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Social Capital Dimension and Demand for Microcredit among Rural Farm Households in Kwara State, Nigeria

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Abstract
This study assessed the influence of social capital dimension and demand for credit among rural farm households in Kwara State, Nigeria. A multistage sampling technique was used to select 94 microcredit beneficiary rural farm households in the study area. Data were obtained on socio-economic characteristics, social capital variables, and microcredit use with the aid of a well-structured questionnaire. Respondents' social capital was assessed by the construction of a set of indices which includes; participation in decision making, heterogeneity of membership, cash contribution, labour contribution and density of membership indices. Data were analysed using descriptive statistics and multinomial logit. The average age of the respondent was 42.7years, household size of about 7persons. 80% of the respondents were male. Multinomial logit regression revealed that the likelihood of sourcing credit from banks, cooperatives and friends and family or money lenders is significantly ($p<0.05$) higher among the married; and rises significantly ($p<0.05$) with an increase in heterogeneity and decision making participation indexes. Also, the likelihood of sourcing credit from government agencies increased ($p<0.01$) with household size. The study thus, concluded that microcredit and social capital had a significant impact on rural household's poverty eradication. The study recommended that households should be encouraged to participate more in social groups and therefore the households should be sensitized to the need to adopt birth control policy.

Keywords: Social capital, Microcredit and Multinomial logit

Introduction

Social capital will facilitate the poor access to credit and lower it costs, improve welfare by increasing information flows and reduction in transaction costs. One of the factors contributing to information asymmetry includesthe inability of poor people to provide individual collateral, this is intended to replace physical collateral. One dominant response to tackling the issue of poverty has been to evoke a market mechanism of microcredit support. The idea is to make credit available through less access restrictive credit schemes or institutions hoping that the poor can use it to establish, grow and improve their income generation avenues and subsequently get out of poverty (de Soto, 2000). Thus the emphasis on the need for microcredit as a strategy to lift the poor out of poverty is seen more as a belief that the poor can use to access market opportunities and take steps to engage in economic activities that will enable them to generate their own incomes (Bredow, 2012). A number of factors, including limited access to credit services, poor infrastructure, small land holdings, and the nature of land tenure systems, have been identified as limiting the full exploitation of the agricultural potential in Nigeria. It is emphasized that access to micro-credit is important for investment to increase agricultural productivity and support off-farm enterprises. It is also recognized that the poor have diverse financial needs including credit for the purchase of small capital assets, working capital and consumption. (CBN, 1999) reported the significance of credit and other inputs to rural households' output and noted that the provision and use of these inputs in the right proportion are crucial to increasing output and productivity in Nigeria. Availability and proper usage of credit has also been empirically proven to enhance the productivity level of rural households in Nigeria (Okoruwa and Oni, 2002). In order to purchase inputs, the rural poor need to be able to obtain production loans. According to Von Pischke and Adam (1980), lack of access to credit by poor rural households has negative consequences for agricultural and non-agricultural productivity, income generation

and household welfare (Diagne and Zeller, 2001). However, when social capital networks or relations that affect personal interaction among members of a community are included, it facilitates the poor's access to credit and lowers its costs, improves welfare by increasing information flows and reduction in transaction costs (Bastelaer, 2000). It is often argued that the formal and informal financial sectors in developing countries including Nigeria have failed to serve the poorer section of the community. Collateral, credit rationing, preferences for high income clients and large loans, and bureaucratic and lengthy procedures of providing loans in the formal sector keep poor people outside the boundary of the formal sector financial institutions in developing countries (Anyanwu, 2004). One of the factors affecting demand for credit among rural households is the inability of the poor to provide individual collateral in reaction to an increasing number of micro finance institutions providing credit on the basis of social collateral through which the social networks to which they belong replace physical capital. This study assessed the influence of social capital dimension and demand for credit among rural farm households in Kwara State, Nigeria

