Agricultural Journal 4 (4): 184-191, 2009
ISSN: 1816-9155

Effects of Social Capital on Credit Access among Cocoa Farming Households in Osun State, Nigeria

[1]J.O. Lawal, [2]B.T. Omonona, [2]O.I.Y. Ajani and [2]O.A. Oni
[1]Economics and Statistics Division, Cocoa Research Institute of Nigeria, Nigeria
[2]Department of Agricultural Economics, University of Ibadan, Ibadan, Nigeria

Abstract: In Nigeria, credit access is a major problem among rural farming households due among others to lack of adequate collateral. The availability of social capital to households has been known to remove the problems associated with collateral hence improving the poor's access to credit. However, very little is known about effect of Social Capital on credit access. This study therefore, examined the determinants of Credit Access and the bi-causal relationship between Social capital and Credit Access among Cocoa Farming Households (CFH). Primary data were collected from 150 randomly selected CFHs from the cocoa producing Agricultural Development Project (ADP) Zones in Osun State with the aid of well structured questionnaire using multistage sampling procedure. In the first stage, six Local Government Areas (LGAs) were selected proportionate to the number of LGAs in each zone. In the second stage, five villages were randomly selected from the chosen LGAs using the ADP list of villages. In the last stage, 150 households were randomly selected proportionate to the number of households in the villages selected. Data collected include socio-economic, social capital and credit characteristics. Analysis was done using descriptive statistics, social capital indices and censored Tobit regression model. The average cocoa farming household size was 8.0±3.7 persons belonging to at least 3 associations, while the average age of the cocoa farming household head was 56±9.8 years. The mean credit amount accessible to the cocoa farming household was N70, 692±33474.3, 44.67 and 19.33% of the respondents got below and above the mean value, respectively, while 36% of respondents could not access credit. Cocoa farming households have meeting attendance index of 75.52% and decision making index of 6.40% in the associations. Index of heterogeneity as 56.30% in association, while, cash and labour contributions were 15.04 and 12.23%, respectively. The aggregate Social Capital Index was 25.81% in association indicating low level of social capital among the cocoa farming households. A unit increase in Social Capital would increase credit access of cocoa farming households by 0.36%. Social Capital was truly exogenous to Credit Access with no reverse causality. A unit increase in cocoa farming household size decreases ($p<0.05$) CA by 0.99 while, unit increases in years of experience, amount of credit requested, availability of collateral and cash contribution in association increases ($p<0.05$) CA of CFHs by 0.19, 0.0006, 2.22 and 0.07, respectively. Although, CFH have good meeting attendance, poor decision making and cash contribution in associations however affected their credit access. The study concludes that SC positively affect CFHs credit access.

Key words: Credit access, social capital, endogenuity, cocoa farming households, censored regression

INTRODUCTION

There is growing recognition that differences in economic outcomes, whether at the level of the individual or household or at the level of the State cannot be explained fully by differences in "traditional" inputs such as labour, land and physical capital. According to Serageldin (1996), traditional composition of capital (i.e., natural, physical or product and human capital) needs to be expanded to include social capital for sustainable development. There is also growing evidence that social capital is an element of sustainable development. Social capital, as defined by Portes (1998) stands for ability of people to secure benefits by virtue of their membership in social networks or other social structures. However, according to Narayan and Pritchette (1999), social capital refers to the internal social and cultural coherence of society, the norms and values that govern interaction among people and institutions, in which they are embedded. Also, Fukuyama (1995) defined Social capital as an instantiated set of informal values or norms shared among members of a group that permits them to cooperate with one another. Furthermore, Bastelaer (2000) regards social capital as the glue that

Corresponding Author: J.O. Lawal, Economics and Statistics Division, Cocoa Research Institute of Nigeria, Nigeria

holds societies together and without, which there can be no economic growth or human well-being. Hence, increased attention is being given to the role of social capital in affecting the well-being of households and the level of development of communities and nations.

Credit for rural smallholders, especially in agriculture, is assuming increasing importance in many parts of the world in response to the needs of less privileged entrepreneurs with limited capital base in the sector. Von Pischke and Adams (1980) asserted that credit is an important resource in the further expansion of farm businesses to which poor rural households in developing countries lack adequate access. According to development professionals, the lack of access to credit by poor rural households has negative consequences for agricultural productivity, income generation and household welfare (Von Pischke and Adam, 1980). Improved access to credit is said to be a way of helping poor rural farmers engage in more productive income generating activities both on and off the farm and to raise their living standards and productivity (Diagne and Zeller, 2001). Social ties facilitate the poor's access to credit and lower its costs, improve welfare by increasing information flows and reducing transaction costs (due to greater trust) Bastelaer (2000).

