

## **Feasibility Study of Starting a Micro-Credit Program in a Midwest United States Town**

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### **Abstract**

*This research performs a feasibility study of starting a micro-credit program in Kirksville, a Midwest U.S. town, in an attempt to find a way to alleviate the extensive poverty of this town. Worldwide microfinance has gained acclaim as a development tool in improving the lives of the poor households. To investigate the demand and the supply of microfinance, a survey of the local community was conducted. According to our findings a low income individual with a larger household and employment will be more likely to apply for a micro-loan. For poor women, household size has significant influence on their demand for micro-loan; while for poor men, the significant predictor is age. Our survey finding shows that there exist a gap between the supply of the small and micro loans provided by the local banks and the demand for such loans by the low income households of Kirksville. The paper suggests that the NMCAA, a local community organization can bridge that gap by providing financial services to these poor households.*

### **Introduction**

According to the U.S. Census Bureau (2010), the state of Missouri has a median household income of \$44,306 which ranks the state at the 35<sup>th</sup> position among the fifty states of the United States. Kirksville, a northeast Missouri town, stands even below than that in terms of its estimated household income (\$25,755). In 2010, Kirksville had a population of 17,505. Around 30 percent of this population lived below the poverty level. Most of these poor (male and female) were of age 18-24 years and were engaged in part-time jobs. Moreover, 55 percent of the poor were females without husbands. It is surprising to find such a high level of poverty in a town of the United States. The question is what can be done to mitigate the level of poverty in Kirksville. The Northeast Missouri Community Action Agency (NMCAA) is a community organization that has been working for the last 46 years towards alleviating poverty, moving families out of poverty, and reducing the recurrence of poverty in Kirksville. As such the agency was interested to find out what other services it could provide to help the poor households.

One of the recent poverty alleviating development tools that has gained acclaim throughout the world is micro-credit. According to Nobel Laureate Dr. Yunus (2009), the current state of financial system does not allow the poor to fully participate in the economic activities. The main idea of his pioneering work in microfinance is to provide micro size loans to the poor for productive purposes to raise their income level and to rise out of poverty. These loans are used mainly as a startup fund or as working capital by the micro-producers. The micro-businesses are defined as businesses with five or fewer employees (Nebraska Micro-Business Resource Directory (2007)). Some of these businesses provide an opportunity for the low income households to become more self-sufficient. Numerous studies have depicted the positive role of microfinance in raising the income of the poor households in the developing world. Though the context of microfinance in the United States greatly differs from that of the developing countries (for details: see Schreiner and Morduch (2001)), Aspen Institution reports (CGAP (2011)) that in 2008 around 362 micro-lenders provided 9,191 micro-loans in the United States. Given the high level of poverty, Kirksville would seem to be an appropriate place to start a micro-credit program. However, before the program is initiated, it is appropriate to perform a feasibility study to find out if there is a market for micro-credit in Kirksville. This research entails a survey of the local community in order to investigate the demand and the supply of microfinance in Kirksville. Also the study will analyze the characteristics of the local poor that influence their demand for such financial services.

The paper is organized as follows. The first section provides the literature review while the second section discusses the findings of the feasibility study in the form of empirical analysis, statistical results and the demand-supply gap. The last section presents concluding remarks.

## **Literature Review**

There is a vast literature related to the different aspects of microfinance. The theoretical studies (e.g., Stiglitz (1990), Ghatak and Guinnane (1999)) demonstrate the positive aspects of group lending feature of microfinance in analyzing the success of the microfinance institutions (MFIs). The empirical studies are mostly impact analysis of micro-credit (e.g., Khandker (2005), Arfane (2002)). However, the feasibility studies are primarily done by the MFIs in the form of market research studies to find out the need of a focus group. These studies are mostly not available to the public (Devaney (2008)).