Methodology

The Study Area

This study was conducted in Kwara State. Kwara State with a total of sixteen Local Government Areas has a population of 1,566,469 and a total land size of 3,682,500 hectares (21, 22). It is located between latitudes $7^0$45'N and $9^0$30'N and longitude $2^0$30'E & $6^0$25'E. The topography is mainly plain lands to slight gentle rolling. The annual rainfall ranges between 1,000mm and 1,500mm. The average temperature ranges between 30^0C and 35^0C. It also has an estimated figure of 203,833 farm families with majority living in rural areas (23). The people are predominantly farmers, but the women also engage in food processing and trading in addition to farming. The states have distinct wet and dry seasons, which characterise the humid tropical climate, with the dry season from November to March. Annual rainfall varies from about 500 mm in the northern belt to 1,100 mm in the forest belt from April to October.

Sampling Technique

A multistage sampling technique was employed for this study. The first stage involved the random selection of Kwara State from the six states in the North Central Nigeria. From which three Local Government Areas were randomly selected. This was to ensure proportional representation of the households in the study area.

From these three Local Government Areas selected, 62 "microcredit groups" were found. ("Microcredit group" are the different groups formed in the rural areas covered by the study for easy accessibility of funds, stands as guarantors and sources of information on credit sources from its members). A list of microcredit from ministry of cooperative and poverty alleviation programme in Kwara State, with a random sampling of 9microcredit groups from the 3 local government areas. In the next stage, there was a random selection of 9 "microcredit groups" from these local government areas. This selection was based on probability proportionate to size.

Method of Data Collection

Primary data were collected for the purpose of this study using a structured questionnaire. Some of the data collected include socio-economic and demographic characteristics, membership of associations; participation in the grass root institution activities and credit financing activities of the households.

Method of Data Analysis

Descriptive statistics such as frequencies, means and percentages were used for the analysis of socio-economic and social capital variables.

Multinomial Logit Model

Multinomial Logit (MNL) analysis was performed to establish factors affecting the demand for credit among rural households in Kwara state. The model was used, as adopted by Mpuga, (2004) and (2008) and Balogun, (2011). The model was used to handle the case of dependent variables with more than two classes. The advantage of multinomial logit is its computational ease and also it is relatively robust, as measured by goodness of fit or prediction accuracy (McFadden, 1984; Mazzanti, 2003; Ryan and Gerard, 2003; Pryanishnikov, 2003 and Mpuga, 2004 and 2008). The various sources of credit from which households could access credit were classified as the dependent variables. It was expected that the dependent variable D_{it} can take on one of j categories 1, 2... K (the different alternative choices/sources of credit).

In this study, five distinct credit categories namely: Banks, Cooperative societie, Government agencies, Local lenders and Relatives/families/groups were identified. It is assumed that all the alternative credit sources are mutually exclusive (in this case, credit source households patronised most were used) (Mpuga, 2004, 2008).

Let Pr (D_{it} =M/X) be the probability of observing outcome M given X, the probability model for D_{it} can be expressed thus:

$$\Pr(D_{it}=M/X) = \frac{\exp \beta_0 + \beta_1 X_{2i} + \ldots\ldots \beta_k X_{mi}}{\sum_{j=1}^{k} \exp(\beta_{0j} + \beta_{1j} X_{2i} + \ldots + \beta_{kj} X_{ni}} \quad \ldots\ldots\ldots (1)$$

for j = 1, 2, ., k. The parameters were not all identified since more than one set of parameters generated the same probabilities of the observed outcomes unless we imposed constraints on the model which is achieved by setting parameters, for example, those of the first choice category j = 1 to all be zero: $\beta_{01} = \beta_{11} = \beta_{k1} = 0$. In other words, parameters of the first choice category were used as the base against which the other choices were compared.