Conceptual framework for the study: Traditionally, capital has included natural capital, physical or produced capital and human capital as the wealth of nations, on which economic development and growth are based. It is now recognized that these three types of capital determine partially the process of economic growth because they overlook the way, in which the economic actors interact and organize themselves to generate growth and development. The missing link is social capital (Grootaert, 1998) (Fig. 1).

At this broad level of conceptualization, there is little disagreement about the relevance of social capital. The efforts to alleviate poverty have included analyzing the contribution of social capital to household well-being. This can be done in the context of a simple conceptual framework, which views social capital as one class of assets available to households for generating income and making access to services possible. The household has an asset endowment consisting of physical capital (land, equipment, cattle, etc.), human capital (years of schooling and work experience) and social capital (membership of associations). The household combines these assets (such as physical capital and labor) to engage in productive activities, in enterprises within the household. Like these inputs, social capital is accumulated over time and improves economic performance.

For cocoa farming households to derive benefits of credit access through social capital, they have to be members of local level associations such as the cooperatives, social/community associations, farmers' associations as the use of existing ties improves access of the poor to credit (Bastelaer, 2000). And within such associations, the farming households' density of membership, heterogeneity, decision making, meeting attendance, cash and labor contributions so also, the aggregate social capital in the associations can help them have more access to credit. This access to credit may either be constrained or unconstrained. The extent of access to credit is measured by (households' credit limit) that is, the maximum amount a household can borrow. If this amount is achievable a household is said to have access to credit. A cocoa farming household is also said to have access to a particular source of credit if it is able to borrow from that source, although for a variety of reasons it may choose not to. A household is said to be participating in accessing funds if it is borrowing from a source of credit. A household is constrained if it lacks access to credit or cannot borrow as much as it wants.

Unconstrained access to credit, then will lead cocoa farming households to improve their capacity for investment which results in increased use of farm inputs. The need for providing credit to farmers is universal because agricultural credit has been an important instrument for improving efficiency and expanding production and increasing productivity (Feder *et al*., 1990). Hence, households with better access to credit will have a greater capacity to absorb and pool risks across periods thereby stabilizing consumption over time (Eswaran and Kotwal, 1990). Furthermore, improved access to credit may indirectly serve as an insurance substitute that can induce receptiveness to adoption of new technologies when coupled with sufficient fund to finance them (Diagne and Zeller, 2001). This then leads to increased output, increased output moves them to good market for their produce, this in turn gives better income to the farming households which in no small measure improve their general welfare and ensure their food security, these results in escape from poverty for the cocoa farming households.

Social capital and credit: Literatures suggest that the use of existing ties improves the access of the poor to credit. Bastelaer (2000) examined the empirical evidence on the relationship between social capital and performance of credit delivery systems/programs in developing world. Beseley *et al*. (1993) found that Rotating Savings and Credit Associations (ROSCAs) are a response by a socially connected group to credit market exclusion and

