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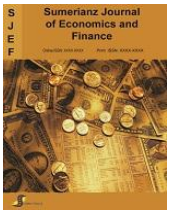

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Factors Influencing Participation in Microfinance Programs: Evidences from Eritrea

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Abstract

This study aims to identify the factors influencing participation in microfinance programs. The starting point of the analysis considers the access of the poor and low-income people to formal credit markets. Using data of 400 respondents from the city of Asmara and its environs and binary logit model, the study examines key variables influencing participation in microfinance program, namely the saving and Microcredit Program (SMCP), a local Microfinance Program. The findings of this study reveal that address, age, gender, marital status, education, bank account, house ownership, land ownership and monthly income are found to be determinants in respondent's participation in SMCP.The findings of the study also suggest that improvements in lending schemes and loan products are required to better suit the diversified needs of urban population.

Keywords: Microfinance; SMCP participation; Saving; Urban population; Eritrea

1. Introduction

The access of the poor to the formal credit market was constrained by screening barriers set by the formal financial institutions. These institutions sanction credit only for the rich and they adopt stern collateral prerequisites to minimize defaults and transaction costs, thus excluding the poor from the process. Lacking access to formal credit, most poor and low-income people continue to rely on meager self-finance or informal credit, which limit their ability to actively participate in and benefit from the development process.

Some researchers argued that the cause of poverty in developing economies, among other things, is that the poor does not have access to credit, (Jean-Luc, 2006; Pitt *et al.*, 2003) and the lack of credit opportunities kept the poor in a vicious circle of poverty. Thus, access to credit has been increasingly accepted as a powerful instrument to help poor people invest and break out of "vicious cycle" of poverty because it has the potential of improving the users incomes and savings, and consequently, enhancing capital accumulation and reinforcing high incomes (Atieno, 2001).

Scholars working in the field have early on started to indicate that micro-finance can be a panacea to alleviate poverty by witnessing institutions in Americas and Southeast Asia starting to test the notions of lending small amounts to impoverished people with success (Armendariz de Aghion and Morduch, 2005; Bakhtiari, 2011; Imai *et al.*, 2010). Accordingly the slogan "microfinance" has been well known in third world and modern world economies in the 21st century and has been promoted as an efficient development intervention program by many countries. As a result, participation in micro-finance has been increasing from time to time in several developing countries. Various studies conducted in different countries on the performance of micro-finance institutions attest to this fact (Cull *et al.*, 2007; Paolo, 2010; Zeller and Meyer, 2002). However, studies conducted in Bangladesh, Bolivia, Malawi and Madagascar confirms that participation in microfinance can be successful only if it is coupled with the provision of other complementary inputs like training, raw material supply, irrigation water, markets and sale of products (Diagne and Zeller, 2001).

Microfinance institutions typically offer small credit services with no collateral to low-income clients. Accordingly, the nature and innovations of microfinance makes the sub-sector useful tool of addressing problems of financial exclusion for the poor. Poor people's participation in microfinance gives them access to productive resources, enhances their knowledge on farm management and income generation. Moreover, it develops their bargaining and decision making power, improves their children's schooling and health, increases their self-confidence and social networking and provides them security at old age (Brian, 2001; International Food Policy Research Institute, 2000; Pitt *et al.*, 2006).

Through the formation of lending groups the poor come together in order to receive a loan. The problems of adverse selection and moral hazard are solved through peer selection, monitoring and enforcement mechanisms embedded in the system. In addition, microfinance institutions attach greater value on organized lending groups as these groups depict the importance of social capital. Nowadays generally the poor prefers microfinance institutions

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because of their attributes such as: short-term loans, frequent repayment schedules, simple application procedures, short processing periods, dynamic incentives, little or no collateral required and use of tapered interest rates.

