

Qudratullah Rahmat

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The Impact of Financial Inclusion on Poverty Reduction in Afghanistan: Case Study of Balkh Province

Qudratullah Rahmat

Abstract

This study is intended to ascertain the impacts of the financial inclusion through nonbanking financial institutions on the reduction of poverty in Balkh Province of Afghanistan. A sample of 365 people was selected using simple random sampling from the population of borrowers of three major lending and financial service institutions in this province. From the selected sample, 325 respondents could be interviewed, and 43 others were unreachable or declined to participate in the study. Using the households' mean monthly consumption as a measure of poverty, it was observed that while enforcement of financial contracts leads to forced sales of collaterals, it was not statistically significant at a level of 5%. Thus, the defaults on loans have not directly caused a decreased level of consumption among the borrowing households of this sample. Nevertheless, explanatory factors, such as lending rate and the ratio of collateral values to loan amount have negative impact on households' consumption. This implies that, a higher funding rate and repossession of collaterals with higher values lead to lower level of consumption in borrowing households. Likewise, loan terms, the level of borrowers' education, and the use of borrowed funds for business purposes have positive impact on consumption. It was also revealed that the majority of the people have borrowed money for funding nonbusiness needs.

Keyword list

financial inclusion, contract enforcement, poverty, collateral, nonbanking financial institutions, microcredit, consumption, default, repossession of collateral.

Introduction

Poverty is one of the major problems in Afghanistan. A vast portion of the population lives in rural areas where a majority of households fall under the poverty line. The primary means of living is agriculture with a limited access to official banking services. Yet, there are several lending institutions providing microcredits to rural and urban inhabitants all over the country. They provide credit facilities to farmers, individuals, and families on a customized basis. While the efficiency of these lending institutions in reducing poverty remains debatable, there is almost a universal consensus on the role of financial inclusion on poverty reduction and its incremental role in tackling poverty-relevant issues. This view is supported by field research and a wide range of literatures (Chibba, Financial Inclusion, Poverty Reduction and the Millennium Development Goals, 2009). Nearly all of the world's unbanked population, about 1.7 billion people, live in developing countries where poverty is a major issue (Kunt, Klapper, Singer, Ansar, & Hess, 2017). The Afghanistan Financial Inclusion Strategy, developed by the central bank in collaboration with the World Bank, aims to assist the unbanked population of the country with the banking and nonbanking financial services that are considered essential for alleviation of poverty (DAB, 2019).

Studies in other parts of the world have also determined that access to basic financial services substantially improves the lives of impoverished people (Ardic, Heimann, & Mylenko, 2011). In many studies, a strong relationship has been found between financial development, economic growth, and poverty reduction in different countries (Beck, Kunt, & Levine, 2004). Financial development not only reduces the poverty, but also significantly alleviates income inequality (Park & Mercado, 2015; Kappel, 2010). Pursuant to the former Millennium Development Goals (MDG), and now Sustainable Development Goal (SDG) of the World Bank, financial inclusion is one of the main goals set for governments of developing countries. Today, the majority of these countries are extending access to finance in an effort to alleviate poverty through financial inclusion. Many of these countries facilitate access to financial services through improving infrastructures, loosening regulations, and competition. However, direct intervention of government to broaden access to finance is viewed as costly and possibly even risky by some researchers (Claessens, 2006).

Afghanistan has experienced a tremendous growth in financial inclusion in the past 15 years. This has significantly transformed the living standards for many people, especially those living in cities. Enterprises have grown and markets have developed remarkably as a result of credit facilities and financial mobility in the country. Today, there is an effective culture of household and individual savings, and the competition between banks has kept pace with growth in the country's

banking sector (Rahmat, 2018). Significant intervention by nonbanking financial institutions has also helped facilitate these transformations. These organizations provide microcredit loans to rural individuals and enterprises to support industries such as handcrafts, fruit processing, beekeeping, and even small-scale cattle farming. Yet, the borrowers of nonbanking financial institutions are quite vulnerable and often have no protection against unfair treatment that might be stipulated in the loan contracts. Unfair treatment is made possible by the illiteracy of borrowers, lack of regulatory supervision and protection, disparity of the borrowers, and the high level of uncertainty associated with the provision of financial services to subprime customers. Examples of unfair practices include unaffordable rates of interest, forced sells or repossession of high-value mortgaged properties or assets given as loan collaterals, and flat interest rates charged on the loan amounts.

Description of Data

In this study, a sample size of 368 was selected from the population of borrower using a simple random sampling technique. Due to the confidentiality policies of lenders, personal information for sampling purposes was not disclosed, including the names and addresses of borrowers. We used a table of random numbers to select 368 numbers, each corresponding to one borrower in an encoded list of customers from the three nonbanking financial institutions included in the study. Then we obtained the contact numbers of the selected individuals and sought consent for interviews. From the sample of 368 people, 27 could not be reached, 16 declined to take part, and 325 individuals were successfully interviewed. Some respondent requested to be interviewed by telephone only.