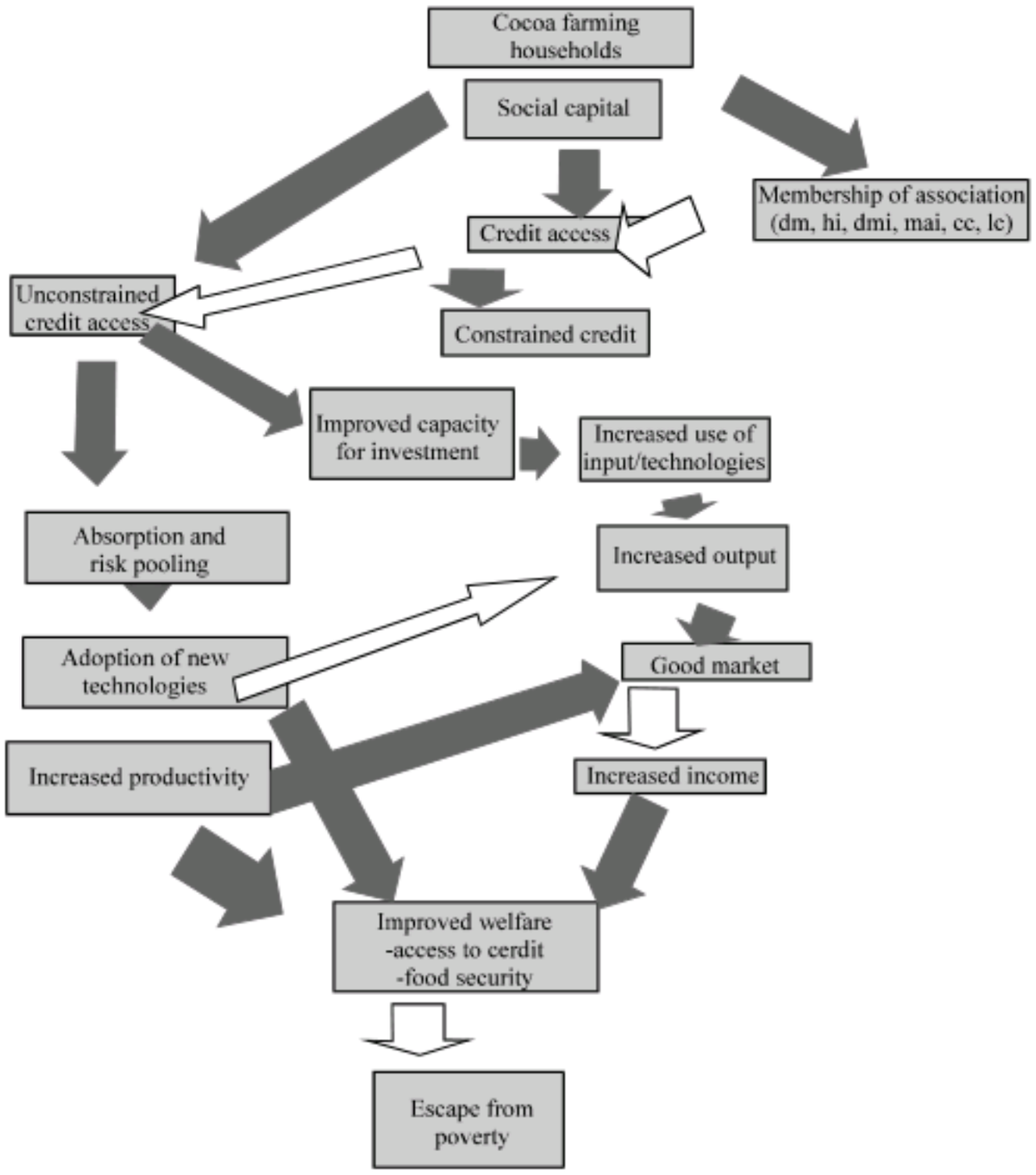

Fig. 1: Framework showing the relationship and effects of social capital, credit access on cocoa farming households escape from poverty. Author's compilation

a widespread way to crystallize social relations in an informal but yet often formally run system of internal credit delivery.

The evolution of microfinance has its root in the greater use of social network in credit administration. Muktasam (2001) observed that delivery of sustainable financial systems seems to be more successful when community strength and trust is strong. Group lending is the most visible form of financial service for the poor, which are collectively labeled microfinance. Van Den Brink and Chavas (1997), in their study of ROSCA systems in Cameroon village suggested that when properly run, this system is more efficient than other credit arrangements in the region. It reaches 90% of all households and handles thousands of transactions each year at a low cost and that ROSCA function as long as the individuals involved value the benefit of membership in the association. Hence, the assertion of Rhyne and Otero (1994) that the guarantee of groups and pressure by social network are important techniques to improve credit performance is quite valid. A growing body of literature is adding weight to the concept that social capital plays an important role in financial services to the peasant farmers and consequently the rural development process.

Werner (1998) reports that improving access to credit and savings is a major reason why Indonesian households join local associations and that one-fifth of all memberships are primarily for this purpose, with a stronger concentration in Jawa tengah which has a traditional ROSCA and with many other groups having provision for credit as their secondary objective. In the case of Indonesia, Grootaert (1999) found that households with higher social capital are better able to obtain credit and that members of financial associations are more likely to obtain credit than non-members and obtained higher credit amount as well. In the same vein, Grootaert (2001) reported that membership and active participation in other local associations whose prime objective is not financial also, contributes to credit access. This is perhaps the sense in which social capital is truly social, in that the

building of trust and network among members in the context of a social setting spills over into financial benefits. This interpretation of social capital has been proposed by several authors such as Putnam *et al*. (1993), Dasgupta (1988) and Fukuyama (1995). Sharma and Zeller (1997) report that the number of self-help groups in communities in Bangladesh has positive spillover effect on the performance of credit groups. Similar spillovers have been documented in the other sectors as well. Kahkoonen (1999) reported that community action to set up water delivery systems is aided by the existence of non-water related networks and associations in the community. Grootaert (2001) also, indicated that internal heterogeneity of associations improved access to credits and that the key dimensions which contributed to this are gender and education. In other words, the study showed spillover effect is strongest in associations whose members consisted of both men and women and who have a mixed educational background.