The provision of modern microfinance services in Eritrea dates back to the late part of 1990th.There are two microfinance programs that are active in Eritrea. These programs are the Southern Zone Saving and Credit Scheme (SZSCS) and the Saving and Micro Credit Program (SMCP). Both programs make use of group-based lending with joint liability and both follow similar basic procedures. While the SZSCS is active only in the southern zone of the country SMSP is active in all zones of the country. The sample of this work is based only on data collected from SMCP clients residing in the city Asmara and its nearby environs.

The SMCP started to become active in 1996 as part of the Eritrean community development fund (ECDF). The source of funds for SMCP is the government of Eritrea, the World Bank (IDA), loans and grants from donors, and operating income. Since 2002 SMCP has been separated from the ECDF to become an autonomous unit operating under the Ministry of Local Government and nowadays its sole sponsor is the government of Eritrea.

The main aim of the SMCP is to provide financial services to the vulnerable groups in both city and urban areas of the country who have no access to formal banking services. Its long term objective is to promote the private sector in Eritrea by encouraging the establishment and expansion of micro and small enterprise managed by individuals or groups to increase their income generating ability and make them contribute their part in national development.

Eritrea is divided into six administrative regions called *Zobas*, 58 subzones, and 2,606 villages clusters, organized into 701 legally registered administration villages (*Kebabis*). In 2015, SMCP covered all administrative zones and 56 subzones. As of the end of 2015, there were 52,301 active clients from which women clients comprised 52% (which is 27,228). During the same period there were 538 village banks in all six regions of the country spread over 56 out of the 58 sub regions. Since starting its programs in 1996, SMCP has quickly expanded its microcredit activities with an extensive network in city and urban areas and take the leading role in popularizing and formalizing microcredit in Eritrea.

However, the aforementioned outreach data indicates that after twenty years of service the SMCP is able to reach only about 1.5% of the potential clienteles. This signifies that there are certainvariables that might be hindering people from participating in this program. The relevant question is then, what kind of respondent-level variables are likely to influence cityrespondents' accessibility to microcredit in Eritrea?

Researchers on microfinance have contributed immensely to the operations, sustainability and impact of microfinance programs on poverty alleviation. But little efforts have been made in literature to analyze the variables that determine the participationin microfinance loan by the poor participating in the sub-Saharan Africa in general and Eritrea in particular. It is against this background that this study aims at contributing to scarcity of the literature on the subject and is believed to make the valuable contribution by providing a base to the microfinance institutions for strengthening and expanding their support to the poor. It is; therefore, the aim of this study to generate information about the variables that influence respondents' participation in microfinance services based on a case-study of respondents who are beneficiaries and non-beneficiaries of the services provided by SMCP. Microfinance has come of age to assist in financing the poor for poverty reduction and economic growth.

2. Empirical Literature

Participation in micro-finance has been increasing from time to time in several developing countries. Various studies conducted in different countries on the performance of micro-finance institutions attest to this fact (Cull *et al.*, 2007; Paolo, 2010; Zeller and Meyer, 2002). Zeller (1994), explained that there are a number of variables that motivate or deter individuals toparticipate in microfinance programs.However, the number of worldwide participation is still below what policy makers would like to see.

Diagne and Zeller (2001) explained that respondent's decision to participate in a microfinance institution depends on the anticipated costs and benefits of participation to the respondent. Accordingly their findings showed that in microfinance programs, individuals incur time costs in compulsory training programs, screening, and monitoring and payment enforcement activities of group members in case of group lending or looking for third party guarantors in the case of individual lending. For poor respondents whose major resource is labor, the opportunity costs of participation would be also too high.

Evans *et al.* (1999), listed five sets of client-related barriers to participation and these are income, vulnerability to crisis, gender of the individual, education, and individual preferences. It is based on this suggestion that we endeavored to explore the variables that may motivate or hinder individuals from participating in a microfinance program. By this means we will review briefly some literature works done by scholars and as we will witness the results of the variables that determine participation in microfinance program are mixed in the literature.Most studies in the literature use probit/logit or tobit models to estimate the determinants of participation in microfinance program.