The demand studies of microfinance are also conducted by the researchers to show that there is a need for formal institutions to provide various financial services to the poor. These studies are of two kinds. The first kind is known as the Financial Diaries. Through these studies the researchers observe the poor households meticulously for a period of time to find out the nature of their spending and the usage of various financial instruments. For example, Collins (2005) observed a sample of poor households in South Africa for one year and concluded that they require some kind of saving vehicles for 25% of their income. In another study, Rutherford (2002) interviewed 42 households of Bangladesh for one year to conclude that these poor households use various financial services to gather a large sum of money to spend in the near future rather than in the distant future. The second kind of studies surveys the existing microfinance clients for statistical analysis to find out the various predictors of their demand. Ashraf et al (2005) performed a randomized experiment in Philippines and found out that, individuals with education, income and women with hyperbolic preferences will most likely use a saving product offered by an MFI. In another study, Balogun and Yusuf (2011) identified that various social capital variables, dependency ratio, credit distance and interest rate significantly influence the credit demanded by the rural households in Nigeria. The literature review shows that both kinds of studies are performed mostly to capture the demand for financial services by the poor households in the developing countries. In that respect our study will add to the scarce literature that investigates the demand for credit by low income households in the United States. Also our study is a combination of the market research performed by the MFIs and the second kind of statistical analysis conducted by the researchers. Finally, this research should provide an additional pathway to the NMCAA in its endeavor to improve the lives of the poor in Kirksville.

## **Findings of the Feasibility Study**

### ***Empirical Analysis***

To conduct the feasibility study, 60 poor households of Kirksville were interviewed in 2009. These households met the guideline given by the U.S. Department of Health and Human Services that determined the income eligibility for families applying for free school lunch. In the United States it reflects 130% poverty level. In our study each household was represented by one survey participant.

The first part of the survey contained questions about age, gender, size of the household, and number of dependents in an attempt to learn more about the demographics of the survey participants. The findings are given in Table 1. The age of the survey participants ranged from 19 to 68 years with a mean of 39 years. This mean age represents the active and productive years of the participants. In similar studies conducted by Ashraf et al (2005) in Philippines and Balogun and Yusuf (2011) in Nigeria the average age of the participants ranged from 40 to 42 years. Out of the sixty people who completed the survey, 63 percent were women. A large majority of the world's poorest inhabitants are women and children. Our sample set was reflective of the target population, households living in extreme poverty with women participants. Of the 60 households

surveyed, the size of the household ranged from 1 to 8 members with an average of 2.65 members per household. Eighty percent of these households had one to three household members. When inquiring about dependents, 43 percent of the participants had no dependents while almost half of the participants had 1 to 2 dependents. On average each household had 1.1 dependents. This implied that at least someone in the low income household took care of another individual.

In the second part of the survey we tried to capture the economic profile of the sixty participants. The findings are depicted in Table 2. We found out that 35% of the participants were employed. Out of these employed, 62% had full time jobs while 38% had part time jobs. The rest 39 participants did not have a job. Among them, 17 participants were seeking a job while 22 participants were not looking for a job. Given this labor force data the unemployment rate among the survey population was 45 percent. Compared to the 2009 national unemployment rate of 10 percent and Missouri unemployment rate of 9.5 percent (U.S. Census Bureau (2010)), this unemployment rate among the low income households of Kirksville was alarmingly high. This implies that Kirksville lacks opportunities for the people to make an earning. While the unemployment number was expected to be somewhat higher because of the participation of large number of people below the poverty level in this study, the high unemployment rate also demonstrates that a microcredit program would provide an option to the low income households. Half of the households that participated in the survey had an annual household income of less than \$10,000 while only 10 percent of the surveyed households had an annual income of \$20,000 or more. The average annual household income of these poor households came out to be \$10,013. This was less than half of the median household income (\$24,032) of Kirksville in 2009. Given this extensive level of poverty, when asked, 92 percent of the survey participants answered that they had the desire to raise their income level. There were a multitude of reasons to do so. Sixty percent of the participants who desired to raise income have chosen food and clothing as their reason. Based on the household survey conducted in nine countries Zeller and Sharma (2000) concluded that 60-70 percent of the household expenditure of poor families incurred for food. Our finding is coherent to this conclusion. The second most common answer was education for children. From Table 1 we know that most of the interviewees were female. For women children are a common concern.

