady incline, suggesting that throughout 2002-2018, MFIs in Argentina were becoming increasingly more financially efficient. The increase in operational self-sufficiency and profit exists despite the volatility in Argentina's economy during the years of 2002 to 2018, which exhibited both positive and negative years of GDP Growth (World Bank, n.d.). Lastly, Figure 2.3 portrays a decline in borrowers defaulting on their loans starting in 2013. Possible explanations to this trend could be increased screening by MFIs of their borrowers, more social outreach providing financial education, or higher penalties of writing-off loans. Overall, the figures demonstrate that the microfinance industry in Argentina has been growing to become more financially efficient and have pivoted to cater towards poorer borrowers since 2002.

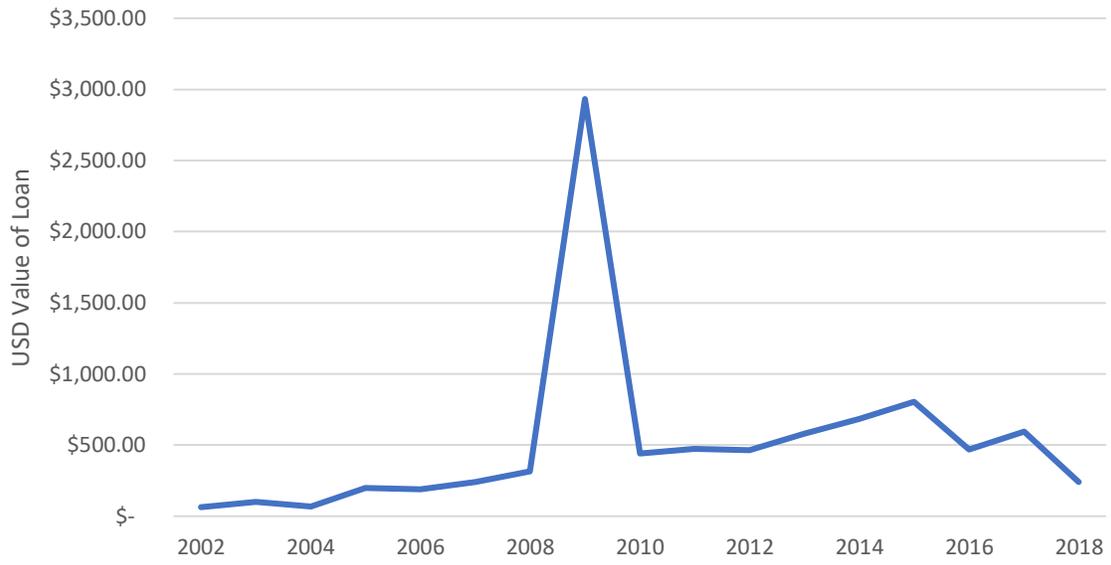


Figure 2.1: Average Loan Balance per Borrower

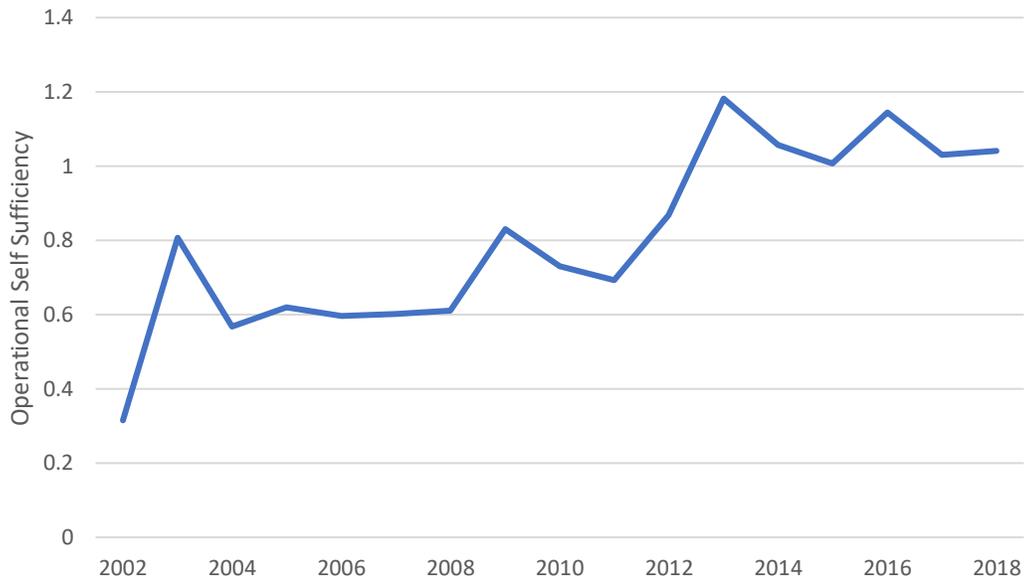


Figure 2.2: Average Operational Self Sufficiency

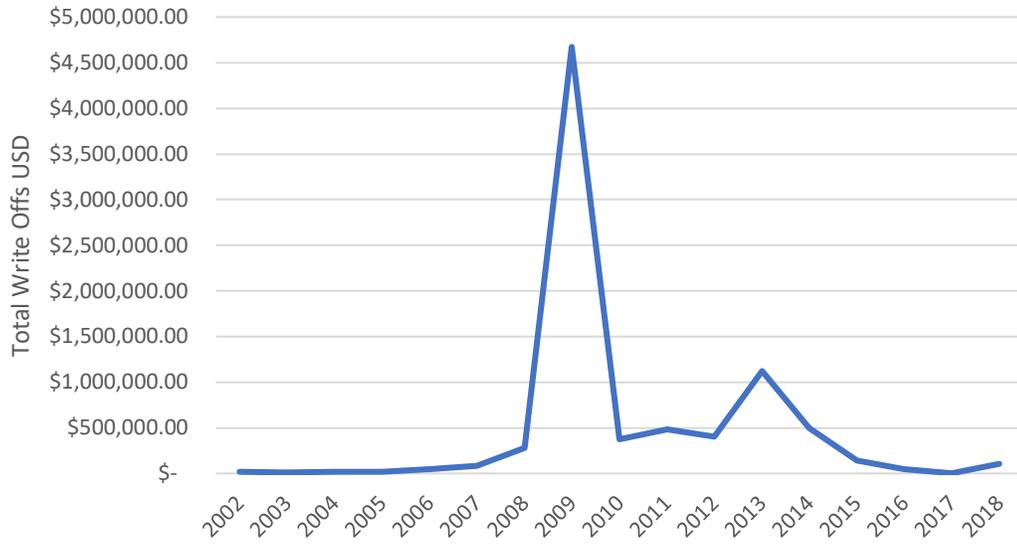


Figure 2.3: Total Write-Offs



Figure 2.4: Total Profit (Loss)

Methods

The thesis asks the question how nonprofit MFIs or for-profit MFIs in Argentina differ in their effectiveness of alleviating poverty. I used single variable linear regression to test the correlation between two social outreach variables and three financial outreach metrics. I then tested how the two different types of MFIs, for-profit and nonprofit, differ in their level of achieving financial and social efficiency. I have shaped my argument around testing key variables that have been argued to be representative measures of financial or social efficiency.

Data Analysis: Variables Used

I used Excel regression to test the relationship between variables measuring financial efficiency on variables measuring social outreach. To increase the credibility of my evidence, I used two variables measuring social outreach and three measurements of financial efficiency, as described in the Data section. According to the journal article *Determinants of the Performance of Microfinance Institutions: A Systematic Review*, social performance relates to the ability that a MFI reaches out to the poor through lending, as the individuals would otherwise have limited or no access to finance (Hermes & Hudon, 2018). The most widely used measurements for social performance relate to a MFI's depth of outreach, as in the type of client served by the MFI. Two common measurements of social performance are the ratio of active female borrowers to the total number of borrowers and the average loan size per borrower (Cervelló-Royo, 2019; Hermes & Hudon, 2018; Cull et. al 2009); Bos & Millone, 2013).

As previously described in Table 2.2, to track financial efficiency, I measured operational self-sufficiency, write-offs, and profit (loss). Operational self-sufficiency provides information as to the ability for the MFIs to cover costs with revenues and is an indicator of financial performance that is more specific to microfinance (Hermes & Hudon, 2018; Damian, 2003).