Research Question/Theoretical Contextualization

The following questions are answered in this study:

1. How does financing households through the microcredit facilities of nonbanking institutions affect the living standard, measured by monthly consumption, of people in Balkh Province?
2. What are the major contractual factors associated with the microcredit facilities of nonbanking financial institutions affecting households' consumption in Balkh Province?

To measure the relationship between borrowing from nonbanking institution and monthly consumption, contractual terms and conditions such as funding rate, term of loans, collateral ratios, and funding purposes are considered as explanatory factors for consumptions.

There are several theories used to delineate the relationship between financial inclusion and poverty reduction in the literature. Some studies use the consumer choice theory to explain the role and constraints of financial inclusion (King, 2014), while others adopt financial theories. Since the financial services of nonbanking institutions in Afghanistan exist outside of the official banking system and thus do not have regulatory supervision, loan contracts are arbitrarily established by the lending agents to protect them against possible defaults, moral hazards, and disputes on the property rights of collaterals. Moreover, the majority of borrowers are rural inhabitants with limited choice and literacy and contract enforcement often results in overwhelming losses to the borrower. To model such a complex scenario, we followed the implications from the Principal-Agent Model of Financial Contracting in which a borrower (agent) makes unobservable effort to use the fund of the lending body (principal) to gain margins (Dlnnes, 1990). According to the theory, an agent becomes worse-off if the terms of default become enforceable, or both principal and agent are better-off if no default occurs. The financial effect of a default by an agent is simply a decreased level of consumption derived from the loss of a pledged asset to the benefit of principal.

Poverty is measured as the household (agent) mean monthly consumption expenditure expressed in monetary terms for a particular period of time. This method is common among developing countries where data on expenditure is more easily and accurately collected from households than their income data (Sugiyarto, 2007). While poverty is a multidimensional phenomenon (i.e. entails health, education, social status, life expectancy, and freedom), the impact of access to finance should be directly reflected in the accumulation of assets for the household. This, in turn, should lead to the reduction of poverty (Meyer, 2016).

Within the framework of Principal-Agent Model of Financial Contracting, the following linear model is specified for the relationship between poverty, expressed by households' monthly consumption, and set of explanatories:

$$HHC_i = \beta_0 + \beta_1 Enforced + \beta_2 LoanRate + \beta_3 FamSize + \beta_4 LoanTerm + \beta_5 LoanGoal + \beta_6 CollRatio + \beta_7 Educ + E$$

In this regression model, HHC_i is the household consumption, *Enforced* is the repossession of collateral when the terms of contract is enforced against a default, *LoanRate* is the interest rate of the loan as per contract, *FamSize* is the family size of the borrower, *LoanTerm* is the loan term of period, *LoanGoal* is the funding purpose, *CollRatio* is the ratio of collateral on the total amount of loan, and *Educ* is the borrower's level of education.

The household average consumption is measured in Afn. Contract enforcement and the goal of funding are dummy variables with 1 as enforced and goal as business funding, and zero otherwise (unenforced and non-business purposes). All other predictors are quantitative measures.

The least squares method is used for estimations of this model with Gauss-Markov assumptions for linear regression.

Field Research Design/ Methods of Data Gathering

Questionnaires were used to collected information from the selected respondents. Since the majority of the target population do not have sufficient literacy to fill the questionnaires, and the considerable number of respondents meant that the interview could not be conducted face to face, questionnaires were filled out by the interviewers only.

