# Effect of Social Capital on Access to Credit among Rural Women Ginger Farmers in Jema'a Local Government Area of Kaduna State

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## ABSTRACT

Rural women farmers are often faced with social and institutional related challenges in accessing credits for their production activities in developing countries. This study was carried out to examine the social capital and access to credit among rural women ginger farmers. A multi-stage sampling method was employed to select 230 respondents for the study. Structured questionnaires were used to collect primary data on socio-economic characteristics, credit and social capital variables of the farmers. Descriptive statistics and Tobit regression model were used to analyse the data. Respondent's average age was about 46 years. Heterogeneity index (46.0%), cash contribution (40.2%) and density of membership were low compared to meeting attendance (68.8%) decision making index (63.2%). Age (ß = -6.62; p< 0.05), farm size (ß = 0.00033; p< 0.05),Meeting attendance (ß = 0.295; p< 0.001), cash index (ß = 0.0008, P< 0.001) and decision making (P< 0.001) index were important factors determining access to credit among the respondents in the study area. The study recommends ginger farmers to increase farm sizes and ensure good labour supply, theyshould  be very active in their various association and cooperative societies to further enhance their social network and capital.

**Key words**: Social Capital, Credit, Access, Rural women, and Ginger Farmers.

## Introduction

Ginger (Z*ingiber officinale Rosce*) belongs to the family of *Zingiberaceae*. It is a slender perennial plant with thick and branched underground stem (rhizome). It is a root crop grown mostly as cash crop as well as local consumption in southern part of Kaduna State Nigeria. The country is one of the five major producers/exporters of the crop others are China, India, Jamaica, and Brazil (Asumugha, 2002). Nigerian ginger is known to produce the highest quality essential oils mainly oleoresin and gingerol. It is also valued for their aroma and pungency.

In most part of the world, agricultural production is central to the overall well-being of the populace. As a result, different countries place high premium on agriculture and strive to develop and protect the sector, thereby guaranteeing sustainable food supply. Over 75% of the Nigerian farming 75% population are mostly rural dwellers sustained by agricultural activities, yet accounting for less than 5% of the foreign exchange earnings making the sector largely subsistent and underdeveloped (Omotesho *et al*., 2007). Amongst the challenges to this under development is poor access to needed credit and capital for the household farmers. It is evident that access and proper usage of credit enhance productivity level of rural households in Nigeria (Okoruwa and Oni, 2002; Balogun, 2011).

The importance of agricultural credit to national development varies from country to

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country. Provision of credit is closely related to providing needed resources which farmers cannot source from their own savings. One of the factors affecting demand for credit among rural households is inability of the poor to provide individual collateral in reaction to an increasing number of micro finance institutions providing credit (Balogun, 2011).This situation, combined with poor information about potential borrowers, credit worthiness, poor formal credit national policy and paucity of formal credit contributes to a virtual exclusion of this group of borrowers from formal credit markets (Bastelaer, 2000; Olagunju, and Ajiboye, 2010). Enabulele *et al.* (1999), Anyiro (2015), pointed out that limited access to credit from the formal financial institutions prompted most households in some rural communities to organize themselves into financial groups in order to meet their financial and social needs.

The motivation and the unifying interest amongst members in such groups is known as social capital (Vonderlack and Schremier, 2002; Ogunrinola, 2011). Social capital entails a little change of the economic behaviour of the farmer, his social relationships and local knowledge with little commercialization. Social capital stands for the ability of actors to secure benefits by virtue of membership in social networks or other social structures. Therefore the recognition that social capital as an input in a household's or a nation's production function has major implications for development policy (Portes, 1998 and Grooteart, 1999). It suggests that the acquisition of human capital and the establishment of a physical infrastructure need to be complemented by institutional development in order to reap the full benefits of these investments.

Serageldin (1996) and Lawal *et al.* (2009) noted that differences in economic outcomes can better be fully explained by differences in traditional inputs such as land, labour and physical capital implying that the traditional composition of capital (i.e., natural, physical and human capital) needs to be expanded to include social capital for sustainable development. Social Capital is required for effective acquisition and use of improved inputs and adoption of new technologies yet gleaning through literature and empirical findings Okunmadewa *et al.*, (2005); Yusuf; (2008); Yusuf, (2009) and Ogunrinola, (2011) have shown that most rural communities are under-banked and where such privileges abounds, efforts on these programmes have largely remain unfelt.

In Nigeria, several attempts have been made to enhance farmers' accessibility to credit through a multiplicity of institutional designs nevertheless; access to credit by women farmers is still highly restricted. The credit control mechanism put in place by governments to enhance farmers accessibility to formal credit remain largely ineffective therefore, the promotion of social interaction among poor women farmers may need to complement the traditional formal credit mechanism. Furthermore, both developed and developing nations has accredited the importance of social networks and access to credit in development process (Portes, 1998; Grooteart, 1991; Okunmadewa *et al.*, 2005; Bezanson, 2006; Sewamela *et al.*, 2006., Yusuf, 2008; Kuada, 2009; Lawal *et al.*, 2009; Yusuf *et al.,* 2009 and Ogunrinola, 2011),

Also, there had been studies on gender accessibility to productive resources in production among ginger farmers, but there is no known empirical quantitative analysis on social capital, ginger women farmers and access to credit in the study area. The crucial importance of social capital and neighbourhood effect had often been

excluded from previous studies. Several studies have recognized increased agricultural productivity as a means for reducing rural poverty (Thirtle *et al*., 2003; Prabha and Chatterjee, 2009; Prabha and Chatterjee, 2010) therefore among other things; this study is expected to contribute to literature. It is against this backdrop that, this study sought to provide answers to the following research questions: Are there local level associations and credit institutions in the study area to which ginger farmers belong? Whether the existing social capital plays any vital role in the transformation of the rural financial system of the ginger farming households in the area? and What is the effect of social capital on the respondent's access to credit?