Write-offs represent the amount of the MFI's loans that have been removed from the gross loan portfolio because they do not expect to be paid back (MIX Market). Write-offs can be an indicator of the quality of the MFI portfolio, as a higher ratio of write-offs rate may indicate that the MFI has issues in collection (Damian, 2003). Profit (loss) is "the total of income less expenses, excluding the components of other comprehensive income" (MIX Market). To increase the reliability of the relationships and to eliminate the possibility of correlation by random chance, I track three different measurements of financial efficiency and two measurements of social efficiency.

Data Analysis: Statistical Model

I use single variable linear regression analysis to test how each variable of social outreach affects the outcome of the variables for financial efficiency. By using p -values for hypothesis testing against a significance level of .05, I assess whether I can reject the null hypothesis that there is no relationship between a given variable for social outreach and a given variable for financial efficiency. Over the years 2002 to 2018, I track if there is consistency with increased average profit(loss), operational self-sufficiency, and decreased write-offs to an increase of female borrowers. I then tested if there is a negative relationship between operational self-sufficiency and average profit(loss) with an increased average loan balance per borrower. I also tested to see if an increased average loan balance per borrower correlates to an increased number of write-offs. Table 2.4 has a summary of the regression equations. Scatterplots of all the relationships are also provided in my results. Overall, the statistical analysis, coupled by qualitative information from literature, offers evidence as to if increased focus on social outreach helps, or hinders, a MFI's financial efficiency.

By comparing the trend lines on graphs between nonprofit and for-profit MFIs, the data analysis provides supporting evidence for the claim that increased female borrowers are consistent with increased financial efficiency. To test the relationship that nonprofit MFIs lend to more female borrowers and low-income borrowers than for-profit MFI, I set up the following regression tests outlined in Table 2.4. According to *Introductory Econometrics: A Modern Approach* the interpretation of the coefficient of the independent variable is the difference in share of female borrowers between non-profit and for-profit MFIs (Wooldridge, 2013). In the regression equations assigned to H2 in Table 2.4, Nonprofit = 0, when the organization is Nonprofit and Nonprofit = 1, when the organization is for-profit. The coefficient determines if there is a discrimination against for-profit MFI: if $\delta_0 < 0$, then for-profit MFIs have a lower share of female borrowers or average loan balance per borrower on average.

Although single variable linear regression is a useful testing method, there are limitations of the model as well. A linear regression model assumes that the relationship between the two variables is linear, while our variables do not have that relationship. Additionally, all the observations in the sample must be independent from another. In our data, there are multiple data points for each MFI. For example, the average loan balance per borrower, was measured for each year for each MFI, suggesting the data points may not be independent. Because these assumptions are not met, it is important to proceed with caution when interpreting the results of the analysis (Aggarwal & Ranganathan, 2017).

In conclusion, the methodology is constructed to test if there is correspondence between financial efficiency and lending to female and/or rural borrowers. The methodology allows for a comprehensive analysis on not only micro-trends for the nonprofit and for-profit MFIs, but also

macroeconomic and political trends that may be another driving force of increased financial efficiency.

Table 2.4: Regression Equations

Hypothesis Tested	Independent Variable	Dependent Variable	Regression Equation
H1a	% Of Female Borrowers	Operational Self Sufficiency	$OSS_i = \beta_0 + \beta_1 ShareofFemales + \varepsilon_i$
H1b	% Of Female Borrowers	Profit (Loss)	$Profit_i = \beta_0 + \beta_1 ShareofFemales + \varepsilon_i$
H1c	% Of Female Borrowers	Write-Offs	$WriteOffs_i = \beta_0 + \beta_1 ShareofFemales + \varepsilon_i$
H2d	Average Loan Balance Per Borrower	Operational Self Sufficiency	$OSS_i = \beta_0 + \beta_1 LoanSize + \varepsilon_i$
H2e	Average Loan Balance Per Borrower	Profit (Loss)	$Profit_i = \beta_0 + \beta_1 LoanSize + \varepsilon_i$
H2f	Average Loan Balance Per Borrower	Write-Offs	$WriteOffs_i = \beta_0 + \beta_1 LoanSize + \varepsilon_i$
H3a	Profit Status (Non-Profit vs For Profit)	% of Female Borrowers	$Share\ of\ FB = \beta_0 + \delta_0 Nonprofit$
H3b	Profit Status (Non-Profit vs For Profit)	Average Loan Balance Per Borrower	$Average\ Loan\ Size = \beta_0 + \delta_0 Nonprofit$

Chapter 3: Social Outreach Factors Affecting Financial Efficiency of MFIs in Argentina

Introduction

In this chapter, I offer evidence to support the claim that increased social outreach of a MFI does not hinder their financial efficiency. Connecting back to the larger research question, this chapter serves as evidence to support that MFIs can help alleviate poverty, while also being financially efficient. I shared results of my regression analysis for all the financial variables I tested: operational self-sufficiency, profit (loss), and write-offs. I connected all the evidence together with my analysis in a discussion section, explaining the implications of the data. To better support the quantitative analysis, I included qualitative commentary from literature on the effects of higher share of female borrowers and increased average loan size per borrower on financial efficiency. Finally, I concluded the chapter with a summary of the findings.

Hypotheses

The hypothesis that I test in this chapter is H1 and H2, that lending to women or offering lower loans will increase the likelihood of higher financial outreach. As a MFI lends to more female borrowers, they expand their social outreach, as women are often excluded from the financial system. If the financial efficiency of a MFI increases as the share of female borrowers increase, it suggests that MFIs that have higher social outreach also have higher financial efficiency. If a MFI has a higher average loan size per borrower, it suggests they are abandoning their poor borrowers and minimizing their social outreach. Given there is a negative relationship with financial efficiency, such that as the average loan balance increases, the metrics for financial efficiency decreases, the data would suggest that a lower social outreach corresponds

with a decrease in financial outreach. In other words, MFIs that have higher social outreach will have higher financial efficiency.

Results

Correlation between Share of Female Borrowers and Financial Efficiency

I regress operational self-sufficiency on share of female borrowers to test the sub hypothesis for H1, H1a. Table 3.1 shows the main results for the relationship between the share of female borrowers and operational self-sufficiency. The table provides the coefficient produced by the linear regression, -0.45, which is significant at the 5 percent level. I can reject the null hypothesis that a change in the share of female borrowers will have no correlation to the operational self-sufficiency of MFIs in Argentina. However, the negative coefficient supports an alternative hypothesis that a larger share of female borrowers *decreases* the operational self-sufficiency of MFIs. The scatterplot of operational self-sufficiency compared to share of female borrowers is shown in Figure 3.1. The general trendline visualizes the negative relationship between share of female borrowers and operational self-sufficiency.

I conduct another regression analysis test in which I exclude any MFIs that are not currently active, described in Chapter 2. The MFIs that are no longer active could have had confounding variables that affected their operational self-sufficiency, which may explain the negative relationship between share of female borrowers and operational self-sufficiency. When excluding the inactive MFIs, there is a positive relationship, visualized in Figure 3.2. Table 3.2 highlights the main results for the regression test. The results are statistically significant and demonstrate the relationship that as the share of female borrowers increase by 0.1, the operational self-sufficiency increases by .047. Thus, when analyzing the active MFIs in

Argentina, as the share of female borrowers increase, the financial revenue compared to financial expenses, net impairment loss, and operating expenses increases.

Another measurement of financial efficiency is the number of write-offs of a MFI. I test the relationship of number of write-offs on share of female borrowers, H1b. The regression results are summarized in Table 3.3, which shows that the coefficient of share of female borrowers was -\$344,500 with a statistically significant p -value. I can reject the null hypothesis that a change in the share of female borrowers will have no effect on the number of write-offs for MFIs in Argentina. The coefficient suggests that as the share of female borrowers for MFIs increases by .1 or 10 percent, the mean write-offs decrease by \$34,450. As MFIs in Argentina lend to more women, they have less borrowers defaulting on their loans. The scatterplot of write-offs compared to share of female borrowers is shown below in Figure 3.3.

The last measure of financial efficiency I test on the share of female borrowers is profit. I test the relationship of profit on share of female borrowers. The regression results of the regression test are summarized in Table 3.4. The coefficient of share of female borrowers was \$304,300 with a p -value of .02. In other words, I can reject the null hypothesis with 95% confidence that a change in the share of female borrowers will have no effect on the profit for MFIs in Argentina. The coefficient suggests that as the share of female borrowers for MFIs increases by .1, the average profit of a MFI increases by \$30,430. The scatterplot of the profit compared to share of female borrowers is shown in Figure 3.4 below.

