Professional Agricultural Workers Journal

Volume 2
Number 2 *Professional Agricultural Workers Journal*

6

6-1-2015

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AN ASSESSMENT OF MICROLENDING PROGRAMS IN THE ALABAMA BLACK BELT REGION

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Abstract

The objective of this study was to assess the impact of selected socioeconomic factors on microlending in the Alabama Black Belt. It used logistic regression to identify the link between borrower socioeconomic characteristics and loan repayment rate from existing and previous microloan programs. It was hypothesized that borrower gender, age, level of education, household income, and credit score has a major impact on loan repayment. The results of study indicated that only credit score had a statistically significant effect on loan repayment. This finding underscores the importance of credit score and credit repair management in existing microloan programs, given the socioeconomic characteristics of microloan program participants in the Alabama Black Belt. It was recommended that microloan programs should incorporate the requisite personal finance management outreach and Extension components due to the need to rebuild credit for those interested in microloans for personal or business use.
Keywords: Black Belt, Microlending, Socioeconomic Characteristics

Introduction

Microcredit has been called one of the most significant innovations in development policy of the past twenty-five years. It is the extension of very small loans (microloans) to impoverished borrowers who typically lack collateral, steady employment, and a verifiable credit history. The microcredit movement aims to extend small amounts of capital to poor borrowers throughout the world, typically to facilitate income-generating self-employment activities. Thus, it has popularized creative, perhaps ingenious, lending techniques (Ahlin and Jing, 2008). The origins of microcredit can be linked to several organizations founded in Bangladesh, especially the Grameen Bank. The Grameen Bank, which is generally considered the first modern microcredit institution, was founded in 1970, but institutionalized in 1983 by Muhammad Yunus. Yunus began the project in a small town called Jobra, using his own money to deliver small loans at low-interest rates to the rural poor (Grameen Bank, 2013).

The 1992 Los Angeles riots underscore the importance of economic growth in impoverished communities in the U.S. A major hindrance to economic growth in many of these areas is the lack of capital available to local entrepreneurs interested in starting or expanding a business. These individuals are traditionally unable to obtain capital through banks and other conventional lending institutions because they have insufficient collateral to qualify for a loan or they seek a loan amount smaller than what conventional lending institutions provide (Conlin, 1999). Inspired by the well-publicized achievements of Third World microcredit programs, such as the Grameen Bank and Accion International, policy-makers and development practitioners in the U.S. have shown increasing interest in replicating such programs in the inner cities. Many of them see microcredit as a promising new approach to the seemingly intractable poverty of America's urban underclass. According to one recent count, about 400 microcredit programs – run mostly by nonprofit organizations – are currently operating in the U.S. (Bhatt and Tang, 2002).

Substantial time, energy, and resources have been spent on microcredit and an array of programs to encourage economic activity in low-income communities throughout North America. These programs provide local entrepreneurs with capital to facilitate the growth of their businesses until they are capable of qualifying for loans from conventional lending institutions (Conlin, 1999).

Although efforts have been growing rapidly to establish microcredit programs in the U.S., it is unclear if such initiatives are indeed viable in the long run (Bhatt, 1999). The World Bank statistics also show a big difference in the success rate of microcredit between developing countries versus industrialized nations. In 2010, the total number of clients under microcredit in the developing world was 199,957,179 versus only 155,254 in North America and Western Europe (World Bank, 2012).

Twelve counties in Alabama, traditionally the focus Tuskegee University land grant programs, are part of the Southern Black Belt Region, an area known for its persistent poverty. Those counties are: Barbour, Bullock, Dallas, Hale, Lowndes, Macon, Marengo, Montgomery, Greene, Perry, Sumter, and Wilcox. The total population is a little more than 400,000 people, or about 12% of the state population. Although the name Black Belt is derived from the dark or rich landscape, it has also come to represent a socioeconomic crescent with predominantly African American population (Tullos, 2004). The Census Bureau (2013) reported the median household income for the afore-mentioned counties as $29,716; per capita income as $17,494, and poverty rate as 28.8% compared to $43,253 median household income; $23,680 per capita income, and 18.6% poverty rate for the State of Alabama.

In the case of the Alabama Black Belt, there is evidence of past microloan efforts that involved the Small Business Administration (SBA)-Tuskegee University (TU) Express Loan, Sumter-Greene Enterprise Community, TuskMac Community Development Corporation (CDC), Accion, Seedco/TruFund, Emerging Market Changers, and USDA Microloans Program. These programs or initiatives have reported some progress in lending to very small businesses in low-income communities. However, most lenders and programs appear to be still struggling to connect with viable borrowers, as well as viable microcredit delivery system to ensure repayment and sustainability of the programs. Given the unique characteristics of poverty and community development challenges facing the Alabama Black Belt, there is a need for evidence-based assessment about the viability and sustainability of microlending in low-income and rural communities. The objective of this study, therefore, was to assess the impact of socioeconomic factors on microlending in the Alabama Black Belt.