Mohamed (2003), conducted an empirical study examining the accessibility to formal and quasi-formal credit by farmers in Zanzibar, where socio-economic characteristics of cityrespondents such as age, gender, education attainment, and income level are identified as determinants affecting farmers' access to formal credit.

In addition, Umoh (2006), using probit model examined factors, internal and external to micro-enterprises which might affect their participation in the credit market in Nigeria and found out that income levels of firm owners and the values of initial capital to decrease the likelihood of firms demanding credit, and type of enterprise and the level of sales to increase the likelihood of firms demanding credit. Besides, Anjugam and Ramasamy (2007) indicated that variables determining participation of women in microfinance program in Tamil Nadu, India have been identified using Probit model and the findings are that the age of women and value of productive assets other than land have a

significant negative influence on their participation. However, social backwardness, indebtedness and presence of other microcredit programs in the same or nearby villages have a significant positive influence on women's participation in the program.

Duflo *et al.* (2008) in a study done in Morocco found that participation in the microfinance program is influenced more significantly by respondents' engagement in non-agricultural activities (livestock farming) and off-farming business (small shops, trading or service activities) and credit experience and repayment ability of respondents.In another study, Shan *et al.* (2008) investigated the determinants of credit program participation using binary logistic regressions and data from Karachi, Pakistan and found out that participation in credit program is significantly affected by some respondent characteristics, such as the age of the head of the family, number of income earners in the family, years of education, the respondent size and ownership of a house. Also a study conducted by Sisay (2008), empirically tested a set of important socio-variables influencing agricultural credit use among small farm respondents by differentiating the sample into credit participants and non-participants and the results revealed that large farm size andhigh investment were significant explanatory variables in distinguishing participants from non –participants.

With randomly selected data of city farmers and with univariate probit regression model, Okpukpara (2010) revealed that credit from informal institutions, education and availability of modern input in the city areas appear to be the major influencing variables in adoption of modern cassava production technologies. Thus, in this study access to credit from informal institutions appears to be the major influencing factor in adoption of modern cassava production technologies. Ayiro and Oriaku (2011), found that age, education, farm income, extension contact and distance between revenue and loan source, farmers' experience and farm size are the variables that determine smallholder farmers' access to formal microcredit in the Abia State of Nigeria.

Adebosin *et al.* (2013) have used Tobit regression model to analyze the demand for micro finance by farmers of Epe, Lagos State, Nigeria and revealed that respondent size, farm size, return from farm activities, gender, and time lag of disbursement of loan had significant effects on the demand for micro finance. In a similar note, Bhoj *et al.* (2013) using a logit model and a sample of 60 member and 30 non-member women respondents from India pointed out that age, level of education, non-farm source of income, herd size and distance to the market have a significant influence on participation in the women's diary SHGs program.

Other scholars, Kangogo *et al.* (2013) using Heckman selection model and with 174 sample data of respondents from Uasin Gishu County, Kenya shown that age, gender, education, farm size, respondent size, farm income and distance to the nearest financial institution has influenced respondent decision to join the micro-credit groups. In addition, in a study conducted in the city of Dire Dawa, Ethiopia with sample size of 203 women respondents revealed that amount of monthly saving; family size and landholding in hectares were the significant determinants of the women's participation decisions on microfinance services (Kifle *et al.*, 2013). Based on nationwide survey of microcredit beneficiaries with the objective to investigate the determinants of participation in microfinance in Musoma district, Tanzania a study by Wainyaragania (2013) indicated that characteristics of the respondenthead (gender, years of schooling, marital status and occupation), respondent characteristics (respondent size in terms of number of members) and village characteristics (distance to the market centers) affect participation in microfinance.

Obike1 and Osundu (2015) using logit multiple regression model and data from Abia state, Nigeria studied the determinants of cassava farmers' accessibility to microfinance services and found that gender, age, education, respondent size, farm size, amount of loan repaid, ownership of house and farming experience as the socio-economic variables influencing cassava farmers' access to MFIs. Other studies more or less report similar findings, for instance, whereby level of education affects the decision to participate in microfinance program see (Yusuf *et al.*, 2013).