In this study, the choice category against which others were compared was zero demand. The choice was arbitrary and this opportunity was used to make a comparison between any groups of the alternative

categories. The log-likelihood function for the multinomial logit can thus be written as;=l

$$\ell = \sum_{i=1}^{n}\sum_{j=1}^{k} d_{ij} Log(P_{ij}) \ldots\ldots (2)$$

Where d_{ij} was a dummy variable that took the value 1 if observation i had chosen alternative j; 0 otherwise.
The first-order conditions were:

$$\frac{\delta \ell}{\delta \beta_{ij}} = \sum_{i=1}^{n} (d_{ij} - P_{ij}) X_{ij} \ldots\ldots (3)$$

The multinomial logit model could also be expressed and interpreted in terms of the odds, i.e. the odds of outcome m versus outcome n given x, indicated by $\omega_{m/n}(x)$, equal to;

$$\omega_{m/n}(xi) = \frac{\Pr(y_i = m / x_i)}{pr(y_i = n / x_i)} = \frac{\exp(x_i\beta_m) / \sum_{j=1}^{j} \exp(x_i\beta)}{\exp(x_i\beta_n) / \sum_{j=1}^{j} \exp(xi\beta)} = \frac{\exp(x_j\beta_m)}{\exp(x_i\beta_n)} \ldots\ldots (4)$$

Combining the exponents leads to the odds equation:

$$\omega_{m/n}(xi) = \exp[x_i(\beta_m - \beta_n)] \ldots\ldots (5)$$

Taking logs shows that the multinomial logit model was linear in the logit:

$$Ln\omega_{m/n}(x_j) = \exp[x_i(\beta_m - \beta_n)] \ldots.. (6)$$

The difference $\beta_m - \beta_n$, called the *contrast*, is the effect of x on the logit of outcome m versus outcome n.
Since the model is linear in the logit, it is fairly simple to compute the partial derivative:=-

$$\frac{\delta \ln \omega_{m/n}(x)}{\delta x_k} = \frac{\delta x(\beta_m - \beta_n)}{\delta x_k} = \frac{\delta x \beta_m}{\delta x_k} - \frac{\delta x \beta_n}{\delta x_k} = \beta_{km} - \beta_{kn} \ldots\ldots (7)$$

Which allows us to interpret $\beta_{km} - \beta_{kn}$ thus: For a unit change in X_k, the log-likelihood of outcome m versus outcome n is expected to change by $\beta_{km} - \beta_{kn}$ units, holding all other variables constant.
In this study's case, the choice of financial institution was modelled as a function of socio economic, demographic and social capital characteristics. This was presented as a general form equation:

$$D_{it} = f(Xi) \ldots\ldots\ldots (8)$$

Where D_{it} takes on values 1, 2,..,k if individual i chooses alternative j (including no credit and the particular source of credit for those who applied) at time t. The categorization is done because of inherent ease of accessibility.

The MNL model was operationalized empirically in this study with the following equations

$D_{0t} = \alpha_0 + {}_{10}X_1 + {}_{20}X_2 + \text{----------} + {}_{0}X_n + \varepsilon_i$ ---- (9)
$D_{1t} = \alpha_1 + {}_{11}X_1 + {}_{21}X_2 + \text{----------} + {}_{1}X_n + \varepsilon_i$ ----- (10)
$D_{2t} = \alpha_2 + {}_{12}X_1 + {}_{22}X_2 + \text{----------} + {}_{2}X_n + \varepsilon_i$ ----- (11)
$D_{3t} = \alpha_3 + {}_{13}X_1 + {}_{23}X_2 + \text{----------} + {}_{3}X_n + \varepsilon_i$ ----- (12)
$D_{4t} = \alpha_4 + {}_{14}X_1 + {}_{24}X_2 + \text{----------} + {}_{4}X_n + \varepsilon_i$ ----- (13)
$D_{5t} = \alpha_5 + {}_{15}X_1 + {}_{25}X_2 + \text{----------} + {}_{5}X_n + \varepsilon_i$ ------ (14)

The dependent variable D_i indicates when household sourced credits from source i and 0 when otherwise. Thus D_0, D_1, D_2, D_3, D_4 and D_5 represent probabilities of households selecting different credit sources (Personal Savings, Bank, NGO/Cooperative society, and Government agency, Local lenders, Relatives and family).
X_i ---- X_n represent vector of the explanatory variables where n = 1----15
$_1$-----$_2$ represent the parameter or coefficients, ε_i represented the independent distributed error term and $\alpha_0, \alpha_1, \alpha_2, \alpha_3$ showed the intercept or constant term.
The explanatory variables were selected based on Kimiyu *et al*. (2000) and Mpuga (2004) and Balogun (2011).
The Explanatory Variables include:

***Household Characteristics*:**

Age(x_1) =Age of household head (Years)
Sex(x_2) = Gender of household head (D=1 for male, otherwise D=0)
Maritals(x_3) =Marital status (D=1, married, otherwise,D=0)
HHsize(x_4) =Household size (continuous)
Schy(x_5) =Years spent in school (years)
Tolexp(x_6) =Total expenditure (Naira)
Hetero~x(x_7)= Heterrogenity index (%)
Decisindex(x_8) =Decision index (%)
Cashcontrib(x_9) =Cash contribution (Naira)
Labrcontrib(x_{10})=Labour contribution (manday)
Memdensity(x_{11})=Membership density (continous)
Meetingindex(x_{12})=Meeting attendance index (%)
Creditdist(x_{13}) =Credit distance(km)
Paybkper(x_{14}) = Payback period (month)
Interestchrg(x_{15}) =Interest charged (%)
Timelag(x_{16})=Time lag (week)

Results and Discussion

Among the most important demographic variables and social capital considered are: age, household size, gender, level of education, occupational distribution, marital status, meeting attendance, heterogeneity index, density of membership, Labour contribution Index, cash contribution Index and decision making index. The socio-economic and demographic characteristics of respondents are presented in Table 3. The average age of respondents was 42.7 years with standard deviation of 8.8 years. This indicates that a higher proportion of sampled household heads in Kwara State, Nigeria are in their active and productive years. This was in line with Balogun and Yusuf (2011). The minimum age of the respondents was 20 years while the maximum age of 76 years. Furthermore; the result revealed that the average household size is 7 with a standard deviation of 3.5. The National and micro studies confirm that larger household size is associated with a greater incidence of poverty, as measured by low household consumption or income per capita. Thus implying a high dependency

ratio in poor households, especially where the majority of the members are children or unemployed. A similar observation was made by Hassan and Babu (1991). This will have a negative impact on the household especially when they want to access microcredit facilities Also, the minimum number is zero while the maximum is 22. From the analysis, the household size is significant as one of the socio characteristics factors affecting poverty status in the study area. Majority of household members were married and the percentage value is 1.32 with standard deviation of 0.86. The result also revealed that 11.6 was the average years spent in the school which indicated that an average respondent had at least six years of primary school education and five years of post-primary school education which is higher than the minimum stipulated nine years of basic education under the universal basic education programme in Nigeria. This result is in line with the findings of the study conducted by Salimonu (2007) Delegado, 1990 and Balogun, 2011). The average occupational distribution is 2.17 with the standard deviation of 0.89.

Socio-economic Characteristics and Dimensions of Social Capital

Table 4 shows the activities of the households in the local level Institutions. Six dimensions of social capital were examined, these were: membership density of the household in local level institutions, cash contribution, heterogeneity index, labour contribution, meeting attendance and decision-making. The result revealed that households that belong to one or more associations averaged 8.4 with a standard deviation of 2.61. The meeting attendance has an average of 81.1 with the standard deviation of 31.4, implying that a household head attends at least four out of five meetings in a month. However, the average level of heterogeneity is 34.26 with a standard deviation of 14.8, while average decision making index is 75 which implies that three out of four members participated in decision-making during their association's meetings. Further result shows that the cash contribution index averaged N19047.62 with a standard deviation of ₦496.74 while the average labour contribution index was 0.257 with a standard deviation of 0.576.

Credit sources

Table 3 shows that 53.0 percent of the respondent households sourced credit from cooperative societies to finance their businesses while 22.1 percent patronised commercial banks. Minor sources of credit were from government agencies, local money lenders and family and friends, accounting for 6.49%, 2.60% and 1.94% respectively as sources of credit. The high patronage of cooperative societies' loan was due to the ease of obtaining cooperative loans without bureaucratic bottlenecks, the lower interest payable on such loans compared to commercial bank loans, and the comfortable loan repayment schedule that characterises cooperative loans. This makes cooperative loans an aspect of social capital that members exploit to the fullest.