In the third part of the survey, the business-related profile of the low income households was analyzed. The findings are given in Table 3. Only two participants of the survey operated their own businesses. One offered child care services while the other one was in the process of opening a bakery. The participant operating the day care borrowed the capital for the business from friends and family. The other business owner had accumulated family savings to cover the start up costs of the bakery. These two businesses demonstrated the potential for microcredit in Kirksville. Among the other survey participants there was an overwhelming desire to start their own businesses. Over three-fourth of the participants wanted to raise their incomes through a micro-enterprise. Those who wished to start a business, most of them had a clear idea of what kind of businesses they wanted to operate. The business ideas were divided into different categories – day care, retail, café/restaurant, arts and crafts and miscellaneous services. In the miscellaneous category most of the business ideas were related to some kind of services, like, delivery service, housekeeping, and medical billing, etc. It should be noted that most of these business ideas were labor intensive which is conducive to the concept of micro-credit.

Of the 47 survey participants who wanted to start a business, 45 of them believed that they needed some kind of funding to start a business. The responses of the participants revealed that a demand exists in Kirksville for micro-business loans. Regarding the size of the loan one fourth of the participants desired a loan of \$3000 or less while 20 percent of them wanted a loan of \$5001 - \$10,000. The majority of the participants that wanted a loan above \$10,000 wanted to start a shop or a restaurant. These are business ideas that require inventory and thereby the demand for a higher amount of loan. According to the Consultative Group to Assist the Poor (CGAP (2011)) the size of micro-loans in the U.S. can go up to \$50,000 as opposed to \$1000 in developing countries. Also, unlike the MFIs in the developing countries the MFIs in the U.S. provide various support services. When asked many participants of our survey expressed their

interest in receiving support services to help begin, promote, and manage their businesses. More than half of the survey participants, who also expressed interest in starting a business, desired some form of business support services. One third of the participants wanted traditional business support services like, accounting, marketing, and planning. Five percent of the participants desired some form of education while 7 percent were more concerned with a variety of services such as, legal advice, transportation and inventory selection. While not all the survey participants were interested in starting a small or micro business, 97% of them thought that a microcredit program in Kirksville would be beneficial for the community. The most common reasoning given was that it would provide additional income generating resources to the poor of Kirksville.

### ***Statistical Results***

Based on the demographic and economic profiles of the survey participants we analyzed the predictors of demand for micro-loan. Following Ashraf et al (2005) we carried out a probit analysis to determine the factors that affect the demand for credit by low income households in Kirksville. Table 4 records the results of the probit specification for the entire sample, women and men. We used three demographic characteristics, namely, age and gender of the survey participant and the household size. If female then the gender of the participant was given a value of 1 and 0 otherwise. Also, two economic characteristics, the employment status of the participant and the annual household income were included in the analysis. If employed then the employment status was given a value of 1 and 0 otherwise.

We find that the household size is a predictor of demand for micro-loan. This variable is statistically significant for the full sample and women. An individual who belongs to a large household will be on average 22 percentage points more likely to demand a loan. This finding is coherent with the study by Balogun and Yusuf (2011) where individuals of a larger household in rural Nigeria are more likely to demand a credit. Our analysis shows that women of a larger household on average will be 29 percentage points more likely to desire a loan while men of a larger household will be 7 percentage points less likely (statistically insignificant) to do that. This result suggests that women borrow as they care more for the children and the household. As mentioned earlier seventy percent of the world poor is women and children. For these reasons micro-credit is targeted mostly towards women. According to Littlefield et al (2003) worldwide 85 percent of the micro-credit borrowers are women.

For men the only variable that significantly influences the demand for micro-loan is age. As a male grows older he will be on average 4.3 percentage points more likely to desire a loan. This result matches with the study by Balogun and Yusuf (2011) in which they found out that rural aged men of Nigeria are more likely to desire a credit. With age men probably become more confident and experienced in demanding a loan to start their own businesses. According to our analysis employment status is a statistically significant predictor for the full sample. If an individual is an employed person he/she is on average 87 percentage points more likely to desire a micro-loan. This finding is opposite to the conventional view that an unemployed person would be more likely to demand a loan. In the context of the United States the safety net of the welfare system plays an important role. It protects the poor and the unemployed in the U.S. However, employment removes that safety net and makes the individual vulnerable. Also, it is an indication that these households view micro-loan as a way to supplement their low income from an employment.