Besides, Leza and Matewos (2017) using data of 100 respondents from Wolaita Zone, Ethiopia and ordered logit regression model they revealed that education level of the respondent head, land size, family size, access to credit and saving services and livestock ownership significantly and positively affects women's decision to participation in microfinance services while distance to market and owners perception affects negatively and significantly women's decision to participation in microfinance services.

Finally, with a total sample of 550 micro-entrepreneurs (MEs) both non-participants and participants of Cowries Microfinance Bank (CMB) and a disaggregated sample into poor MEs (305) and non-poor MEs (245) and a tobit regression model, Adijat *et al.* (2018) found that the determinants of participation in the CMB program for the poor MEs are gender, educational level, business experience, membership of a political party, respondent size, income and marital status of the respondents. The only variable that is not significant for the poor sample is age. On the other hand, for the non-poor MEs, the determinants of participation in CMB program are age, membership of a political party, education and income of the MEs.

3. Methodology

Respondent's participation in a credit program can be defined as the able and willing to borrow from different sources of credit (Diagne, 1999; Diagne and Zeller, 2001). Vaessen (2001), examined respondents' accessibility to city credit in Northern Nicaragua by analyzing both demand-side (respondents) variables and supply-side (lenders) factors. However, this study employs only the demand (respondents) side to access to microcredit in Eritrea by focusing on respondents from the city of Asmara and its environs.

The main objective of this study is to analyze the determinants that influence respondents' participation decision in microfinance services taking the case of residents of Asmara city and its environs. Hereby we employed socio-economic, institutional, demographic and other respondent-related variables that influence the level of participation

in microfinance services. A simple random sampling technique is used in selecting respondents who are both participants and nonparticipants of microfinance institution. Data is collected from both primary and secondary sources. Primary quantitative data of 400 respondents is collected using structured survey questionnaire. In addition, qualitative data is collected through key informant interviews. Out of 400 respondent 260 are participants and the remaining 140 are nonparticipants. Data is analyzed through generation of descriptive statistics and binary logit regression model. Descriptive static techniques such as percentages, means, standard deviations and frequency counts were generated for general information.

As already noted, the purpose of this study is to analyze which, how and how many of the explanatory variables are able to determine the dependent variables. The independent variables include respondent's demographics (such as age, gender and marital status) and socio-economic variables (such as income level and assets ownership) and are both continuous and dummy. The dependent variables in this case are dummy variables, which takes a value of zero or one depending on whether or not a respondentis micro finance participant or not.

In order to estimate the probability of the respondent's choice conditional on the respondent's characteristics we choose logit model, owing to the merits possessed by logit model such as approximating the normal distribution quite well and analytical convenience (Ben-Akiva and Lerman, 1985; Train, 2003). Moreover, the logit model is the most common economic method of describing how individuals choose between different alternatives and it is based on the assumption that individuals choose the alternative that provides them the highest utility.

The utility of the alternative choices (participation or nonparticipation) is dependent on the different alternative characteristics of the respondent. The utility is described as a function of these variables (variables). Let $\boldsymbol{U_n(Y_n, X_n)}$ be the utility function of respondent $\boldsymbol{n}$, where $\boldsymbol{Y_n}$ is a dichotomous variable denoting whether the individual participates in a microfinance program (1 if yes; 0 otherwise); $\boldsymbol{X_n}$ is a vector of individual respondent's characteristics. The individual will choose to participate from microcredit program if such choice implies a higher utility level compared to not participating:

$$\boldsymbol{U_{1n}}(\boldsymbol{Y_n}= 1, \boldsymbol{X_n}) > \boldsymbol{U_{0n}}(\boldsymbol{Y_n}= 0, \boldsymbol{X_n}) \quad (1)$$