Demand for credit and households sourcing credit from various credit institutions

The multinomial logit model was employed in order to determine the factors that affected the demand for credit among the rural households under study. From Table 6, six responses were used as dependent variables and these were banks, cooperative societies, government agencies, local money lenders, friends and family and personal individual saving which served as the base category or society reference cell. From the estimation, results revealed a log-likelihood ratio value of 422.29 with a P-value significant at 1% level indicating that the model as a whole was statistically significant. Table 6 shows that marital status, household size, total expenditure, heterogeneity index, decision making index, cash contribution, labour contribution, meeting index, payback period and interest charged were statistically significant at various levels. These showed that all these variables were important factors affecting demand for credit. From the analysis, the coefficient of marital status was positive and significant at 1% for credit sources from commercial banks, and at 10% each for cooperative societies and friends and family. This implies that being married increases the probability of acquiring credit from commercial banks, cooperative societies and friends and family. This was in line with Waite and Gallagher (2000) who noted that marriage brought an array of benefits. Also, Wilmoth and Koso (2002) noted that marriage involves long term commitment and increases the productivity and efficiency of the household through the couple's specialization in specific skills and duties. They further concluded that married individuals have access to many benefits such as health life insurance and ease of access to borrow from financial institutions.

In the case of local money lenders, the coefficient was negative and significant at 5%. This implies that being married reduces the probability of borrowing credit from local money lenders. This was in line with the findings of Balogun (2011). However, the coefficient of marital status was positive but not significant in getting credit from governmental agencies. Further analysis showed that a unit change in the marital status of the group member in the study area would enhance the probability of getting a loan from commercial banks and friends and family by 0.301 and 0.2006 respectively but in the case of cooperative and local money lenders, the probability of getting credit would be reduced by 0.0795 and 0.006 respectively. From credit demand factors, only household size was important. The coefficient was negatively signed and significant at 5%. This means that as the size of the household reduces, the probability with which a household's demand for credit from the government agency increases. This translates as the higher the membership of household size, the more the responsibilities of the household heads and the lower the chances of getting credit from Government Agencies. The reason could be that government agencies believed that increased credit for larger household size would not enable the credit to be utilized for economic activities but for up-keep of the family. Schultz (1981) observed that a high number of children and their participation in

household production would likely impede investment in their human capital and maintain low income status of the household, thereby creating or perpetuating poverty – fertility trap. The coefficient of the total expenditure of the respondent household was positively signed and significant. This implies an increase in the total expenditure of a household will increase the probability of sourcing credit from commercial banks, and decrease in the probability of sourcing credit from the cooperative (Balogun 2011). The coefficient of heterogeneity index was positively signed and significant in securing credit from commercial bank (1%), cooperative societies (10%), governmental agencies (5%) and friends and family (10%). This implies that a unit increase in heterogeneity index of the households in their local associations will bring about a decrease in the probability of sourcing credit from a commercial bank, government agency and friends and family by 0.0 321, 0.022 and 0.03111 respectively while it will bring about an increase in the probability of sourcing credit from a cooperative society by 0.0215. The probability of demanding credit from cooperative societies and local money lenders increases with participation in decision making of households. In effect, participation in decision making places households in a better position to benefit in cooperatives and local money lenders following the study of Burt (2000) who noted that those who occupy key strategic positions in the network, especially whose ties span important groups, can be said to have more social capital than their peers. This is so because their network gives them heightened access to much better resources. The coefficient of decision making index was positively signed and significant at 10% level each for credit sources of cooperative societies and local money lenders. In the case of the cash contribution of a household, a unit increase brought about an increased likelihood of demanding credit from commercial banks and cooperative societies by 0.372 and 0.225 respectively. The coefficient of cash contribution index was positively signed and significant at 1% and 10% for sources of credit from commercial banks and cooperative societies respectively. Cash contribution by household members in the association is a sign of commitment and it also serves as a source of social collateral in the credit market (Ajani and Tijani 2009, Balogun,(2011). The result revealed that labour contribution was a significant factor in demand for credit only from government agencies with the level of significance was 10%. This implies that any increase in the labour contribution index leads to an increase in the likelihood of households' demand for credit. This finding is similar to Balogun (2011). Meeting attendance was an important variable in demand for credit for commercial banks, cooperative societies and government agencies. From the analysis, the coefficient of the meeting index was positive and significant 10% and 1% for credit sources of banks and cooperatives respectively, while it was negative and significant for credit sources of governmental agencies. A unit increase in the meeting attendance index will increase the probability of demanding for credit from commercial banks and cooperative societies by 0.0339 and 0.0223 respectively. For government agencies, a unit change in meeting attendance will lead to a reduction in the probability of demanding credit. Meeting attendance solves the problem of information asymmetry among households in credit markets. It might mean that only those who actively participated in the network, captured the gains but just being a member of a high trust group is not enough (Atemnkeng, 2007).