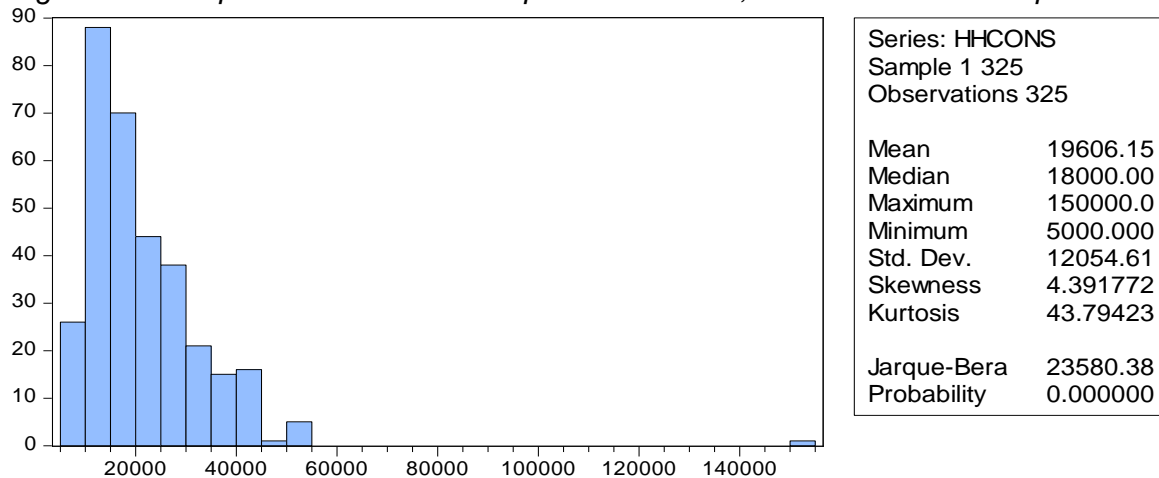
Results

The collected data was analysed using Eviews 8 after controlling for missing data, outliers, and mistakes. A summary of the outputs is presented in the following sections.

A. Descriptive Statistics of Data

The consumption data of the sample shows a positively skewed and leptokurtic distribution of consumption among the households.

Figure 1: Descriptive statistics of the dependent variable, Households' Consumption



Source: Survey Data

The descriptive statistics of all variables are presented in the table below:

Table 1: Summary of statistics of explanatory variables in the model

	HHCONS	ENFORCED	LOANRATE	FAMSIZE	LOANGOAL	COLLRATIO	EDUC	LOANTERM
Mean	19606.15	0.181538	0.180523	7.587692	0.261538	2.533538	13.10154	12.75385
Median	18000.00	0.000000	0.180000	8.000000	0.000000	2.500000	12.00000	12.00000
Maximum	150000.0	1.000000	0.220000	12.00000	1.000000	5.000000	18.00000	24.00000
Minimum	5000.000	0.000000	0.130000	4.000000	0.000000	1.200000	5.000000	6.000000
Std. Dev.	12054.61	0.386058	0.020062	1.610872	0.440150	0.666445	2.738415	2.753397
Skewness	4.391772	1.652356	-0.124674	0.345144	1.085217	0.377328	-0.389191	2.732910
Kurtosis	43.79423	3.730279	2.329042	2.756276	2.177696	2.918570	2.253330	11.54468

Source: Survey data

As indicated in the summarized statistics above, the mean monthly consumptions of the households borrowed from nonbanking financial institutions of the sample is 19,606.15 Afghanis with standard deviation of 12,054.61 Afghanis.

Analytatics of Factors

Using the specified model for this study, the following outputs are obtained using the Ordinary Least Squares method.

Table 2: Regression Output of the Model

Dependent Variable: HHCONS		Method: Least Squares		
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	22617.12	8339.157	2.712159	0.0070
ENFORCED	-2046.296	1689.639	-1.211085	0.2268
LOANRATE	-98612.86	31874.10	-3.093824	0.0022
FAMSIZE	81.78099	366.0600	0.223409	0.8234
LOANGOAL	6399.866	1595.444	4.011338	0.0001
COLLRATIO	-1709.189	920.0016	-1.857811	0.0641
EDUC	635.9883	254.8319	2.495717	0.0131
LOANTERM	695.1584	245.4898	2.831720	0.0049
R-squared	0.274507	Mean dependent var		19606.15
Adjusted R-squared	0.258486	S.D. dependent var		12054.61
S.E. of regression	10380.37	Akaike info criterion		21.35753
Sum squared resid	3.42E+10	Schwarz criterion		21.45067
Log likelihood	-3462.598	Hannan-Quinn criter.		21.39470
F-statistic	17.13487	Durbin-Watson stat		2.004089
Prob(F-statistic)	0.000000			

The relationship between households' mean monthly consumption and the set of explanatory variables is shown in the analysis. Results indicate that enforcement of the loan contracts in default is not statistically significant at a 5% level. Yet, the F-statistic and its corresponding probability shows that the joint impact of the specified factors is highly significant. In this model, the interest rate on loans has a relatively large negative impact on the mean monthly consumption of the households. The dummy variable, Loan Goal, is used to indicate if there is any difference between the impacts of loan to businesses and loan to non-business purposes. As clearly shown, there is a positive and statistically significant difference between using the fund for business and using it for other purposes. The borrower's level of education and the term of loans have positive impact on the monthly consumption of the respondents. Moreover, the Gauss-Markov assumptions for the linear model were tested at 5% level of significance and none of them were violated, except the condition for the normality for residuals. However, the model is poorly fitted and may not be suitable for forecasting purposes. In addition to the tests of assumptions, the following test were also conducted for this model.

The wald test of coefficients below indicates that the specified variables are jointly significant at any level.