Consequently, the probability that the individual respondent*n* chooses to access microcredit can be written as:

$$\boldsymbol{P}n\ (\boldsymbol{Y}n= 1) = \mathbf{Pr}\ (\boldsymbol{U}1n > \boldsymbol{U}0n) \quad (2)$$

The empirical model is specified as follows:

$$\boldsymbol{P}n\ (\boldsymbol{Y}n = 1) = \frac{1}{[1+e^{-(\propto + \boldsymbol{\beta X} n]}} \quad (3)$$

where: $\boldsymbol{Y_n}$ is dependent variable, equal to 1 if the individual respondent participate inmicrofinance program which is in this case SMCP and 0 otherwise; $\boldsymbol{P_n}$ is the estimated probability of an individual participates inmicrofinance program.

Where: $\boldsymbol{\alpha}$is a constant term;

$\boldsymbol{B}$ is a vector of coefficients for the independent variables $\boldsymbol{X_n}$;

$\boldsymbol{X_n}$ is a vector of independent variables (see Table1), including individual respondent's demographics and socio-economic characteristics.

4. Discussions and Results

4.1. Characteristics of Respondents

The data comprises of 400 respondents who are further divided into 260 participantsand 140 non-participants. Table 1 below summarizes the respondent characteristics used in the analysis for the whole sample. Out of the total 187 (46.8%) are females and 213(53.3%) are males. The results show that the overall mean age for the sample is around 43.7 years old. With respect to educational attainment, the survey divides respondents into four groups, namely illiterates (no education), primary school education, junior and high school education and finally post-secondary education. As the table indicates the vast majority of respondents are educated while only 2.3% of respondents have no education.Furthermore, the table indicates that majorities (82.3%) of the respondents are married; and as to the respondenthousehold size the average size is 4.7 members with a minimum of one and a maximum of 12 members.

Majority (66.3%) of respondents are employed in the private sector followed by those who are employed in the public sector (20.5%). Farmers and casual workers comprise only 7.2% and 6% respectively.The geographic distribution of the respondents shows that 84.8% of respondent live in Asmara metropolitan area, while the remaining 15.3% live in the suburbs. With regards to possession of savings accounts, the majority (58.8%) of the respondents claimed that they have no saving account with any financial institution.

Table-1. Description of Variables Used in Logit Model

Variables	**Statistics**	
	Frequency	Percent
Age		
19 - 40	161	40.3
41 – 60	210	52.5
61- 81	29	7.2
Gender		
Male	213	53.3
Female	187	46.8
Address		
Asmara	339	84.7
Environs	61	15.2
Marital Status		
Married	329	17.8
Single	71	82.2
Education		
No education	9	2.3
Primary School	75	18.8
Junior and High school	226	56.5
Post High School	90	22.5
Occupation		
Farmers	29	7.2
House Wives	24	6.0
Private Sector	265	66.3
Public Sector	82	20.5
Participation		
Participants	260	65
Nonparticipants	140	35
Savings Account (with any financial institution)		
Yes	235	58.2
No	165	41.3
Respondent Size		
One to six	328	82
Seven to twelve	72	18

4.2. Determinants of Participation to Microfinance

Binary logit regression model has been used to investigate individual participants-level variables that influence respondents' participation in microfinance institution. Table 2 presents the estimated results of the logit model. Largely the logistic model successfully predicted the possibility of respondents' participation in microfinance (82.31 percent). The likelihood ratio test with chi-square statistic equal to 129 with 11 degrees of freedom fails to accept the null hypothesis that the parameter estimates for the model are equal to zero, at the 5 percent level of significance. It can be concluded that the explanatory power of the logistic model is satisfactory and the model can be used to explain the probability of respondents participating in microfinance.

As a result of the logit estimates, out of thirteen variables nine are found to have significant influence on respondents' participation in the SMCP, including *ADDRESS(1)*, *AGE*, *GENDER(1)*, *MSTATUS*, *EDUCATION* (*NOEDUCATION*,*PRIMARY*, *JandSSCHOOL*, *POSTSSCHOOL*),*MINCOME*, *BANKACC*, *OWHOUSE(1) AND OWLAND(1)*.