Table 3.1: Operational Self-Sufficiency on Share of Female Borrowers

<i>Dependent Variable:</i>	Operational Self-Sufficiency
Share of Female Borrowers	-0.45 (.17) [0.01]**
Intercept	1.06
R ²	0.06
Adjusted R Squared	0.05
Observations	108

Notes: Estimation method is a single variable linear regression test. Dependent variable is Share of Female Borrowers. Variable of Interest is operational self-sufficiency. Standard error is reported in parathesis, followed by p-value in brackets. ***,**, and * indicate statistical significance at 1%, 5%, and 10% level.

Table 3.2: Operational Self-Sufficiency on Share of Female Borrowers; Active MFI

<i>Dependent Variable:</i>	Operational Self-Sufficiency
Share of Female Borrowers	0.47 (.21) [0.00]***
Intercept	0.43
R ²	0.09
Adjusted R Squared	0.07
Observations	57

Notes: Estimation method is a single variable linear regression test. Dependent variable is Share of Female Borrowers. Variable of Interest is operational self-sufficiency. Standard error is reported in parathesis, followed by p-value in brackets. ***,**, and * indicate statistical significance at 1%, 5%, and 10% level.

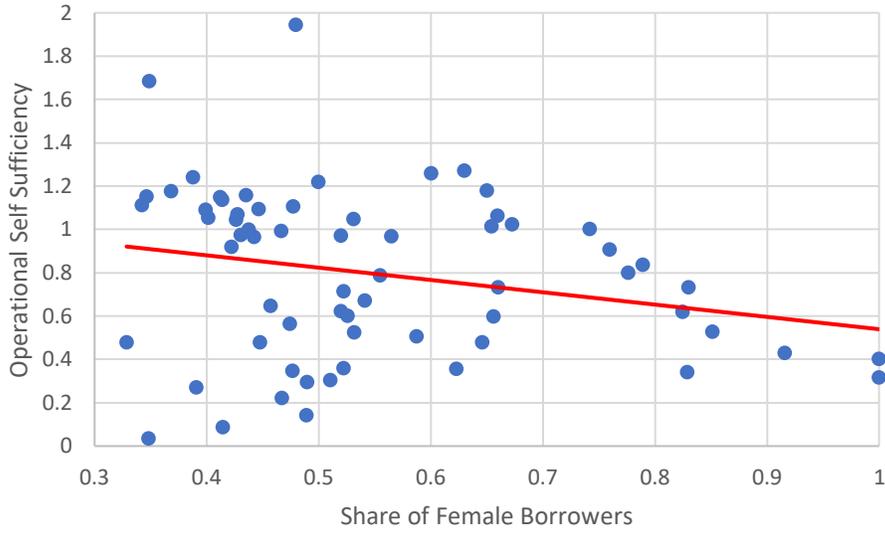


Figure 3.1: Operational Self Sufficiency on Share of Female Borrowers

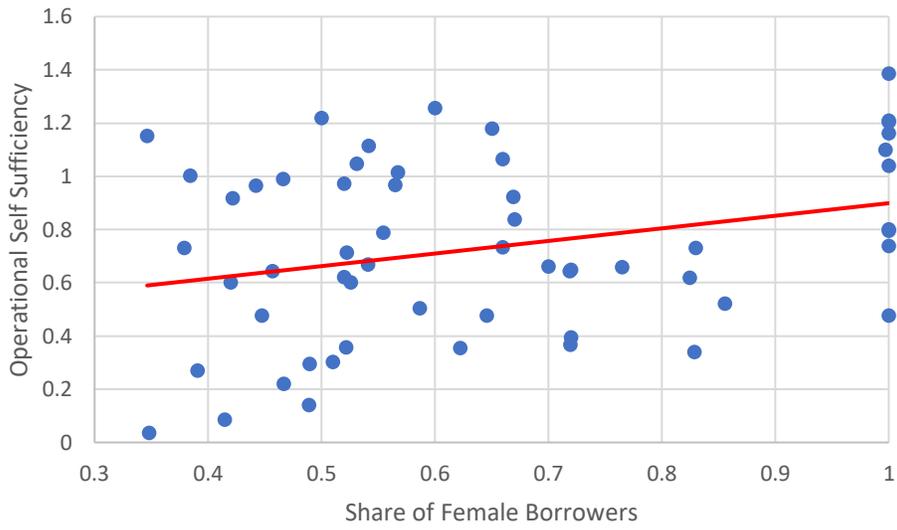


Figure 3.2: Operational Self Sufficiency on Share of Female Borrowers; Active MFIs

Table 3.3: Share of Female Borrowers on Write-Offs

<i>Dependent Variable:</i>	Write-Offs
Share of Female Borrowers	-344,500 (163,819) [0.00]***
Intercept	307,417
R ²	0.05
Adjusted R Squared	0.04
Observations	79

Notes: Estimation method is a single variable linear regression test. Dependent variable is Share of Female Borrowers. Variable of Interest is amount of write-offs. Standard error is reported in parathesis, followed by p-value in brackets. ***,**, and * indicate statistical significance at 1%, 5%, and 10% level.

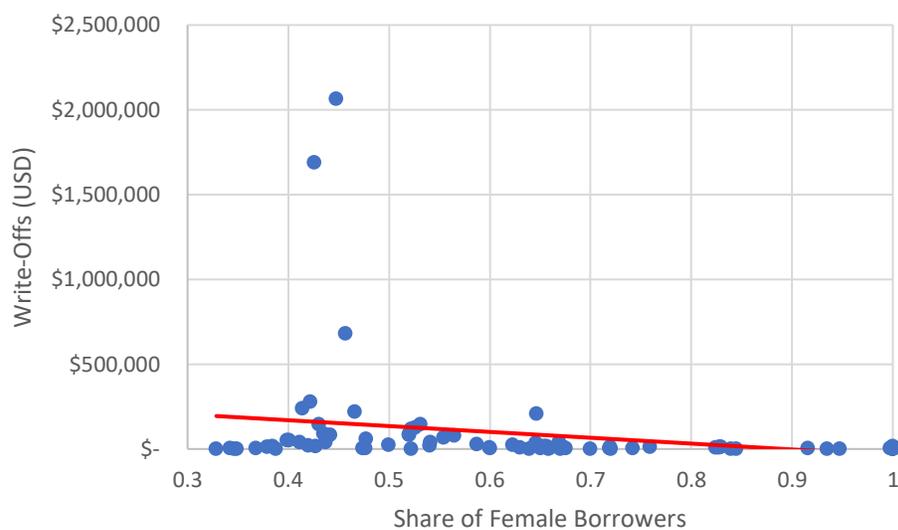


Figure 3.3: Write-Offs on Share of Female Borrowers

Table 3.4: Share of Female Borrowers on Profit (Loss)

<i>Dependent Variable:</i>	Profit (Loss)
Share of Female Borrowers	304,300 (127,992) [0.05]*
Intercept	-174,252
R ²	0.06
Adjusted R Squared	0.05
Observations	97

Notes: Estimation method is a single variable linear regression test. Dependent variable is Share of Female Borrowers. Variable of Interest is profit (loss). Standard error is reported in parathesis, followed by p-value in brackets. ***,**, and * indicate statistical significance at 1%, 5%, and 10% level.