Table 3: Wald Test output summary:

Test Statistic	Value	df	Probability
F-statistic	10.04381	(7, 317)	0.0000
Chi-square	70.30670	7	0.0000

Null Hypothesis: C(1)=0, C(2)=0, C(3)=0, C(4)=0, C(5)=0, C(6)=0, C(7)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(1)	22617.12	8339.157
C(2)	-2046.296	1689.639
C(3)	-98612.86	31874.10
C(4)	81.78099	366.0600
C(5)	6399.866	1595.444
C(6)	-1709.189	920.0016
C(7)	635.9883	254.8319

Restrictions are linear in coefficients.

The model stability is also tested using CUSUM method at 5% significance, and it is observed that there is no problem in terms of stability.

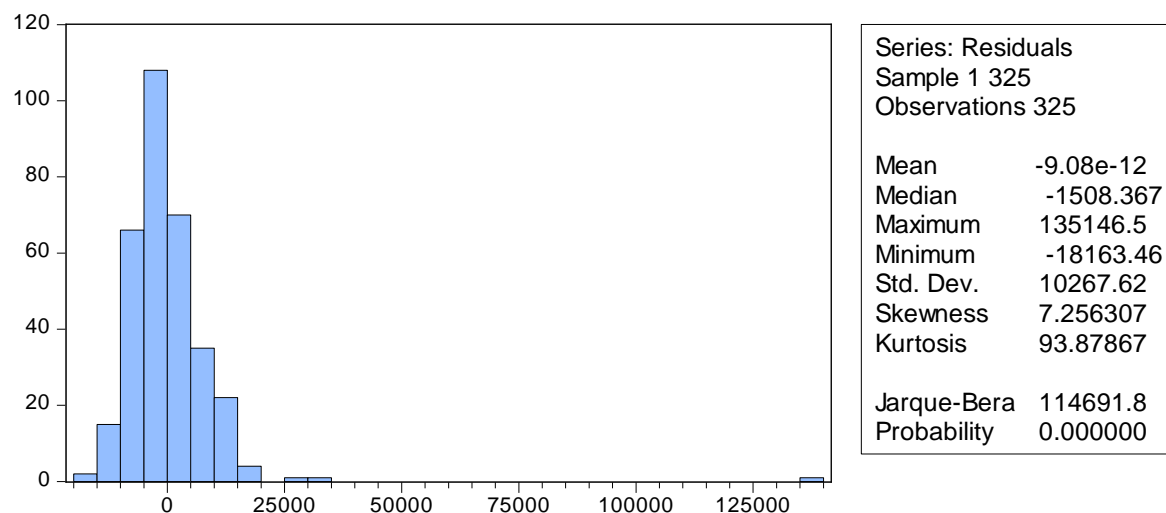
The following assumptions for the residuals are also tested at 5% level significance.

Table 4: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.496806	Prob. F(7,317)	0.1676
Obs*R-squared	10.39837	Prob. Chi-Square(7)	0.1671
Scaled explained SS	459.4128	Prob. Chi-Square(7)	0.0000

The test of Heteroskedasticity indicates that residuals are homoscedastic using Breusch-Pagan-Godfrey method. However, the normality test of residuals and the corresponding Jarque-Bera statistic shows that residuals are highly skewed to the right with leptokurtic distribution.

Figure 2: Normality test of residuals.



The reason for a skewed residual distribution is the skewness of the households' consumption as the explained variable of the model.

The collinearity test of the model, using variance inflation factors, indicates that there is no VIF greater than 5, and as a result, there is no multicollinearity issue in this model.

Discussion & Conclusion

This study indicates that, while the enforcement of loan contracts as a process of recovery leads to repossession of the pledged assets of the borrowers, it does not have any statistically significant impact on the households' levels of consumption. Nevertheless, the terms of contracts, such as funding rate and the ratio of collaterals to the amount of loans, have significant impact on mean consumption in the sample. In addition, loans used for business purposes, the level of education of the borrowers, and loan terms have been positively related with mean monthly consumption of the household in the sample. The family size of the borrower does not show a significant relationship with the consumptions at a 5% level.

Based on the outputs of the model, borrowing from the nonbanking financial institutions may not lead to decreased level of consumption as a result of contract enforcement per se. Nevertheless, the higher rate of funding and the ratio of collaterals are significantly associated with the lower level of households' consumption.

Challenges & Limitations

The mean consumption level of the respondents may not be precisely estimated as the majority of the households do not keep any proper record of their monthly expenditures. Additionally, some of the respondents may not be comfortable expressing the true level of their consumption for a variety of reasons.

Due to traditional limitations, access to women in the selected sample was not possible. The majority of the missing respondents of the sample are the women who either did not respond to the call or refused to talk about their borrowings.

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