Previous Studies

This section summarizes relevant studies, that deal with entrepreneurship, credit, or microlending. Specifically, it includes race and entrepreneurship, credit and mortgages, credit and sustainable development, sustainability and leverage in monitored and peer-monitored lending, and social capital and its effects on earnings of borrowers. It also includes, gender and microfinance institutions, socioeconomic factors and their effects on loan repayment, microinsurance and poor households, factors affecting repayment in microfinance programs, and race, wealth gap and credit.

Green and Pryde (1990) assessed black entrepreneurship in America. The authors found majority of black business owners were between the ages of 35 and 44, which was also true of business ownership in other racial or ethnic groups. However, only 17% of black business owners were 25 to 34 years old, the lowest percentage across groups. In addition, just 1.8% of black business owners were under 25 years, which again is the lowest percentage across groups. The owner-age data suggest that if black entrepreneurship started at an earlier age, it would contribute to a reduction in the entrepreneurial gap for blacks relative to other groups.

Avery et al. (1996) analyzed credit risk, credit scoring, and the performance of home mortgages. The authors focused mainly on the role of credit risk assessment in the approval process rather than on its effects on pricing. They reported that the credit score was the key factor that influenced loan repayment.

Rahman (1999) examined the potential of microcredit programs for equitable and sustainable development in Bangladesh, using anthropological research. This involved a collection of case studies through participant observation as well as unstructured and in depth interviews. The findings indicated that bank workers were expected to increase disbursement of loans among their members and press for high recovery rates to earn profit necessary for economic viability of the institution. The author concluded that bank workers and borrowing peers inflicted intense pressure on women clients in order to ensure timely repayment of loans. Also, many borrowers maintained their regular repayment schedules through a process of loan recycling that considerably increased the debt on the individual households, increased tension and frustration among household members, produced new forms of dominance over women, and increased violence in society.

Conning (1999) studied outreach, sustainability and leverage in monitored and peer-monitored lending. The author constructed a theoretical model of the contract design problem to maximize impact, target the poor, and achieve financial self-sufficiency. Using data from 72 microfinance institutions (MFIs), Conning found that sustainable microcredit organizations that target poorer borrowers charged higher interest rates, had higher staff costs, and were less leveraged than those that target less poor borrowers.

Gomez and Santor (2001) examined the effect of social capital and neighborhood characteristics on the earnings of microfinance borrowers. The authors posited that social capital (social relations that facilitate individual action) is essential for microentrepreneurial success. Of the participants of 612 group borrowers and 52 individual borrowers, they reported that group lending and the presence of neighbors had a positive correlation with self-employment earnings; it was demonstrated that social capital is a positive determinant microentrepreneurial success.

Deshpanda and Burjorjee (2001) analyzed access and benefits for women regarding practices and innovations for MFIs. The author surveyed 29 MFIs, and found that those programs offering only individual loans or relatively high minimum loan amounts tended to have lower percentages of women clients.

Bhatt and Tang (2002) used socioeconomic data from four microcredit programs in California to determine a borrower's likelihood of repayment in U.S. programs. The results of the investigation showed that the level of education and proximity to the lending agency increased

borrower's chance of loan repayment, while the borrower's gender did not affect chances of repayment. The results in one particular program indicated that low transaction cost for loan and high borrower cost can also affect the repayment. Furthermore, lending to communities with high social capital and borrowers engaged in income generation activities also increased the chance of loan repayment.

Churchill (2002) assessed demand for microinsurance, with emphasis on poor households. The author found that poor households have extreme vulnerability to risk and external shocks. Traditionally, poor households have managed risk and coped with external shocks through a combination of informal social support networks, savings, and borrowing from informal moneylenders. It was argued that participation in microfinance programs offers another set of risk management and coping options for poor households. In addition, it was emphasized that just as a large demand for formal savings and loans exists among the poor, there is also a belief that a large demand exists for formal insurance.

Nawai and Shariff (2012) used a multinomial logit regression model to determine the factors affecting repayment performance in microfinance programs in Malaysia. Results of the study indicated that gender, formal religious education, distance to the lender office, business formality, total sales per month, total loan received, loan monitoring, and loan disbursement lag had significant effects on repayment performance. The result also showed that lack of pressure from MFIs to pay the loan may cause the clients to delay their payment or just pay minimum amounts.

Mokhtar et al. (2012) investigated the determinants of loan repayment problems among microfinance borrowers in TEKUN and YUM institutions in Malaysia. By using logistic regression model, the empirical results showed borrower's characteristic (age, gender, and type of business involved) and microcredit loan's characteristics (mode of repayment and repayment amount) were among the factors that contributed to the microcredit loan repayment problem among borrowers in Malaysia.