Evidence from Bangladesh and Madagascar suggest that economic heterogeneity in the group (especially different income sources) improves repayment rates because of the groups' better ability to pool risks.

Social capital has been found to have major impact on income of the poor by improving outcome of activities that affect them. It improves the efficiency of rural programmes by agricultural productivity, facilitation and improves access of people or household to water, credit and education (Grootaert and Bastelaer, 2002a).

Given the fact that rural farmers constitute the greater share of the agricultural labour force in the country (Akatu, 1987), this study hopes to bring to limelight the effect of social capital on credit access by cocoa farmers in Osun State, Nigeria.

The main aim of this study is to ascertain the effect of social capital on credit access by cocoa farmers in Osun state.

The specific objectives are to:

- Examine the social capital dimensions of the cocoa farmers
- Determine the influence of social capital on access to credit by cocoa farmers

MATERIALS AND METHODS

Area of study: This study was conducted in Osun State. Osun State is one of the six states constituting the Southwestern geo-political zone of Nigeria. The State shares boundary with Oyo State to the West and South, Ondo and Ekiti States to the East and Kwara State to the North.

Osun State has 30 Local Government Areas according to the 2006 census and an estimated population of 3.4 million with (an estimated) land area of 9.145 km^2. The state has an elevation of 200-1.000 m above sea level and is situated on latitude 40°E and longitude 70°N. Majority of the inhabitants are predominantly smallholder farmers who depend on agriculture for their livelihood. Osun state is the third largest producer of cocoa in Nigeria. The study was carried out in the cocoa producing zones of the state (Oshogbo and Ife/Ijesa zones) (Table 1).

Analytical techniques: The data used for the analysis were obtained through survey, using well structured questionnaire. The analytical framework for the study included descriptive and regression analyses. The descriptive analysis encompasses frequency distribution, mean and percentages. In addition, different social capital dimension indices were constructed following Grootaert (1999). The regression analysis attempts to model the determinants of credit access.

Tobit regression model on credit access by cocoa farmers: Following a Tobit decomposition framework suggested by McDonald and Moffitt (1980), the effects of changes in socio-economic and social capital variables on credit access by cocoa farmer can be obtained. The model has the capability of estimating an equation system, whereby the probability of an event happening or not can be captured in the dependent variable. This is the reason Tobit model is usually used in regression modeling to solve the problem of zero observation(s) in the dependent variable (Blundell and Meghir, 1987; Wen *et al*., 2002; Blaylock and Blisard, 1993). Hence, Tobit model will be used in this credit modeling to analyze credit access by cocoa farmers in the study area. The model follows the general form of OLS and is stated in Eq. 1 and 2:

Table 1: Osun state agricultural zones

Zones	Local government	Total
Ife-Ijesa	Atakunmosa-west, Atakunmosa-east, Ife-central, Ife-east, Ife-north, Ife-south, Ilesa, Ilesa-west, Obokun and Oriade	10
Osogbo	Boripe, Ila, Ifedayo, Irepodun, Odo-otin, Olorunda, Osogbo, Ifelodun, Ola-oluwa, Ede South, Ede North	10
Iwo	Aiyedade, Aiyedire, Egbedore, Ejigbo, Irewole, Isokan, Iwo, Orolu and Boluwaduro	10

Author's compilation, LGAs in bold were used for the study

$$AC = \theta V_i + \rho_i \text{ if } \theta X_i + \rho_i > 0 \quad (1)$$

$$AC = \theta V_i + \rho_i \text{ if } \theta X_i + \rho_i \leq 0 \quad (2)$$

where:

θ = Vector of unknown parameters
AC = Credit access by ith cocoa farmer (N)
X_i = Vector of explanatory variables
ρ_i = Random error term