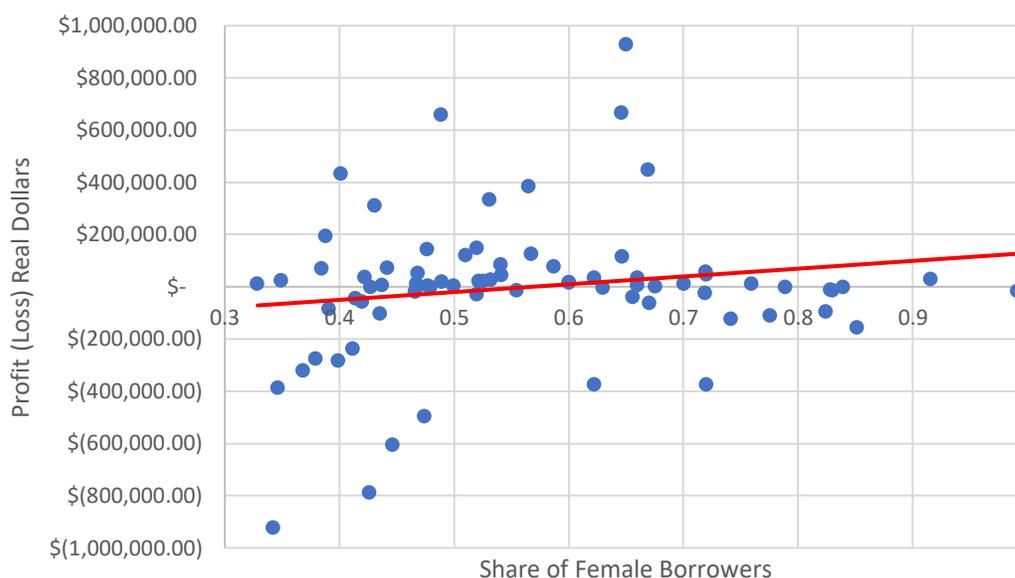


Figure 3.4: Profit (Loss) on Share of Female Borrowers

Correlation between Average Loan Size per Borrower and Financial Efficiency

As tested with share of female borrowers, I test operational self-sufficiency on average loan size per borrower, H2d. The regression statistics are summarized in Table 3.5, which show a coefficient of 0 and statistically insignificant p-value at .05. We fail to reject the null hypothesis that there is no relationship between average loan size per borrower and operational self-sufficiency. The scatterplot of the relationship is shown in Figure 3.5, which visualizes a positive

relationship between average loan size per borrower and operational self-sufficiency. When removing the four outliers evident in the scatterplot, the test results become statistically significant with a p -value of 0. The data becomes more statistically significant as each outlier is removed, reaching statistical significance at a 1% level when three outliers were removed. However, in all cases, the coefficient of the average loan balance per borrower remains the same, 0, highlighting that there is evidence to believe that there is no relationship between average loan balance per borrower and operational self-sufficiency. This coefficient value is equivalent to an increase of average loan balance per borrower going up by \$1, the operational self-sufficiency increasing by two hundredths. However, if the average loan balance per borrower increased by \$10,000, then the operational self-sufficiency can expect to see an increase of about .25.

I then test the relationship of number of write-offs on average loan size per borrower. The coefficient of average loan size per borrower was \$149.35 which is statistically significant at the .01 level, highlighted in Table 3.6. I can reject the hypothesis that a change in the average loan size per borrower will have no effect on the number of write-offs for MFIs in Argentina. The coefficient suggests that as the average loan size per borrower for MFIs increases by .1, the mean write-offs increase by \$14.94. As MFIs loan to poorer borrowers, the MFI experiences less defaults on the loans. The scatterplot of the write-offs compared to average loan size per borrower is shown in Figure 3.6.

I finally test the effect of average loan size per borrower on profit. The regression analysis tests the hypothesis H2f and are summarized in Table 3.7. The coefficient of average loan size per borrower was .96 with a p -value of .97. I fail to reject the null that a change in average loan size per borrower will have no effect on the profit(loss) for MFIs in Argentina. The coefficient therefore does not share information about the relationship because the data is statistically

insignificant. The scatterplot of the relationship between profit and average loan balance per borrower is shown below in Figure 3.7.⁴

⁴ When checking for the four outliers that appear on the scatterplot, the relationship still is statistically insignificant, with a p-value of .735 and a coefficient of 7.6.

Table 3.5: Average Loan Balance per Borrower on Operational Self-Sufficiency

<i>Dependent Variable:</i>	Operational Self-Sufficiency
Average Loan Balance per Borrower	0.00 (0.00) [0.05]*
Intercept	0.76
R ²	0.03
Adjusted R Squared	0.03
Observations	108

Notes: Estimation method is a single variable linear regression test. Dependent variable is average loan balance per borrower. Variable of Interest is operational self-sufficiency. Standard error is reported in parathesis, followed by p-value in brackets. ***,**, and * indicate statistical significance at 1%, 5%, and 10% level.

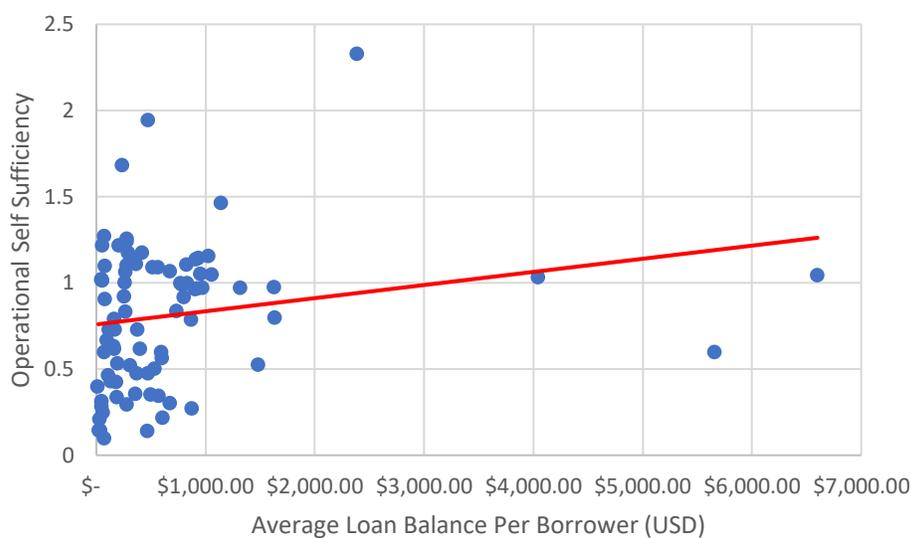


Figure 3.5: Operational Self Sufficiency on Average Loan Balance Per Borrower (Real)

Table 3.6: Average Loan Balance per Borrower on Write-Offs

<i>Dependent Variable:</i>	Write-Offs
Average Loan Balance per Borrower	149.35 (16.09) [0.00]***
Intercept	-20,504
R ²	0.53
Adjusted R Squared	0.53
Observations	77

Notes: Estimation method is a single variable linear regression test. Dependent variable is average loan balance per borrower. Variable of Interest is number of write-offs. Standard error is reported in parathesis, followed by p-value in brackets. ***,**, and * indicate statistical significance at 1%, 5%, and 10% level.

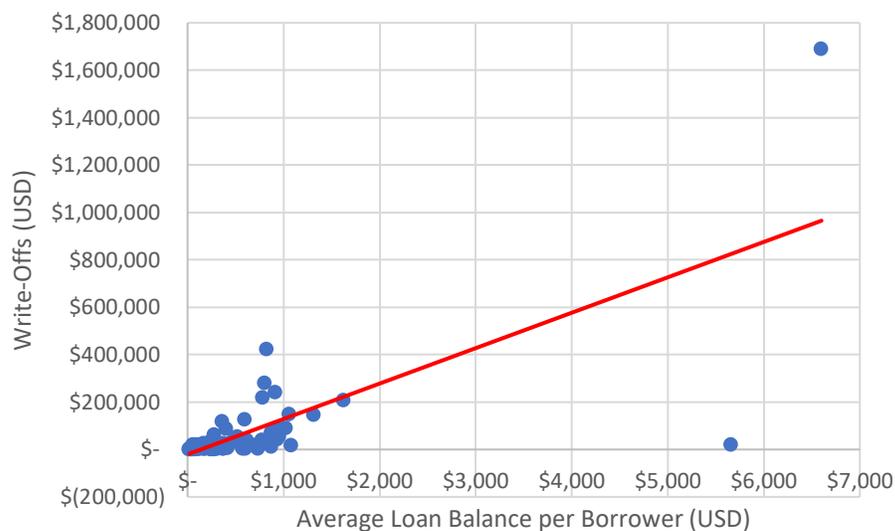


Figure 3.6: Write-Offs on Average Loan Balance per Borrowers

Table 3.7: Average Loan Balance per Borrower on Profit (Loss)

<i>Dependent Variable:</i>	Profit (Loss)
Average Loan Balance per Borrower	0.88 (27.02) [0.97]
Intercept	24,803
R ²	0.00
Adjusted R Squared	0.00
Observations	108

Notes: Estimation method is a single variable linear regression test. Dependent variable is average loan balance per borrower. Variable of Interest is profit (loss). Standard error is reported in parathesis, followed by p-value in brackets. ***, **, and * indicate statistical significance at 1%, 5%, and 10% level.