Center for Global Policy Solution [CGPS] (2014) analyzed the racial wealth gap and African Americans. The study reported that limited or no access to credit and higher rates of low credit scores make African American families more likely to fall victims to discriminatory and predatory lending practices perpetuated by alternative financial services providers, such as payday lenders. The study also reported that African Americans were almost 3 times less likely to have a bank account relative to Whites.

Methodology

Empirical Model

To determine the impact of selected socioeconomic factors on loan repayment, an empirical model was used and stated as follows:

LR = f (GEN, AGE, EDU, HHI, CRS)…….. (1)
Where,
LR = loan repayment
GEN = gender

AGE = age of the borrower
EDU = education
HHI = household income
CRS = credit score

The study used logit probability model to determine the relationship between the dependent variable, LR, and independent variables, GEN, AGE, EDU, HHI and CRS. Logistic regression model or logit model is a type of probabilistic statistical classification model. It is also used to predict the outcome of a categorical dependent variable.

Based on one or more predictor variables in most of cases, the model is used for estimating empirical values of the parameters which have qualitative responses. The probabilities describing the possible outcomes of a single trial are modeled, as a function of the predictor variables. Frequently logistic regression model is used to refer specifically to the problem in which the dependent variable is binary or the number of available categories is two. Logistic regression uses the equation below:

$$\log it(E[Yi/Xi]) = \log it(pi) = In(\tfrac{pi}{1-pi}) = \beta Xi \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(2)}$$

Where: E = Mathematical expectation
P = Probability
β = Coefficient of the independent variable
Y = Dependent Variable
Xi = Independent variables

For this study, the estimation model is as follows:

$$\log it(E[LR/Xi]) = \beta_0 + \beta_1\text{GEN} + \beta_2\text{AGE} + \beta_3\text{EDU} + \beta_4\text{HHI} + \beta_5\text{CRS} \ldots\ldots\ldots\ldots \text{(3)}$$

Where: E = Mathematical Expectation
P = Probability
LR, GEN, AGE, EDU, HHI, and CRS as defined in equation (1) above and measured in Table 1.

Data Collection

Data were collected using a questionnaire. The questionnaire was administered to loan applicants and targeted individuals who participated in specific loan programs. These programs were the TuskMac CDC and SBA-TU Express Loan programs. Program area of TuskMac CDC was only in Macon County, Alabama, and the program area of SBA–TU Express Loan was Barbour, Bullock, Dallas, Hale, Lowndes, Macon, Marengo, Montgomery, Greene, Perry, Sumter, and Wilcox counties. Data collected included demographic characteristics, credit worthiness, level of education, level of income, gender, and age. A sample of 35 borrower files was used to collect the needed data in the fall of 2013.

Table 1. Variables and Hypothetical Signs

Variables	Definition	Hypothesized sign
LR = Loan Repayment	Borrower loan default (1) = Borrower had no loan default (0) = Borrower had loan default	
Independent Variables		
GEN = Gender	Gender of borrower (1) =Female (0) = Male	**(+)**
AGE =Age	Age of the borrower (1) = Less than or equal to 45 years (0) = More than 45 years	**(+)**
HHI = Household income	Household income the borrower (1) = More than $25,000 (0) = Less than or equal to $25,000	**(+)**
EDU = Education	Education level of the borrower (1) = More than high school (0) = Less than or equal to high school	**(+)**
CRS = Credit score	Credit score of the borrower (1) = More than 625 (0) = Less than or equal to 625	**(+)**

Data Analysis

The study used frequency distribution and multiple regression for the analysis. The data were analyzed using Excel 14.0© (Microsoft Inc., Redmond, WA) and SAS 9.2© (SAS Institute Inc., Cary, NC). The multiple regression method used a logistic approach and maximum likelihood estimation. The results of the logit analysis were assessed through the coefficients, the *p*-values, and log odds. When the model was run, including the education variable, the overall model log-likelihood value and corresponding *P* was not statistically significant. It was determined that the education variable had a relationship with household income (i.e., multicollinearity was present). So, the education variable was dropped and the analysis was done again. This time, the overall model was statistically significant. The latter result is what is reported in the study.

Results and Discussion

Descriptive Statistics

Table 2 shows the socioeconomic variables, frequencies and percentages. Out of the 35 small loan participants, 34% were females, while 66% were males; 54% were less than or equal to 45 years old, and 46% were older than 45 years. Similarly, 54% had higher than high school education, while 46% had equal to or lower than high school education. Regarding household income, 57% had higher than $25,000 and 43% had equal to or lower than $25,000. In addition, 37% had credit score higher than 625, and 63% had credit score equal to or lower than 625.