Table-2. Logit Estimates for Respondents participation in Microfinance Program

	B	**Std. error**	**Significance**	**Exp(B)**
Constant	-2.061	.811	0.011	0.127
MINCOME	0.000	0.000	0.008*	1.000
ADDRESS (1)	-0.952	0.566	0.093*	0.386
AGE	0.032	0.013	0.016*	1.032
GENDER(1)	0.673	.269	0.012*	1.960
MSTATUS	1.209	0.371	0.001*	3.351
NOEDUCATION			0.002*	
PRIMARY(1)	1.489	1.163	0.200	4.431
JandSSCHOOL(2)	1.422	0.460	0.002*	4.146
POSTSSCHOOL(3)	1.087	0.308	0.000*	2.966
BANKACCT.(1)	0.490	0.277	0.078*	1.632
OWHOUSE(1)	0.742	0.273	0.006*	2.101
OWLAND(1)	-1.088	0.573	0.058*	0.337

*5% significance level	
-2 Loglikelihood	388.930
Cox and Snell R square	0.276
NagelKerke R square	0.380
Chi square	129.03
Total Observation	400
Degree of freedom	11

As aforementioned based on binary logit model nine variables are found to have a significant influence on the participation of respondents' participation in SMCP. The significant positive sign on *MINCOME* variable indicates that respondents with higher monthly income have higher probability of participation in SMCP. One possible reason for this result is that high income respondents tend to have more investment opportunities, leading to stronger potential need of credit support. High-income respondents may also be more confident in repaying loans if they borrow. Therefore, they are more inclined to participate. ADDRESS is a dummy variable indicating whether the respondent lives in Asmara marked with "0" or lives in the suburbs of the city denoted with "1" and the significant negative on ADDRESS (1) variable indicates that respondents locatedfar away from the city centerhave a lower probability of participation in SMCP. This could be that people living in the suburbs tend to have less investment opportunities and chronic transport problems, leading to need of credit support.

The positive sign on AGE implies that with age there is a higher probability of participation in SMCP. One explanation that we can give is that perhaps older people have more resources, capital and experience leading to greater potential need of credit support. *GENDER* is a dummy "1" for male and "0" for female and in our result GENDER (1) is found to be highly significant with a positive sign implying that being a male respondent increases the probability of participation in SMCP. This could be that males are more exposed, experienced and risk takers than their female counter parts to seek more credit to start a new venture or expand existing one. The significant positive sign attached to *MSTATUS* indicates that married people have high probability of participating in SMCP. One possible reason is that married people are usually older and having more stable life with resources, experience and vision to seek the support of more credit from SMCP.

This cluster of variables stand for education and with the exception of variable *PRIMARY (1)* all the other variables, namely *JandSSCHOOL and POSTSSCHOOL* have a positive and significant sign indicating that respondents who have acquired junior, secondary and post-secondary school education have higher probability to participate in SMCP than the poorly educated, holding other variables constant. This relationship is expected because respondents with formal education (for example, secondary or post-secondary school) are likely to have more exposure to the external environment including risks and possess more skills, and therefore they might require more credit for consumption and/or production, compared to the less educated respondents. This variable *BANKACCT (1)* stands for respondents who have a bank account with any other financial institution and the variable has a significant positive sign indicating that respondents who have an account with a bank have a higher probability to join the SMCP. This implies that respondents with more financial inclusion and exposure have the tendency to seek more and alternative credit support from SMCP.

OWHOUSE(1) is a variable representing those respondents who own their own house and has a significant and positive sign implying that respondent who have a house have a higher probability to participate in SMCP. This seems to be possible because respondents with assets such as a house have more business confidence and investment potential to seek initial or additional capital to start or to expand their business. The negative and significant variable *OWLAND (1)* stands for a respondent who have a parcel of idle landindicating that a respondent with land has a higher probability not participate in SMCP.This result might indicate that an idle parcel of land is not as productive as other assets such as house, machinery or a truck and cannot be an appealing variable for a respondent to seek credit from SMCP.