Figure 3.7: Profit (Loss) Real on Average Loan Balance per Borrower

Check for Robustness

To check for robustness, I excluded all the observations that had contradictory profit and operational self-sufficiency. Looking back at the original data set that generated Table 2.3, if

there was a given year that had either an operational self-sufficiency above one, but a negative profit, or an operational self-sufficiency below one and a positive profit, I removed the set of data-points from my regression analyzes. These data points suggest that the organizations were receiving a profit, when their financial revenue wasn't about their expenses, which is contradictory. By removing the data points, I prevent any misreported data points from skewing my results. Although the number of observations is about 35 percent lower, the tests provide as additional support in case those years had invalid data.

The regression equation that tested write-offs against share of female borrowers, was not statistically significant at an alpha of 0.05 and had a coefficient of -37,0754 write-offs. Despite the statistical insignificance of the test, the relationship holds the same direction as the previous test. The coefficient between the operational self-sufficiency and share of female borrowers is -0.37 yet is also statistically insignificant at an alpha of 5%. The relationship of profit on share of female borrowers is also statistically insignificant. It had a coefficient of about \$42,100.

In terms of the relationships between average loan balance per borrower, the trend continues as all the regression tests are not statistically significant. The relationship with operational self-sufficiency was not statistically significant and had a coefficient of nearly 0. The relationship of profit to average loan balance per borrower had a coefficient of -17.99 and a p-value that was statistically insignificant at an alpha of .05. Lastly, the results of the test between average loan balancer per borrower and write-offs was statistically insignificant with a coefficient of -16.77. In conclusion, despite the statistically insignificant tests, the coefficients in majority continue to have the same direction as our hypotheses would predict. Despite operational self-sufficiency and women, all of the data tests demonstrate a correlation between increased social outreach and increased financial success.

Discussion

Share of Female Borrowers effect on Financial Efficiency

Lending to female borrowers indicates a MFI organization considers their social performance by adhering to a group of the population that is often excluded from the financial system. In literature, there is a debate on whether there is a tradeoff between MFIs having high financial and high social performance, or they are compliments (Hermes & Hudon, 2018). The regression analysis primarily suggests that as the share of female borrowers increase, MFIs exhibit improved financial performance, supporting H1. The amount of loans not being paid back decreases as the ratio of female borrowers increase. Additionally, the expected mean profit of a MFI significantly increases as the share of female borrowers increase. Finally, when analyzing just the active MFIs, there is a positive relationship between female borrowers and operational self-sufficiency.

However, in contrast, the operational self-sufficiency has a negative relationship with the share of female borrowers when looking at all MFIs. The negative relationship between share of female borrowers and operational self-sufficiency could also be attributed to the eight for-profit MFIs in the sample of nineteen firms. Cull et. al. (2009) conclude that for-profit MFIs have less capacity than nonprofit MFIs for outreach to the poorest, along with being less financial stable. The decreased capacity of being financially efficient for commercial MFIs may have skewed the relationship of operational self-sufficiency and female borrowers. Additionally, as discussed prior, the inactive MFIs seem to have skewed the data to show the negative relationship between female borrowers and operational self-sufficiency, which can be attributed to the potential of decreased financial success as the MFI got closer to the closing of their business. Overall, the

regression analysis is consistent with the H1, as the share of female borrowers increase, the financial efficiency of a MFI increases as well.

In addition to the quantitative analysis, there are several sources within the literature on microfinance that suggest an increase of lending to woman would lead to financial success for a MFI. Women often pay back loans more compared to men because they are more conservative with their investing strategies (risk-averse) and are more willing to be swayed by advice from loan officers (Aghion et al., 2007; Velasco & Marconi, 2004). Women therefore serve as less risky lenders and repeated lending to women can increase financial efficiency (Bos & Millone, 2013). Thus, an increased share of female borrowers increases the financial efficiency of a MFI. As share of female borrowers serves to be an indicator of higher social outreach, the evidence argues that higher social outreach corresponds with higher financial outreach.

The Average Loan Balance per Borrowers effect on Financial Efficiency

Average loan balance per borrower serves as another indicator of social performance since MFIs will often lend smaller amounts to poorer lenders. Thus, the smaller the average loan balance per borrower of MFI, the greater social outreach the MFI offers. Although the regression analysis of the relationship between average loan balance per borrower, profit, and operational self-sufficiency were statistically insignificant, the interpretations of write-offs regressed on average loan balance per borrower remains insightful. As MFIs loan more to each borrower, there was a positive relationship with write-offs. More lenders were not paying their loans back when the MFI offered higher dollar value loans. As MFI abandoned their poorer clients, they did not see an increase of reliability from their borrowers, but instead a decrease. These findings correspond with Cull, Demirgüç-Kunt and Morduch (2007) conclusions that MFIs that make smaller loans are not less profitable on average.

The data that was statistically insignificant could have been because of a relatively small N (N=108 for operational self-sufficiency and profit). According to *Introductory Econometrics: A Modern Approach*, if a variable is not statistically significant, then we may ask if the variable has the expected effect on y and whether that affect is large (Wooldridge, 2013). Wooldridge states that if it is large and the sample size is small, you should compute a p-value as large as .20 (2013). However, for the relationship of operational self-sufficiency and profit on average loan balance per borrower, the coefficients suggest that there is nearly no relationship between the variables (recall the coefficients from H1d and H1f). The statistical regression test was conducted for the 19 MFIs in Argentina. In future studies, it would be beneficial to conduct this regression test with multiple countries provided by the Mix Market Database so that the sample size is larger. The larger sample size could bring about a smaller p-value, offering conclusions about the relationship for the countries involved.

Another alternative could be to measure the relationship of the financial variables against another measurement of depth of social outreach. A different variable could be to test operational self-sufficiency, write-offs, and profit (loss) regressed on share of rural borrowers (Cervelló-Royo, 2019; Cull et. al 2009). This relationship would serve as another example as to how social outreach affects financial efficiency.

Conclusion

This chapter analyzed the relationship of two measurements of social outreach on three measurements of financial efficiency. Through Excel single variable regression, I show that there is a positive relationship between the share of female borrowers with profit (loss). I also show that an increase in female borrowers decreases the write-offs of a MFI. Two of three of the relationships prove H1 to be correct, as well as with operational efficiency when evaluating the

active MFIs. I also highlighted the positive relationship between average loan size per borrower and write-offs. As MFIs lend more money to borrowers, suggesting higher-income clients, they have less people paying off their loans, supporting hypothesis H2e. In summary, the regression analysis supports the claim that MFI can achieve social outreach and financial efficiency simultaneously. Thus, the MFIs in the sample do not confirm the idea that MFIs in Argentina experience mission drift, in such that the MFIs who prioritize social outreach, are also able to have financial success.

Chapter 4: Non-Profit MFIs Social Outreach surpasses For-Profit MFIs

Introduction

In Chapter 4, I analyze the nineteen microfinance institutions to conclude that nonprofit MFIs are more socially efficient than for-profit MFIs. As argued in the previous chapter, an increased social outreach leads to greater financial efficiency. As the nineteen Argentine microfinance institutions lent more funds to women, they increased their financial efficiency measured by profits and minimizing write-offs. Similarly, as the Argentine microfinance institutions included more lower-income borrowers, they experienced fewer write-offs. Chapter 4 serves to determine whether nonprofits have higher social outreach than for-profit MFIs. A higher social outreach would suggest that in conjunction with H1 and H2, the nonprofit MFIs in Argentina would also have higher financial efficiency.

I begin the chapter with outlining my hypothesis and sharing the results of the single variable regression analysis. I also include a qualitative measurement of MFIs efforts in social outreach by evaluating the financial resources they provide to their borrowers. Following the results, I discuss the conclusions, providing additional insight into some of the MFIs and how their borrowers have responded to the loans.

Hypothesis

To assess which MFIs, nonprofits, or for-profits, are better apt to be both financially efficient and socially efficient, I test Hypothesis 3.

Hypothesis 3 (H3): *Nonprofit microfinance institutions have a higher social outreach than for-profit MFI.*

In this chapter, I test the hypothesis by conducting two regression tests. First, I test how the share of female borrowers changes when regressed upon profit status. This regression test

serves as an analysis of how a metric of social outreach differs for for-profit MFIs compared to non-profit MFIs. Then, I measure how the average loan balance per borrower changes when regressed upon profit status. By analyzing the coefficients, I determine there is enough statistically significant evidence to suggest that nonprofit MFIs in Argentina have a higher share of female borrowers and a lower average loan balance per borrower. Ultimately, the results help support the research question that nonprofits are better in their efforts to alleviate poverty compared to for-profits. Additionally, I evaluate each active MFIs and assess whether or not they engage in holistic outreach, in which they offer both financial loans and educational support. The educational opportunities to learn more about best business practices or master a new skill, builds on the borrower's ability to expand their business. My research shows that nonprofit MFIs in Argentina offer more opportunities to learn and grow, compared to for-profit MFIs.