RESULTS AND DISCUSSION

Social capital dimensions of cocoa farming households: Table 2 shows the mean social capital dimensions of the cocoa farming households in the study areas of the state. The Density of Membership (DM) has 62.17, 33.91 and 48.03% in zone 1, 2 and in Osun state pooled data, respectively. This is means that the proportion of cocoa farming household members in association is 6 out of 9 members in zone 1 compared to 2 out of 7 members in the second zone and 4 out of 8 members in the household in the state are members of associations. The degree of Heterogeneity (HI) is as high as 56.9% in zone 1, 55.90% in zone 2 and 56.30% in the pooled state data. This implies that the degree of diversity within the households in the different zones and in the pooled state data in terms of gender, economic capability, income, occupation within associations is above average. This means there is heterogeneity among the respondent farming households. The Decision Making Index (DMI) has 6.39, 6.41 and 6.40% in zone 1, zone 2 and in the state pooled data, respectively. The DMI values are low across the zones and in the state among the cocoa farming households in associations. This implies that most of the cocoa farming household members are not actively involved in decision making within the associations they belong to in the state. The Meeting Attendance Index (MAI) in zone one (Osogbo) shows 84.12% while, in Ife/Ijesa it is 66.91% and in the pooled data it is 75.52% meaning that generally the cocoa farming households attend most of the statutory meetings as scheduled most especially, in Osogbo zone. Cash Contribution (CC) values are generally low in th zones and state pooled data; they are 16.07, 14 and 15.04%, respectively meaning that the cash commitment to associations by the cocoa farming households is low. This shows that cocoa farming households are not contributing in cash to the associations where they belong. The same thing applied to the Labour Contribution (LC) ndex, which has 19.42, 5.05 and 12.23% in zone 1, 2 and pooled state data. The aggregate social capital index for Osogbo is 30.72%, Ife/Ijesa is 21.77% and in the overall data the value is 25.80%. This is showing that social capital status in zone 1-Osogbo is higher than in zone 2-Ife/Ijesa. This is due to the fact that value of the density of membership, heterogeneity index, meeting attendance index, cash and labour contributions are higher than what obtains in zone 2 Ife/Ijesa zone of the state. The pooled data shows that low social capital exist among cocoa farming households in the state.

Determinants of credit access: Table 3 shows, the result of the Tobit analysis for the pooled data of Osun State. The result shows that chi-square (χ^2) is 90.16 with pseudo r^2 0.1709; hence the chi-square (χ^2) is statistically significant ($p<0.01$). This indicates that the model has a good fit to the data. The pooled data for Osun State showed that household size, years of experience, age of farm, amount of credit requested, presence of collaterals and cash contribution in association by cocoa farming households as the key determinants of credit access in Osun State of Nigeria. But when, the SCI is not disaggregated, household size, educational status, years of experience, amount requested as credit, request for collateral and the type of collateral are significant determinants of credit access among CFH in the state.

More specifically, household size has the coefficient of -0.7432 ($p<0.01$) which implies that as the household size is increased by 1 unit, the credit accessible by cocoa farmers decreases by 0.7432.

Years of experience of the cocoa farmers have a significant coefficient of 0.1946 ($p<0.05$) meaning that as the years of experience in cocoa farming by the farmer increases, the credit accessible increases by 0.1946. This is due to the fact that having so many years of experience

Table 2: Summary statistics of social capital dimensions in zone 1, 2 and overall

Social capital dimensions cocoa farming households (%)	Means		
	Zone 1	Zone 2	Overall (Osun state)
Density of Membership (DM)	62.17 (39.57)	33.91 (34.99)	48.03 (39.71)
Heterogenetty Index (HI)	56.9 (11.28)	55.90 (13.84)	56.30 (12.59)
Decision Making Index (DMI)	6.39 (12.68)	6.41 (6.84)	6.40 (10.15)
Meeting Attendance Index (MAI)	84.12 (21.12)	66.91 (41.24)	75.52 (33.77)
Cash Contribution (CC)	16.07 (21.92)	14.00 (15.05)	15.04 (18.77)
Labour Contribution (LC)	19.42 (25.64)	5.05 (12.90)	12.23 (21.47)
Social Capital Index (SCI)	30.72 (37.3)	21.77 (49.85)	25.80 (44.67)

Figures in parenthesis are SD; Field survey (October-December) 2007

in farming and production of cocoa is an indication that the CFH is not likely to misuse or divert the credit to other needs it was not actually intended for.

Also, the age of cocoa farm has a coefficient of -0.1033 ($p<0.01$) which implies that as the age of the cocoa farm increases in years, the credit accessible by the CFH decreases by 0.1033. This is due to the fact that as the cocoa plantations advances in age, they are more susceptible to pest and disease attacks, which make their production drop thereby reducing the output expected compared to a younger plantation. Hence, credit giving bodies may not want to be associated with poor outputs so they apportion lesser credit to those in that category. The amount of credit requested is also significant with a coefficient of 0.0006 ($p<0.01$) meaning that unit increases in the amount requested for as credit facility leads to a 0.0006 increase in the amount accessible to CFHs. This then translates that the higher their request, the better because the application would have gone through many steps that may warrant the actual amount demanded to be reduced. Hence, asking for a higher amount of credit when applying for credit may benefit the CFHs because their applications would have been screened and reduced before disbursement.