### ***The Demand-Supply Gap***

In the last part of our survey the availability of financial services in Kirksville was analyzed. For this purpose the financial institutions as well as the low income households of Kirksville were interviewed. There are seven commercial banks in Kirksville. Of these five banks participated in our survey. Together these 5 banks have 10 branches in Kirksville. It can be safely said that there are ample financial institutions in Kirksville for a population of 17,505 to apply for

a loan. It was observed that four out of the five banks were providing small as well as micro business loans. According to the bank representatives these loans ranged from \$3000 to \$250,000. The U.S. Small Business Administration defines small business loans as loans ranging from \$100,000 to under \$1 million while micro business loans are in the amount of less than \$100,000. Altogether, these four banks have around 400 micro and small loan borrowers.

To have a better understanding of the supply of loans to the poor households the residents of Kirksville were also asked a number of questions. Out of the 60 participants, 9 people applied only for a bank loan from a bank in Kirksville and 4 among them received a loan. On the other hand, 14 participants applied only for a payday loan from a payday loan service in Kirksville and 13 of them received a loan. This information is depicted in Table 5. This shows that most of the survey participants applied for loans from a payday loan service rather than from a bank. This matches with the report by the CGAP (2011) that the underbanked households of the U.S. often turn to alternative financial services, like, payday lenders, pawn shops to manage their financial needs. These services are expensive but popular. Same idea was reflected by our survey participants. They said that it was easier for them to get a payday loan and required less paper work compared to a loan provided by the banks and other financial institutions. As noted by Zeller and Sharma (2000), in Pakistan and Cameroon less than 5 percent of the borrowings by the low income households came from a formal lending institution. Our survey findings reflect similar trend for the poor households in Kirksville. We found out that only 25 percent of the survey participants ever applied for a bank loan while more than half of those applicants were refused a bank loan. More importantly, of the 60 survey participants, 31 people, who represent 52% of the participants, never applied for a loan from any bank in Kirksville. This implies that bank loans are not viewed as an income generating option by these low income households.

In comparing the findings from the bank survey to the findings from the household survey, it can be concluded that the micro and small loan borrowers, reported around 400, the Kirksville banks finance are mostly not of the low income households. This confirms that a gap exists between the demand for small and micro loans and the supply of small and micro loans in Kirksville. This is where the NMCAA can play an important role. They can bridge the gap. As the agency tirelessly works towards improvement of the lives of the low income households in Kirksville, the poor families have more and easy access to this institution. Unlike the local commercial banks, the NMCAA can use this attribute to its advantage in extending financial services to the low income households of Kirksville.

## **Conclusion**

In an attempt to find a way to alleviate the extensive poverty of a Midwest U.S. town this research performs a feasibility study of starting a micro-credit program in Kirksville. Our evidence suggests that there is a market for micro-credit in Kirksville. We found out that an overwhelming majority of our survey participants who were of low income households had the desire to raise their income levels by starting a micro-business and thereby demanded micro-loans. It is more likely for a low income individual with a larger household and employment to apply for a micro-loan. For poor women, household size has significant influence on their demand for micro-loans; while for poor men, the significant predictor is age. Our survey finding shows that there exist a gap between the supply of the small and micro loans provided by the local banks and the demand for such loans by the low income households of Kirksville. The paper suggests that the NMCAA, a local community organization can bridge that gap by providing financial services to these poor households. Further, this survey can be replicated in any small town of the United States to investigate the feasibility of starting a micro-credit program in improving the lives of the poor.

This study has several limitations. First, it can be improved by recording detail financial information of the poor households similar to that of the Financial Diaries to identify their sources and usages of funds. This will also help to perform a better statistical analysis. Second, the survey lacks information on the existing local small businesses. Third, a rigorous survey of

the local banks is needed. It will help greatly in explaining the demand-supply gap that exists in Kirksville.