Results

Regression Statistics and Interpretations: Female Borrowers

Table 4.1 shows results of the regression for the relationship between the share of female borrowers and profit status. The table provides the coefficient produced by the single variable linear regression, 0.291, which is significant at the one percent level. The y-intercept, 0.785, represents the average share of female borrowers for nonprofit MFIs in the sample. Thus, nonprofit MFIs have about 79% female borrowers on average. The average share of female borrowers for for-profit MFIs is about 50%.⁵

⁵ *Share of FB* = .785 – .288*Nonprofit*

$$\text{Share of FB} = .785 - .288(1)$$

$$\text{Share of FB} = .497$$

Overall, the data in Table 4.1 corresponds with H3 in that firms that were for-profit had a share of female borrowers, that on average, was 29% less than nonprofit MFIs. The relationship is both positive and significant. Figure 4.1 depicts a visual representation of the relationship, highlighting how most observations of the share of female borrowers for nonprofit MFIs is higher than for-profit MFIs. Overall, the regression analysis for share of female borrowers on profit status suggests that H3 is correct, nonprofit MFIs have a higher social outreach compared to for-profit MFIs, when measured by money lent to female borrowers.

Table 4.1: Share of Female Borrowers and Profit Status

<i>Dependent Variable:</i>	Share of Female Borrowers
Share of Female Borrowers	-0.288 (.151) [0.00]***
Intercept	.785
R ²	.479
Adjusted R Squared	.474
Observations	108

Notes: Estimation method is a single variable linear regression test. Dependent variable is Share of Female Borrowers. Variable of Interest is profit status, profit or non-profit. Standard error is reported in parathesis, followed by p-value in brackets. ***,**, and * indicate statistical significance at 1%, 5%, and 10% level.

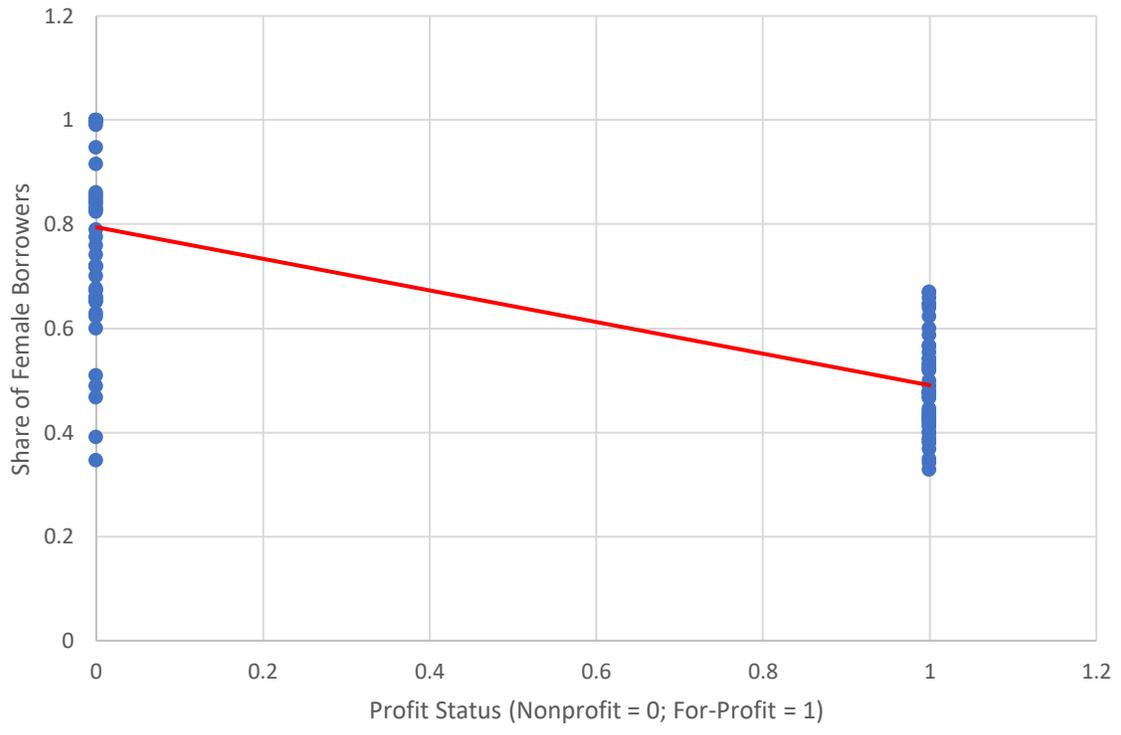


Figure 4.1: Share of Female Borrowers vs Profit Status

Regression Statistics and Interpretations: Average Loan Balance per Borrower

Table 4.2 provides the results of the relationship between average loan balance per borrower and profit status. The coefficient produced is \$657.60 real USD and is significant a one percent level. Thus, the analysis suggests that for-profit loans are \$657.60 more than nonprofit MFIs on average. The intercept represents the average loan balance per borrower for nonprofit MFIs in the sample, so nonprofit MFIs have an average loan balance per borrower of \$271.63 on average. The average loan balance per borrower for for-profit MFIs in the sample is \$929.23.⁶

Overall, the regression analysis supports H3 that for-profit MFIs do not have as high of social outreach as nonprofit MFIs. Figure 4.2 also depicts the relationship that for-profit MFIs often have higher average loan balances per borrower. As for-profits average loan balance per borrower is higher than non-profits, it suggests that non-profits often cater to poorer borrowers than for-profits. This might be because the ultimate mission of a non-profit organization is to solve a problem and help their target audience the most as possible. The scatterplot also calls attention to a few outliers that have especially high loan balances per borrower. In conclusion, the regression analysis for average loan balance per borrower on profit status verifies H3, nonprofit MFIs have a higher social outreach compared to for-profit MFIs, when measured by how high their average loan balance is per borrower.

⁶ *Average Loan Size* = 271.63 + 657.60*Nonprofit*

$$\text{Average Loan Size} = 271.63 + 657.60(1)$$

$$\text{Average Loan Size} = 929.23$$

Table 4.2: Average Loan Size and Profit Status

<i>Dependent Variable:</i>	Share of Female Borrowers
Average Loan Size	657.60 (884.06) [0.00]***
Intercept	271.63
R ²	0.12
Adjusted R Squared	0.12
Observations	108

Notes: Estimation method is a single variable linear regression test. Dependent variable is Average Loan Size. Variable of Interest is profit status, profit or non-profit. Standard error is reported in parathesis, followed by p-value in brackets. ***,**, and * indicate statistical significance at 1%, 5%, and 10% level.

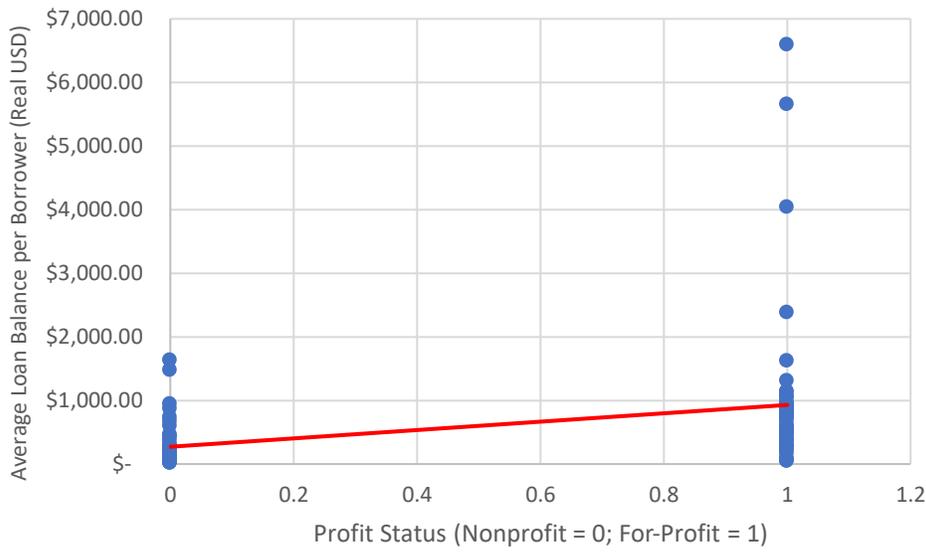


Figure 4.2: Average Loan Balance Per Borrower vs Profit Status

Robustness Check

When excluding the potentially invalid data points from the regression tests that had conflicting operational self-sufficiency and profit, they are both statistically significant at 0.01 alpha and are in the same direction as the original tests. When testing share of female borrowers to profit status, the coefficient is -0.25 in that for-profit microfinance institution's share of female borrowers is on average 25% less than nonprofit MFIs. The regression test between average loan balance per borrower and profit status suggests that for-profit and nonprofit have similar average loan balance per borrower and is statistically significant. Although this is not in correlation with our findings, the neutral results do not disprove them either.