The presence of physical collateral from the cocoa farming households in order to access credit has a positive significant coefficient of 2.2241 ($p<0.1$). This implies that the presence of collaterals is positively related to credit access by the cocoa farming households. This observation is implied and conforms to expectation, because majority of farming households have no tenable physical collaterals when it is demanded and its presence will ensure their access to credit thereby serving as a security for their credit facility.

Cash contribution has a positive coefficient of 0.0700 ($p<0.05$). This implies that increase in cash contribution of the CFH in associations; will leads to 0.0700 increases in the credit access. This observation may be due to the fact that this cash contribution, serves as a deposit and at the same time a sign of commitment in the association which increases access to credit.

Social capital and credit access: Bicausal relationship: In order to test whether social capital is truly capital, the study tested the existence of bicausalilty between social capital and credit access using instrumental variable (Table 4). In this case, a variable which determine social capital but not related to household credit access was used. Following Krishna and Uphoff (2002) and studies conducted on social capital in Indonesia, Kenya and Andean region that relied primarily and found membership in association to be a relevant indicator of measuring structural social capital. Membership in local associations and networks was used. Membership in local associations

Table 3: Determinants of social capital and credit access in Osun State, Nigeria

Variables	With multiplicative social capital index	With additive social capital index
Constant	0.6767 (0.30)	0.0809 (0.01)
Age of household head	0.0403 (0.51)	0.0050 (0.06)
Gender of household head	-1.8193 (-0.66)	0.0325 (0.01)
Household size	-0.9922 (-4.62)***	-0.7432 (-3.30)***
Literacy	0.0837 (0.06)	0.7985 (0.51)
Educational status	0.1860 (1.88)*	0.1535 (1.55)
Years of experience	0.1736 (2.14)**	0.1946 (2.38)**
Age of farm (years)	-0.06802 (-1.15)	-0.1033 (-1.88)*
Farm size (ha)	0.2887 (1.34)	0.1459 (0.61)
Amount requested	0.0007 (4.07)***	0.0006 (4.03)***
Disbursement lag	0.0307 (0.33)	0.0948 (0.99)
Interest rate	-0.03897 (-0.96)	-0.0925 (-0.24)
Request for collateral	-3.2422 (-1.70)*	-2.2960 (-1.29)
Type of collateral	0.5831 (1.86)*	0.3788 (1.34)
Presence of collateral	2.2031 (1.65)	2.2241 (1.84)*
Presence of savings	1.5124 (0.47)	1.4782 (0.49)
Land tenure	0.4526 (1.03)	-0.1620 (-0.43)
DM (%)	-	-0.0028 (-0.14)
HI (%)	-	0.0044 (0.09)
DMI (%)	-	0.0333 (0.52)
MAI (%)	-	-0.0168 (-0.87)
CC (%)	-	0.0700 (2.22)**
LC (%)	-	-0.0271 (-0.88)
Social capital index	0.0036 (0.30)	-
LR chi^2	83.28	90.16
Prob>chi^2	0.0000	0.0000
Pseudo R^2	0.1865	0.1709
Log likelihood function,	-181.6315	-218.7282

Table 4: Social capital and instrumental variable estimation

Variables	Without instrumental variable	With instrumental
Constant	0.6767 (0.30)	0.9780 (0.19)
Age of household head	0.0403 (0.51)	0.0207 (0.27)
Gender of household head	-1.8193 (-0.66)	0.2725 (0.11)
Household size	-0.9922 (-4.62)***	-0.8755 (-4.39)***
Literacy	0.0837 (0.06)	1.2127 (0.83)
Educational status	0.1860 (1.88)*	0.2377 (2.48)**
Years of experience	0.1736 (2.14)**	0.2123 (2.61)**
Age of farm (years)	-0.06802 (-1.15)	-0.1176 (-2.11)**
Farm size (ha)	0.2887 (1.34)	0.3166 (1.50)
Amount requested	0.0007 (4.07)***	0.0006 (3.88)***
Disbursement lag	0.0307 (0.33)	0.0880 (0.97)
Interest rate	-0.03897 (-0.96)	-0.1923 (-0.50)
Request for collateral	-3.2422 (-1.70)*	-3.8338 (-2.12)**
Type of collateral	0.5831 (1.86)*	0.4942 (1.67)*
Presence of collateral	2.2031 (1.65)	2.3675 (1.96)**
Presence of savings	1.5124 (0.47)	2.6193 (0.93)
Land tenure	0.4526 (1.03)	-0.0101 (-0.03)
Social capital index	0.0036 (0.30)	1.7308 (1.11)
LR chi^2	83.28	85.31
Prob>chi^2	0.0000	0.0000
Pseudo R^2	0.1865	0.1617
Log likelihood function	-181.6315	-221.1548