Further analysis showed that the coefficient of payback period was negative and significant at 1% each for credit sources of commercial banks, government agencies and friends and family and 10% for cooperative societies. This shows that as the length of payback period decreases, the more likely the credit market will be ready to give out loans to households. It also implies that a unit change in the payback will lead to a change in the probability of demanding credit from banks, cooperative societies, government agencies and friends and family by 0.016, 0.0301, 0.101 and 0.0211 respectively. The interest charged on the loan collected is the cost paid by the borrower. The coefficient of interest charged by the bank, cooperative, and local money lenders were positive and significant 1% each and10%for government agencies. It shows that as the interest rate increases so also the probability of demanding credit increases and this implies that as a unit change in the interest rate, the probability of sourcing for credit from commercial banks, cooperative societies, government agencies and local money lenders will increase by 0.0292, 0.0247, 0.0314 and 0.0214 respectively. The reason was due to the household's continuous demand for credit despite an increase in the interest rate, but in the case of friends and family, the coefficient was negative and significant at 5%. This implies that as the interest rate decreases the probability of demand for credit increases. This result was in line with the belief that as interest rate increases, the demand for credit will be reduced and this could be as a result of continuing economic booming activities and the attendant rush to prepare for the next farming season. It could also be due to a high deficit supply.

Conclusion

From the empirical evidence, not all the money (loan) requested by the respondents was granted. It showed that there was still a need to have significant policies by the government to address the credit demand and supply in rural parts of Nigeria. Further analysis showed that the cooperatives and friends and family credit sources offer households greater access to credit in terms of volume, pay-back period and interest rates. However, from the multinomial logit analysis, it was observed that every household is eager to source credit from all of the credit sources regardless of the interest rate charged and the payback period of the credit. Rural households should therefore be encouraged to participate in social groups (networks) since findings revealed that belonging to social networks or group reduces the possibility of being poor in the study area.

The study revealed that less amount was granted as loan

which could not sustain the households to achieve their economic activities, therefore, it is suggested that the involvement of both private and government organizations in credit delivery should be strengthened in the area of volume and coverage and at a reduced interest rate. Social capital as an asset can help the dissemination of information useful to the poor and this has a multiple effect on the economy at large by improving growth and income redistribution; it should therefore be encouraged because it helps to reduce poverty in the rural sector.

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Table 4: Factors Affecting Demand for Credit Using Multinomial Model