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**Table 1**  
**Demographic Profile of the Survey Participants**

Variable	Frequency	As a Percentage of All Survey Participants
<i>Age (years)</i>		
18 – 24	9	15%
25 – 45	33	55%
46 – 65	16	27%
More than 65	2	3%
Mean	39 years	
Standard Deviation	12.76	
<i>Gender</i>		
Male	22	37%
Female	38	63%
<i>Household Size (members)</i>		
1 – 3	48	80%
4 – 8	12	20%
Mean	2.65 members per household	
Standard Deviation	1.57	
<i>Number of Dependents</i>		
0	26	43%
1 – 2	27	45%
3 or More	7	12%
Mean	1.1 dependents per household	

**Table 2**  
**Economic Profile of the Survey Participants**

Variable	Frequency	As a Percentage of All Survey Participants
<b><i>Labor Market</i></b>		
Employed	21	35%
Full-time Employment	13	22%
		(62% of the employed)
Part-time Employment	8	13%
		(38% of the employed)
Unemployed	17	
Unemployment Rate	45%	
<b><i>Annual Household Income</i></b>		
Less than \$10,000	30	50%
\$10,000 - \$19,999	24	40%
\$20,000 and More	6	10%
Mean	\$10,013	
Standard Deviation	7369	
<b><i>Wants to Raise Income</i></b>		
	55	92%
<b><i>Reasons for Raising Income</i></b>		
Food & Clothing	33	55%
Children Education	12	20%
Health Service	6	10%
Other Reasons	4	7%

**Table 3**  
**Business-Related Profile of the Potential Micro Producers**

Variable	Frequency	As a Percentage of All Survey Participants
<i><b>Owns a Business</b></i>	2	3%
<i><b>Wants to Start a Business</b></i>	47	78%
<i><b>Potential Business Ideas</b></i>		
Daycare	7	12%
Retail	10	17%
Café/Restaurant	6	10%
Arts & Crafts	8	13%
Miscellaneous Services	13	21%
Not Sure	3	5%
<i><b>Wants/Needs a Loan to Start a Business</b></i>	45	75%
<i><b>Size of the Loan Desired</b></i>		
\$3,000 and Less	15	25%
\$3,001 - \$5,000	5	8%
\$5,001 - \$10,000	12	20%
More than \$10,000	10	17%
Not Sure	3	5%
<i><b>Wants/Needs a Support Service to Start a Business</b></i>	31	52%
<i><b>Types of Support Service Desired</b></i>		
Planning	8	13%
Accounting	7	12%
Marketing	6	10%
Education	3	5%
Others	4	7%
Not Sure	3	5%

**Table 4**  
**Estimation of the Determinants of Demand for Micro-Loan Using Probit Model**

	All	Female	Male
Age	0.022 (0.018)	-0.995e-03 (0.024)	0.043* (0.029)
Female	-0.134 (0.395)		
Household Size	0.222* (0.159)	0.287* (0.192)	-0.070 (0.366)
Employment Status	0.872** (0.510)	0.624 (0.643)	0.955 (0.877)
Household Income	-0.224e-04 (0.342e-04)	-0.309e-04 (0.404e-04)	0.544e-04 (0.768e-04)
Observations	60	38	22
Mean Dependent Variable	0.75	0.74	0.77

Standard errors are in parentheses. \* Significant at 10 percent; \*\* significant at 5 percent.

**Table 5**  
**The Gap Between the Demand & the Supply of Small and Micro Loans in Kirksville**

	Frequency	As a Percentage of All Survey Participants
<b>Household Survey</b>		
Applied only for a Bank Loan	9	15%
Received a Bank Loan	4	7%
Applied only for a Payday Loan	14	23%
Received a Payday Loan	13	22%
Applied for either a Bank Loan or Payday Loan	6	10%
Received either a Bank Loan or a Payday Loan	3	5%
Never Applied for a Bank Loan	31	52%
<b>Bank Survey</b>		
Number of Micro & Small Loan Borrowers	400	