Nonprofit and For-Profit Holistic Outreach: Offering Financial Resources

Another measurement of social outreach, in addition to percentage of female borrowers and size of loan, includes how MFIs interact with their borrowers, in terms of which financial resources and educational opportunities they offer. Although the monetary services are helpful to borrowers, resources that may guide the entrepreneurs make more sound decisions, improving the success of the new businesses while increasing the income for the borrowers. The nonprofit and for-profit active microfinance institutions offer different degrees of educational resources. I researched each individual MFI and explored their website to determine if and by what means the financial organizations offer workshops and resources to their borrowers. The results are summarized in Figure 4.3. I assumed that a MFI was not active if they did not have an active website, and therefore wrote "N/A" in the column describing if they had holistic outreach. In summary, out of the seven active non-profit MFIs, five of them offered resources to their clients, such as training and development workshops or more specific workshops towards skills like technology, accounting, textiles, and sales. In contrast, out of the four active profit-MFIs, only

one of them offered workshops to their borrowers, such as financial workshops. Overall, not only do nonprofit MFIs cater to poorer borrowers who are female, but they also offer guidance for how to run their business and be better entrepreneurs.

As previously discussed, being a ‘gung-ho’ entrepreneur has correlated with better investments and benefits to the borrower. Although screening the borrowers under these conditions could be a method to improve the success of microfinance loans, another method may be to offer resources to those who are creating a business. Building human capital skills such as business administration or textiles can influence the long-term income of someone living in developing conditions.

Firm	Profit or Non-Profit	Holistic Outreach Offered?	Description and Source of Holistic Outreach	Source
Alternativa 3	Non-profit	Yes	Offers training and professional development workshops, including the importance of networking.	http://alternativa3.org/nuestros-fundamentos/modelo-de-intervencion%e2%80%8e/
Avanzar	Non-profit	Yes	Offers free trainings to the public. Focus on cooking, technology, textiles, esthetic (makeup artist), sales classes; offers business management skills and tools to manage the ecommerce process.	https://avanzar.org.ar/que-hacemos/#
BMM Córdoba	Non-profit	N/A	No Website	
Entre Todos	Non-profit	N/A	No Website	
FPVS	Non-profit	Yes	Offers training and technical knowledge to those who get loans.	http://fpvs.org/que-hacemos/
Fundacion Sagrada Familia	Non-profit	No	Does not look appear as though there are resources.	
Grameen Chaco	Non-profit	N/A	N/A	
Grameen Mendoza	Non-profit	N/A	N/A	
Pro Mujer - ARG	Non-profit	Yes	Offers different training workshops for free. Six micro-teaching modules in Empowerment, Financial Education, Basic Business Skills, Preventive Health, Empowerment and Development of Business Skills. <ul style="list-style-type: none"> - Entrepreneurship Program in 3 levels: Starting my Business, My Business Plan and Boosting my Business. - Workshops by members for members: An empowering space that recognizes and values the knowledge of our clients and strengthens ties: Crafts/arts/miscellaneous hobbies. - Support services: Legal advice, Accounting/tax, Financial and technical assistance - Virtual and face-to-face mentoring services. 	https://argentina.promujer.org/capacitaciones/

Firm	Profit or Non-Profit	Holistic Outreach Offered?	Description and Source of Holistic Outreach	Source
Progresar	Non-profit	No	Offers four different programs to help families from underprivileged neighborhoods have the opportunity to achieve a better quality of life <ul style="list-style-type: none"> - EPC, Educación Para Crecer (Education to Grow); which helps improve the literacy of children between ages 4-14. - Crecer en Familia (Grown in Families) works with families in workshops to bring the community together. - Prestamos para crecer (Loans to Grow) offers loans to families who work to improve their homes and start their own projects. 	https://www.fundacionprogresar.org/
Techo	Non-profit	Yes	When they offered microfinance loans, they offered weekly meetings for emotional support, as well as training on soft skills, accounting, marketing, and cost training.	https://www.techo.org/argentina/
Columbia Microcreditos	Profit	N/A	No website	
Contigo Microfinanzas	Profit	No	No explained workshops in their method of intervention. Only resources available are spaces to work to simplify the process of borrowing.	https://www.fundacionmicrofinanzasbbva.org/informe-2014/08.php
Cordial Microfinanzas	Profit	No	Does not explain any offered services or support when discussing loans.	https://www.cordialfinanciera.com.ar/historia.html
Emprenda	Profit	No	No explanation of offering services other than loans.	http://emprendemf.cl/
FIE Gran Poder	Profit	N/A	No website	
Intihuaca - BMM Argentina	Profit	N/A	No website	
OMLA	Profit	Yes	There are not necessarily workshops, but they offer financial consulting and advice to help identify the needs and create objectives for the business.	https://www.omla.com.ar/
CEFAM	Unknown	N/A	No website	

Discussion

Two key measurements of social outreach of MFI are the percentage of borrowers that are women and how large the loans are that are lent. As nonprofit MFIs lend to more women, they are providing additional resources to the group most affected by poverty and unemployment in Argentina (Díaz-Martin et al, 2021). Common female paths for women in Argentina is to marry early and be the leaders of household tasks, while education is not a priority. Young women who lack education find themselves stuck in the cycle of poverty as their absence of education prevents them from finding a job (Nia, 2018). Additionally, in Latin America women are at a disadvantage in the labor market due to “occupational segregation” as well as the characteristics of female employment, which are more part-time and sporadic (Diana et al., 2012). Offering financial resources to stimulate businesses for women enables nonprofit MFIs to help women escape the poverty trap and enable poverty alleviation. Not only do these financial assets provide women with economic participation, but it promotes development, overcoming poverty, reducing inequality, improving children’s health and nutrition, and increasing school attendance (Bijlani, 2017). Ultimately, the loans from microfinance organizations enables women to start their own businesses, allowing them to achieve greater financial freedom.

Out of the nineteen microfinance organizations in the sample, many offer examples on their websites that highlight their assistance to women. Pro-mujer, one of the larger nonprofit MFIs in Argentina, describe on their website that they have been able to help transom the lives of around 17,000 women in the country since their opening in 2005. A personal anecdote shared on Pro Mujer Argentina includes a quote from a borrower Soledad Yanez who notes that from a course about “Cold Porcelain”, she learned how to mold and work with the technique, which has ultimately enabled her to live from the designs she’s able to make (“Pro Mujer”, n.d.). In

addition, Fundación BBVA has many life stories that explain the impact of microfinance on their borrowers. One individual, Ada Moreno, started a car wash business after losing her job during the financial crisis. She explains how the microfinance organization “has changed us because now we are better known in the community; now they know how hardworking and resilient we are. I am very grateful to the institution for all the help they have given and are still giving me” (“Life Stories Archivos”, 2020). The benefits of the holistic outreach from the nonprofit MFIs help the borrowers expand their business more effectively. The nonprofit MFIs prevail to help more individuals learn business skills, appearing to have higher social outreach.

By measuring average loan balance per borrower, the regression analysis offers evidence to suggest which institution, nonprofit or for-profit, lend more to poor borrowers. Nonprofit institutions fall under a “specific category of associational life in civil society” in which they have increased legal registration, bring in external funding, and are an intermediary between grassroots constitutes and communities with government and other agencies (Smith, 2011). As nonprofits are often associated with putting an emphasis on civic and community service, it is sensible that nonprofit MFIs would have higher social outreach compared to for-profit MFIs.