Female participation in microloan initiatives is comparatively low, at 34%. Except in a few cases all over the world, female participation in small loan programs is lower than male participation. For example, Deshpanda and Burjorjee (2001) reported lower female participation in microfinance programs in places such as Mexico, Eastern Europe, the Arab States, Africa, South Asia, and East Asia. The majority (54%) of the participants were equal to or less than 45 years old. This is also similar to Green and Pryed (1990) who mentioned that the majority of [black] business owners were between 35 and 44 years of age. Regarding education, the finding agrees with Census (2012), which reported an average of 20% of the Black Belt entrepreneurs have a college degree. Correspondingly, regarding household income, the results for a majority are quite identical to Census Bureau (2013) which reported the median household income of the 12 Alabama Black Belt counties (Barbour, Bullock, Dallas, Hale, Lowndes, Macon, Marengo, Montgomery, Greene, Perry, Sumter and Wilcox) as $29,716. For credit score, the results are similar to CGPS (2014), which reported limited or no access to credit and higher rates of low credit scores make low-income families more likely to be victims of discriminatory or predatory lending practices.

Empirical Results

Table 3 shows the results of the logistic regression analysis. The overall chi-square value of 17.114 with a *p*-value of 0.002 indicates that the model as a whole fits significantly better than the basic or intercept only model. This means that at least one of the explanatory variables is significant. The Table also shows that among the independent variables, credit score was the only significant variable with a *p*-value of 0.002. The reason behind gender, age, and household income not being statistically significant might be due to the small size of the sample. All the variables, except gender, followed hypothesized signs. The logistic regression coefficients provide the change in the log odds of repayment as a result of one unit change in the predictor variable. For example, for every one unit increase in credit score, the log odds of loan repayment (versus non repayment) increase by 3.266 units, holding the other variables constant.

The odds ratio for credit score means that a borrower with a credit score higher than 625 is 26 times more likely to repay the loan than one with credit score equal to or lower than 625. Similarly, a female borrower is about1 time less likely to repay a loan compared to a male borrower. A borrower with an age of 45 years or less is nearly 2 times more likely to repay the loan compared to a borrower with age higher than 45years. A borrower with household income more than $25,000 is 3 times more likely repay loan compared to a borrower with household income equal to or less than $25,000.

This study found a positive relationship between age and loan repayment but the obtained value from the regression model was not significant. The result is similar to Mokhtar et al. (2003) who found socioeconomic characteristics such as age and gender, contributed to microcredit loan repayment. For gender, this study differs from the study of Mokhtar et al. as there was negative relationship with female and loan repayment. However, the gender finding is in agreement with Bhatt and Tang (2002) who found that gender had no influence on loan repayment. The significant and positive relationship between credit score and loan repayment confirms results from Avery et al. (1996). They reported that credit score was the key factor that influenced loan repayment.

Table 2. Socioeconomic Variables, Frequencies and Percentages

	Frequency	Percent
Gender		
Female	12	34
Male	23	66
Age		
Less than 45	19	54
More than 45	16	46
Education		
More than high school	19	54
Less than high school	16	46
Household Income		
More than $25,000	20	57
Less than $25,000	15	43
Credit Score		
More than 625	13	37
Less than 625	22	63

Conclusion

The objective of the study was to assess the impact of selected socioeconomic factors on microlending in the Alabama Black Belt. The descriptive statistics showed more males, younger age persons, with an education of high school or higher, with household income of more than $25,000 a year, and with lower credit scores. The results of the regression analysis showed overall significance of the model. The results also showed that among the factors, credit score was the only statistically significant factor.

Lower loan recovery rates, lower interest rates, low credit scores, and the requirement of no collateral, most likely, are the reasons for failure of many microloan programs in the Alabama Black Belt, particularly in Barbour, Bullock, Dallas, Hale, Lowndes, Macon, Marengo, Montgomery, Greene, Perry, Sumter, and Wilcox counties. Existing and new microloan programs in the Alabama Black Belt need to consider relevance of credit score when planning and implementing their programs. The close relationship between credit score and loan repayment suggests a major emphasis on credit consulting and credit rebuilding service as a part of microloan programs. Further research is needed on microloans in the Alabama Black Belt; for example, research on comparison of socioeconomic characteristics of successful

Table 3. Results of the Logistic Regression

	Analysis of Maximum Likelihood Estimates			
Parameter	β	df	P	Odds Ratio
Intercept	-2.819	1	0.054	
GEN	-0.213	1	0.832	0.808
AGE	0.632	1	0.521	1.880
HHI	1.156	1	0.392	3.176
CRS	3.266	1	0.002	26.202

Overall Test	Chi-Square	df	P
Likelihood Ratio	17.1142	4	0.002

borrowers and borrowers with high loan delinquencies could be investigated. Another example could be examining specific relationships between socioeconomic characteristics and loan repayment.

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