Figures in parenthesis are t-values significant at ***1, **2 and *10%, Dependent variable, Ln Amount of credit accessed. Number of observations (150). Computed from field data

and networks is clearly an input indicator, because the associations and networks are the vehicles through which social capital can be accumulated. This indicator resembles the use of years of schooling as a proxy for human capital. Though, this may not be a perfect instrument, it at least provides the direction of causality between social capital and credit access. If social capital is truly capital, the coefficient of the instrumental variable (membership in association) should be higher than what is obtained for the actual social capital variable in the regression. The instrumental variable estimate (1.7308) had a higher explanatory power than the actual social capital estimate (0.0036) in Table 4. This implies that the direct effect of social capital outweighs the reverse effect in the explanation of the correlation between the two variables. A reverse causality could have been accepted if there is no improvement or reduction in the R^2 as well as in the instrumental variable estimate. Since there is an improvement on both counts, one can infer the absence of significant reverse causality and thus confirm the exogenity of social capital.

A unit increase in the instrumented social capital leads to 1.73 increase in credit access for the cocoa farming households while, the actual social capital will lead to 0.36% increase in credit access. The study conclude that social capital has positive influence on credit access and it is an important factor in improving the cocoa farming households' access to credit in Osun State, Nigeria.

CONCLUSION

The research finding brings to light that social capital status among cocoa farming households in Osun State, Nigeria is low and that social capital is truly capital, it positively affects the credit access among the cocoa farmers.

The study examined the determinants of credit access using censored Tobit regression model and found that educational status, years of cocoa farming experience, amount of credit requested and presence of collateral for loan, type of collateral and cash contributions in association drives access to credit positively.

The study also sought for bi-causal relationship between social capital and credit access and found that a direct relationship exists between them. It also showed exogenity of social capital to credit access with no reverse causality.

RECOMMENDATIONS

In order to improve the credit access of the cocoa farmers in Osun State, Nigeria the following recommendations are made:

- Since, Social Capital is strongly related to Credit Access, the cocoa farming households should improve their social capital status of by belonging to associations
- Cocoa farmers' should ensure that their cash contributions in associations where they belong is enhanced as it drives access to credit positively

The government, finance houses and others in the business of giving credit facilities to cocoa farming households should give credit based on the social capital (social collateral) of the cocoa farmers as this will improve their access to credit for improved productivity and welfare.

REFERENCES

Akatu, P.A., 1987. The role of Capital availability in Productivity. In: Proceeding of the First National Conference on Productivity. National Productivity Comission. Abuja. www.northwestern.edu/african-studies/working%20papers/wp2soares.pdf.

Bastelaer, V.T., 2000. Does Social capital Facilitate the Poor's Access to Credit. SCI Working Paperno. 8. TheWorldBank,WashingtonDC.siteresources.worldbank.org/INTSOCIALCAPITAL/Resources/Social-Capital-Initiative-Working-Paper-Series/SCI-WPS-08.pdf.

Beseley, T., S. Coate and G. Loury, 1993. The economics of rotating savings and credit associations. Am. Econ. Rev., 83 (4): 249-262.

Blaylock, J.R. and W.N. Blisard, 1993. Women and demand for alcohol: Estimating participation and consumption. J. Con. Aff., 27 (2): 319-334.

Blundell, R.W. and C. Meghir, 1987. Bivariate alternative to the univariate tobit model. J. Econ., 33: 59-80.

Dasgupta, P., 1988. Trust as a Commodity. In: Gambetta, (Ed.). Trust: Making and Breaking Cooperative Relations. Oxford: Blackwell.

Diagne, A. and M. Zeller, 2001. Access to Credit and its impact on Welfare in Malawi. Research Report 116. International Food Policy Research Institute. ideas.repec.org/p/fpr/resrep/116.html-22kAliou Diagne, ManfredZeller-2001-343pagesbooks.google.com.

Eswaran, M. and A. Kotwal, 1990. Implications of credit constraints for risk behavior in less developed economies. Oxford Econ. Papers, 42: 473-482.

Feder, G.L., J.L. Justin, Y. Lin and X. Luo, 1990. The relationship between credit and productivity in chinese agriculture: A microeconomic model of disequilibrium. Am. J. Agric. Econ., 72 (5): 1151-1157.