Conclusion

In summary, the regression analysis supports the hypothesis that nonprofit MFIs have increased social outreach compared to for-profit MFIs. Nonprofit MFIs have a higher percentage of female borrowers compared to non-profit organizations, demonstrating that nonprofit MFI put more emphasis on helping women. For example, Pro-Mujer, an Argentinean MFI that solely lends to women explains that their investing strategy comes from the recognition of the financial gaps along the capital curve and the disparity in the financial inclusion of women (Quiénes Somos, n.d.). In addition, nonprofit MFIs have a lower average loan balances per borrower,

giving evidence to their commitment in serving lower income individuals. Lastly, nonprofit MFIs provide more educational resources indicating that their primary motivation of offering loans is not only to gain profit, but also improve the human capital of their borrowers. Since increased social outreach correlates with increased financial outreach, as explained in Chapter 3, it can be predicted that nonprofit MFIs perform better in both financial efficiency and social outreach.

Chapter 5: Conclusion

Research Question and Summary of Arguments

“Creating a World Without Poverty,” as succinctly put it by the title of noble peace prize winner Muhammad Yunus’ book, has never been easy or a task without obstacles (Yunus, 2009). There have been problems implementing change that result in decreased poverty and inequality. The literature demands additional research on the different methods to escape poverty to ensure that the same mistakes are not made as were made in the past. A conclusion made from the literature is that to best help the poor, it is better to approach the problem at a microeconomic level, in small steps. Microfinance has been an example of a small steps approach to escaping the poverty trap. In Argentina, those who are affected most by economic collapse and recessions are the poor, while they benefit the least from macroeconomic recovery (Cohen, 2003). Microfinance provides a more direct economic solution to help the economic suffering of the population below the poverty line.

Microfinance in Argentina is small and growing, which has served as a motivation to research to discover how it can grow to be the most successful. The research questions asked and answered in this study are as follows: How do microfinance organizations in Argentina help alleviate poverty? Are financial success and social success mutually exclusive? Additionally, and above all, how do nonprofit and for-profit microfinance institutions differ in the way they are able to help alleviate poverty? Microfinance in Argentina has grown over the past twenty years, but little research has been done to help determine which structures of MFIs are the most successful and more likely to cause poverty alleviation.

The regression tests in the thesis showed that nonprofit MFIs maximize both their social and financial efficiency, more so than for-profit MFIs. The thesis found that social efficiency and

financial efficiency were not mutually exclusive because a higher social efficiency correlated with a higher financial efficiency. As the percentage of female borrowers increased, MFIs saw fewer write-offs and higher profits. Additionally, as average loan balance decreased, bringing in poorer borrowers, MFIs experienced less write-offs. In summary, lending to the more impoverished share of the population correlated with higher levels of financial efficiency. Regarding the final research question, how do non-profits differ in their ability to alleviate poverty, I found that nonprofits exhibited higher social efficiency than for-profit MFIs. Nonprofit MFIs lend to more women and offer smaller loans, suggesting they include more individuals with smaller incomes and make greater efforts to alleviate poverty. Additionally, nonprofit MFIs offer more financial workshops and training than for-profit MFIs. Since there is a correlation between higher financial efficiency and higher social efficiency (H1 and H2), the hypotheses and regression tests conclude that nonprofit MFIs are able to better operate both financially and socially.

Recommendations to MFIs

The data shows that nonprofit MFIs are more likely to have more female borrowers and lower average loan balances, which also correlates to greater financial success. The thesis discussed a possible explanation for this correlation, beyond women being better at reliably paying back loans. The nonprofit MFIs were more likely to offer workshops to their borrowers to provide training on professional development, financial education, accounting, and general business skills. The literature explained that ‘gung-ho’ entrepreneurs, or entrepreneurs with previously established small businesses, have been more likely to benefit from microfinance loans (Banerjee et al., 2020). The explanation for this difference in effects of microfinance loans could be explained by the difference of business skills by the borrowers. Previous experience

within the business world may have enabled these lenders to accurately adjust their business spending and assets, positively influencing their revenues and profits. Although one takeaway from this literature could be that MFIs should better screen their borrowers, another perspective could be that MFIs should offer resources and training programs to their clients so they can make better informed decisions with their loans. Nonprofits in the sample were more likely to offer educational resources to their borrowers and experienced fewer write-offs. For-profit MFIs should consider offering financial workshops to potentially influence the amount of loans that are being paid off.

Previous research and the thesis suggest that MFIs should continue to target women for microfinance loans because lending to more women correlates to greater financial efficiency. MFIs that lent to more women had greater profits and less write-offs. Women are more likely to pay off their loans and are also a group that is more affected by poverty. Given an MFI lends to more women, they would be improving their efforts in alleviating poverty while also increasing their financial success.

Recommendations to Government Policy

Microfinance has positively influenced the lives of the impoverished population as it has given individuals financial resources that they would otherwise not have access to. My thesis provides additional information to governments that nonprofit MFIs accomplish their mission in catering to impoverished borrowers. Therefore, I encourage there should be more financial drives by policy makers, charitable foundations, and practitioners to raise money to support microfinance startups such as the drive done in 1997 in the United States (Clinton, 1997). In addition, there can be more public-private partnerships supporting MFIs, such as the Small Business Administration's Microloan Program that awarded \$70 million in grants to nonprofit

organizations that lent more than half their loans to women (Clinton, 1997). By involving the private sector in formulating poverty reduction strategies, the government recognizes the importance of microfinance and finance in general towards development. Historically, Argentina stabilized their economy in 2003 because of a stimulus provided to increase agricultural exports, stimulating the demand for urban products. By providing individuals with loans in Argentina, the government has the potential to further stabilize the economy as it will affect the amount of Argentinean commerce (Cohen, 2012). The support of private entities and non-governmental actors will help embed microfinance into the financial system (Duflos & Imboden, 2004).

Recommendations for Further Research

The results of the regression relationship showed a positive correlation between social efficiency and financial efficiency, when measured by average loan balance per borrower, share of female borrowers, write-offs, profit, and operational self-sufficiency. A beneficial research study would be to test other measurements of financial or social efficiency to expand on the thesis and provide additional evidence to support the positive correlation between metrics of social and financial efficiency. Other metrics could include share of rural borrowers or return on assets. Another beneficial regression test would be to expand the sample size to include MFIs in all Latin American countries. The regression test involving average loan size per borrower to both profit and operational self-sufficiency were statistically insignificant. Increasing the sample size may create a statistically significant relationship telling us more about the relationship between average loan size per borrower, operational self-sufficiency, and profit.

My research showed a strong positive relationship between different variables testing social efficiency and financial efficiency, as well as nonprofits having a higher social efficiency than for profits. Although I show the strong correlation, I am unable to determine that a high social

efficiency, for example lending to more women, causes a greater financial efficiency. Additionally, I am unable to state that the mere fact of being a nonprofit MFI, causes microfinance institutions to cater to more people affected by poverty. An experiment that controls for other variables and measure the different outcomes of those MFIs, or those receiving the microfinance loans, may offer evidence to see if lending to more women or poorer borrowers *leads* to higher financial efficiency.

In addition to the characterization of the type of borrower (such as gender), studies have also assessed the accountability of group loans and if having a relationship with those in the group leads to higher pay back rate. MFIs have different target borrowers, both group and individual loaning, called solidarity groups, village banking, and individual lending. In comparison to individual lending, group lending has lower interest rates and lower amounts of loans (Banerjee, 2012). However, according to Maria Lehner, the loan size of group lending is large (2008). Lower interest rates of group loans can be explained by the effectiveness of group lending since the group dynamic creates social pressure that helps ensure loans are repaid (Warby, 2014). However, Banerjee explains that there is no clear relationship between group liability and social capital on repayment, risk taking, insurance and other behavioral outcomes (2012). There seems to be a debate among literature if group lending or individual lending is the most effective. This argument could motivate future studies related to the topic of microfinance and its efficiency. It is possible that lending to more groups, rather than individuals, is another aspect that may have affected the nonprofit MFIs to see greater financial efficiency.

Final Thoughts

Economic development has been approached in several different ways throughout history, and there is no agreed upon method as to how to alleviate poverty. Although helping the

poor is something that many people and scholars wish to do, it is essential that scholars and academics put in the time to determine which methods are most effective in providing additional resources to individuals so they can escape the poverty trap. This study showed a clear correlation between nonprofit MFIs helping the most marginalized groups of the Argentinean population. Nonprofits were able to offer workshops and financial guidance, that ultimately enabled women to open businesses they could live from. The microeconomic approach to development is an effective method to affect many lives, on an individual level, towards alleviating poverty.

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