Variable	Bank		Cooperative		Government Agency		Local lenders		Friends and family	
	Coefficient	Marginal Effect	Coefficient	Marginal Effect	Coefficient	Marginal Effect	Coefficient	Marginal Effect	Coefficient	Marginal Effect
Age X_1	-0.0252 (-0.87)	-0.0043	-0.0011 (-0.04)	0.0049	-0.0306 (-0.81)	-0.0009	0.0140(0.23)	0.0001	0.0570(1.00)	0.0001
Sex X_3	0.7614(1.45)	0.0407	0.5725(1.18)	-0.0164	0.3809(0.63)	-0.0088	0.6482(0.66)	0.0001	0.2371(0.23)	-0.0006
Maritalst X_4	1.0703(2.92)***	0.3011	0.5302(1.47)*	-0.0795	0.4242(0.98)	-0.0087	-1.5621(-1.65)*	-0.0061	1.0833(1.74)*	0.0007
Household size X_5	0.0104(0.14)	0.0045	-0.0022 (-0.03)	0.0034	-0.1988(-1.87)*	-0.0275	-0.2087(-1.44)	-0.0006	-0.0325(-0.35)	-0.0000
School yearX_6	0.0151 (0.39)	-0.0006	-0.0239 (0.66)	0.0043	-0.0608(-1.20)	-0.0031	-0.0584(-0.72)	-0.0002	0.0459 (0.57)	0.0000
THExpenditure X_7	0.000001 (1.92)*	0.0000	0.0000(1.71)*	-0.0000	0.0000 (0.75)	-0.0000	0.0000 (1.62)	0.0000	0.0000 (1.87)*	0.0000
Heterogenity Index X_8	0.0759(3.65)***	-0.03210	0.0831(4.16)***	0.0215	0.0492(1.93)*	-0.0221	0.02227 (0.55)	-0.0002	0.0612 (1.75)*	-0.0000
Decision Making Index X_9	0.0082(0.96)	-0.0011	0.0147(1.90)*	0.0016	0.0028(0.27)	-0.0004	0.0512(1.87)*	0.0001	0.0175(0.84)	0.0000
Cash Contribution X_{10}	0.0501(2.72)***	0.0332	0.0320(2.61)***	0.0225	0.0001(1.62)	-0.0000	0.0000(1.31)	-0.0000	-0.0000 (-0.08)	-0.0000
Labour Contribution X_{11}	0.1261(0.29)	-0.0402	0.3279(0.81)	0.0261	0.7960(1.72)*	0.0200	0.1910(0.26)	-0.0003	0.7235(1.03)	0.0007
Membership Density X_{12}	-0.0307 (-1.14)	-0.0066	0.0051(0.48)	0.0068	-0091(-0.44)	-0.0002	-0.0012(-0.05)	0.0000	-0.0685 (-0.50)	-0.0001
Meetingat X_{13}	0.0031 (0.44)**	-0.0014	0.0119(1.83)*	0.0223	-0.0099 (-1.18)	-0.0007	0.0028 (0.22)	-0.0000	-0.0004 (-0.03)	-0.0000
Credit Distance X_{14}	0.0280 (0.64)	0.0030	0.0114(0.27)	-the 0.0034	0.0400 (0.90)	0.0009	-0.0508(-0.54)	-0.0002	0.0465 (0.80)	0.0001
Payback Period X_{15}	-0.4582 (-4.18)***	0.0162	-0.5662 (-5.54)***	-0.0301	-0.4932(-3.43)***	0.0111	0.0680(0.34)	0.0016	-0.8779 (-3.20)***	-0.0005
Interest Charged X_{16}	0.1642 (4.20)***	0.0292	0.1214(3.17)***	-0.0247	0.0911(1.89)*	-0.0314	0.2837(5.08)***	0.0214	-0.2452 (-2.14)**	-0.0006
Time LagX_{17}	0.1101 (1.22)	0.0052	0.0942(1.05)	0.0029	-0.034(-0.08)	-0.0049	-0.2329(-1.11)	-0.0009	-0.0623 (-0.35)	-0.0002
Constant	-5.2391 (-2.72)***		-5.2104 (-2.85)***		0.8915(0.38)	.	-7.9511(-1.83)*		-6.6822 (-1.63)	
Observations	462		462		462		462		462	
Pseudo R^2	0.2930		0.2930		0.2930		0.2930		0.2930	
Log likelihood	-422.2904		-422.2904		-422.2904		-422.2904		-422.2904	

Absolute value of z statistics in parentheses, * significant at 10%, ** significant at 5% and *** significant at 1% Omitted category in the dependent variables are the (comparison personal saving or individual who did not borrow credit)

Source: Field Source, 2021