Fukuyama, F., 1995. Trust. The Social Virtues and the Creation of Prosperity. Free Press, New York. cps.sagepub.com/cgi/reprint/38/5/574.pdf.

Grootaert, C., 1998. Social Capital: The missing link Christian Grootaert (World Bank). SCI Working Paper No. 3. siteresources.worldbank.org/INTSOCIAL-CAPITAL/Resources/Social-Capital-Initiative-Working-Paper-Series/SCI-WPS-03.pdf.

Grootaert, C., 1999. Social Capital, Household welfare and Poverty in Indonesia Social Capital Initiative Working paper No. 2148 Washington DC. World Bank. www.socialcapitalgateway.org/NV-eng-povertyquality.htm-44k.

Grootaert, C., 2001. Does Social Capital Help the Poor? Synthesis of findings from the local Level Institutions studies in Bolivia, Burkina Faso and Indonesia. Local Level Institutions Working Paper 10. World Bank, Social Development Department, Washington D.C. www.socialcapitalgateway.org/NV-ita-povertyquality.htm-43k.

Grootaert, C. and Thierry Van Bastelaer, 2002a. The role of Social capital in Development: An empirical Assessment. Cambridge University Press, New York.

Kahkoonen, S., 1999. Does Social Capital Matter in Rural Water Delivery? A Review of Literature. Social Capital Initiative Working Paper. Washington D.C.: World Bank. www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2001/10/12/000094946_0109270407067/Rendered/.../multi0page.pdf.

Krishna, A. and N. Uphoff, 2002. Mapping and Measuring Social Capital Through Assessment of Collective Action for Conserve and Develop Watersheds in Rajasthan, India. In: Christiaan Grootaert and Thierry Van Bastelaer (Eds.), The Role of Social Capital in Development: An Empirical Assessment. New York: Cambridge University Press, pp: 85-124.

McDonald, J.F. and R.A. Moffit, 1980. The uses of Tobit analysis. Rev. Econ. Stat., 62 (2): 318-321. www.palgrave-journals.com/ijea/journal/v8/n2/full/ijea20089a.html.

Muktasam, A., 2001. Why rural credit programs fail: Lessons learned from Indonesian rural development programs. Paper presented at Micro-finance for Agricultural Producers in NTB, Indonesia Workshop, November 15th. www.dthr.ab.ca/resources/documents/.../MeasuringCommunityCapacity-StateoftheFieldReviewandRecommendationsforFutureResearch.

Narayan, D. and L. Pritchett, 1999. Cent and Sociability: Household Income and Social capital in Rural Tanzania. Econ. Dev. Cul. Ch., 47 (4): 871-897.

Portes, A., 1998. Social capital: Its origins and applications in modern sociology. Ann. Rev. Soc., No. 24, pp: 1-25.

Putnam, R.D., R. Leonardi and R.Y. Nanetti, 1993. Making democracy work: Civic traditions in modern Italy. Princeton, N.J.: Princeton University Press.

Rhyne, E. and M. Otero, 1994. Financial Services for Microenterprises: Principles and Institutions. The New World of Microenterprise Finance. In: Maria Otero and Elisabeth Rhyne (Eds.). West Hartford: Kumarian Press.

Sharma, M. and M. Zeller, 1997. Repayment performance in group-based credit programs in Bangladesh: An empirical analysis. World Develop., 25 (10): 1731-1742. www.ifpri.org/pubs/abstract/120/rr120ref.pdf.

Serageldin, I., 1996. Sustainability as opportunity and the problem of social capital. Brown J. World Affairs, 3 (2): 187-203. www.serageldin.com/SpeechDetail.

Van Den Brink, R. and J.P. Chavas, 1997. The microeconomics of an indigenous african institution: The rotating savings and credit association. Econ. Dev. Cul. Ch., 45: 745-772.

Von Pischke, J.D. and D.W. Adams, 1980. Fungibility and the design and evaluation of agricultural credit projects Am. J. Agric. Econ. 62 (4): 719-726.

Wen, S.C., I. Kimiko, T. Kiyoshi and T. Yuki, 2002. Analysis of Food Consumption Behaviour by Japanese Household. FAO Repository Document. ESA Working Paper No. 4, pp: 30-34. www.riceweb.org/publications/wrrc/wrrcPDF/_0WRRC_complete.pdf.

Werner, S., 1998. Local Level Institutions and Collective Action. Mimeo, Social Development Department. Washington, DC: World Bank. www.worldbank.org/html/dec/Publications/Workpapers/wps2000series/ wps2148/wps2148.pdf.