5. Conclusions

This study examines the key variables that influence the participation of respondents from Asmara and its environsin a microcreditprogram, namely SMCP. Overall, our results suggest that respondents in Asmara and its environshave incomplete participation in institutional credit including the microcredit provided by SMCP. The empirical analysis based on the logistic regression has established nine respondent-level variables to beimportant in affecting respondents' likelihood to participate in microcredit, these include respondent'sincome, address, age, gender, educational level, marital status, bank account, own a house and own land.

As reported in this study, the heterogeneous nature of respondents is essential in accounting for the differential opportunities of participating in microcredit, and therefore, simply expanding microcredit programs in city areas may be inadequate to increase participation rate by the city respondents. On the demand side, the limited participation can be largely attributed to the low or lack of credit demand by respondents for either consumption or production activities. In addition, poor respondents effectively ration themselves out of the credit market for the reasons such as inability to provide guarantor and low repayment ability arising from their poor wealth situations. One efficient way of facilitating respondents'participation in microcredit is to encourage respondents to create investment opportunities. This will give rise to additional capitalrequirement, which potentially increases residents' demand for credit.

In addition to the demand-side factors, our analysis indicates that the supply-side variables such as interest rates, guarantee requirement, and loan processing time can impair respondents'participation in microcredit program. Therefore, microfinance institutions (MFIs) such as SMCP should improve their micro lending policies (such as

simplifying lending procedures) and re-design their micro loan products that allow for more flexible terms and conditions to better suit the diverse needs of the cityresidents. These innovations (especially client-responsive loan products) are deemed to be more desirable by the poor whose living conditions are generally associated with uncertainty and vulnerability because these flexible services can help them better deal with risks and thus reduce vulnerability. Another observation in this study is that the respondents' inadequate participation rate can be due to their poor knowledge of SMCP's. Thus, to improve respondents'participation in microcredit, there is an imperative for SMCP to enhance promotion of its microcredit programs among the cityresidents and make the residents fully aware of its features (e.g., collateral free). This can be done through community meetings (or social gatherings) and advertisement via mass media such as radio and newspaper.

The strong link between repayment capacity and participation indicates that increasing residents' repayment capacity helps improve their participation rate. Hence, it is important for SMCP to combine micro loans with other services or products that help improve the efficiency of loan use, which in turn helps build up the residents' confidence in repaying loans. A useful service is to provide borrowing residents with the evaluation of profitability of the loan-supported projects. Other services may include training in cash flow and risk management.

Our findings indicate that informal finances such as friends, relatives, traders, money lender, ROSCAS (Rotating Savings and Credit Association) play an important role in meeting the credit needs of the city residents. This includes not only residents who fail to obtain financial support through formal channels (such as SMCP's), but also those who may be able to obtain formal credit but choose to borrow from informal lenders due to the potential merits of informal lenders (example, flexible lending schemes). This implies that the existence of informal finance may not simply be a result of insufficient supply of formal credit or credit rationing by formal institutions. It is likely that the different lending approaches adopted by formal and informal lenders make them cater to distinct groups of borrowers with various concerns. This is another main reason for the persistent co-existence of formal and informal finance in many developing countries including Eritrea.

Policymakers in Eritrea should re-evaluate the role of informal financial sector in credit delivery and formulate new policies regarding the development of informal finance. For example, rather than trying to eliminate the informal finance, it would be more appropriate to reinforce the linkages between the formal and informal financial sectors in Eritrea. Better linkages between the two sectors enable one sector to overcome its own weaknesses by drawing from the other's strengths, such as banks can make use of the outreach and local knowledge of informal lenders while informal lenders can benefit from formal lenders' strong resource mobilization ability and wide networks across the region. Consequently, strengthening the association between the formal and informal sectors helps expand credit delivery and improve the overall efficiency of the financial system, and hence, accelerates the development of Eritrean economy.

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