## Methodology

### Study area.

The focus area for the study was Jema'a Local Government Area of Kaduna State, Nigeria with headquarters at Kafanchan. It has an area of 1,661 km² and a projected population of 408,549 (Kaduna State Bureau of statistics, 2018). Agriculture is the main occupation of the people with about 80% of them actively engaged in farming. The Local Government Area is well suited for the production of cash and arable crops such as groundnuts, maize, yam, beans, guinea corn, millet, ginger, rice, cassava, sugarcane, shea nuts, cowpea, mango, cocoyam, cassava, timber, banana, soya bean, corn, onions, sorghum and potatoes. During the dry season, a considerable number of people engage in irrigation farming along rivers and other water bodies, mainly growing vegetables. Ginger cultivation has a comparative advantage in the study area hence they are the leading producers in the country. The crop is cultivated either as a sole crop or in mixed with other crops. Animals reared in the area include cattle, sheep, goats and pigs (Yusuf, 2009).

### Sampling Technique

Multistage sampling technique was used to select respondents for the study. The Local Government consists of twelve wards; namely; Asso, Atuku, Barde, Gidanwaya, Godogodo, Jagindi, Kafanchan 'a', Kafanchan 'b',Kagoma, Kaninkon, Maigizo 'a' Takau 'b'. First, five wards were randomly selected; also one village each where intensity of ginger farming is high was selected using proportional sampling technique from each of the wards making a total of five (5) villagesanda total of 230 respondents as shown in table 1 below.

Table 1.Sampling Size

| Village/Town | No of Respondents | Percentage |
|---|---|---|
| Barde | 50 | 21.74 |
| Asso | 44 | 19.13 |
| Kanock | 48 | 20.86 |
| Kava | 42 | 18.26 |
| Kwarabe | 46 | 20.00 |
| **Total** | **230** | 100 |

### Method of Data Collection and Analytical Techniques

Primary data used for the study were sourced using well-structured questionnaire. The Local Level Institutions mapping was conducted for each village (LLIM). Data on socio-economic status, types of associations and local network in the villages were collected. Respondents were asked to supply data on their participation; contributions,

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decision making, labour contribution and meeting attendance. Descriptive statistics such as means, percentages, standard deviations and.Tobit regression analysis was used to identify the factors influencing access of the respondents to credit

**Modelling /Model Specification**

The Tobit statistical model proposed by Tobin was used to estimate the effect of respondents socio-economic and socio-capital variables on access to credit as adopted by Olagunju and Ajiboye (2010) and Meshal *et al*, (2017). The model is specified as follows:

If $Y_i = \beta_i X_i + \varepsilon_i \ i = 1,2,3, \ldots \ldots n$

$$Y_i = Y^*_i = \begin{cases} Y_i = Y_i^* \ if \ Y_i^* > 0 \\ Y_i = 0 \ if \ Y_i^* \leq 0 \end{cases} \quad (1)$$

Where $Y_i^*$ is a latent dependent variable, $Y_i$ the observed dependent variable, $X_i$ is the vector of the independent variables, $\beta_i$ is the vector of coefficients and $\varepsilon_i$ is an error term assumed to be independently normally distributed :
$\varepsilon_i \sim N(0, \sigma^2)$ and therefore $Y_i \sim N(\beta_i X_i, \sigma^2)$. It should be noted that the observed 0's on the dependent variable could mean either a true 0 or censored data. Since the focus is, interpreting the dependent variable as a probability of making a choice, given information's on the independent variable $X_i$, then there is a need for transformation over theentire real line into a probability of between (0 and 1) thus the cumulative probability function provides a suitable transformation. Since all probabilities lie between 0 and 1, the range of cumulative probability function is (0,1) interval (Osuntogun 1997; Olagunju and Ajiboye 2010). Thus

$$F(X_i, \beta) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{Y_i} e^{\frac{-s^2}{2}} ds \qquad (2)$$

s is a random variable which is normally distributed with mean zero, and unit variance. Thus, the probability that $Y_i = 1$ i.e the credit source approves a loan is a function of the independent variables. So that,

$P_i = P_r(Y_i = 1) = P_r(\mu_{1i} > \mu_{2i})$
$= P_r(\beta_I X_i + \varepsilon_{1i} > \beta_2 X_i + \varepsilon_{2i}$
$= P_r[(\varepsilon_{1i} - \varepsilon_{2i} > X_i(\beta_2 + \beta_I)]$
$= P_r(\mu_i > X_i \beta)$
$.P_i = P_r(Y_i = 1) = F_i(X_i, \beta)$
(3)

Where,

$P_r$ = a probability function, $\mu_i$ = a random disturbance term $(\varepsilon_{1i} - \varepsilon_{2i})$; $\mu_i \sim N(0, \sigma^2 1)$

$X = the \ n \ x \ k \ matrix$ of explanatory variables, $\beta \equiv k \ x \ 1$ Vector of parameters to be estimated, $F(X_i \beta) =$ cumulative distribution function for $\mu_i$ evaluated at $X_i \beta$.

We can specify the linear combination of observable explanatory variables as a linear form,

$$Y^*_i = \beta X_i + \mu_i \qquad (4)$$

Algebraically,

$Y_i = \beta_0 + \beta_2 X_{2i} + \beta_n X_N$
$+ \ldots \ldots \ldots \ldots, 1,2 \ldots \ldots N$

Such that

$$Y_i = \begin{cases} 0 \ if \ Y_i^* \leq T \\ Y_i^* \ if \ 0 < Y_i^* < 1 ; (i = \\ 1 \ if \ Y_i^* > T \end{cases}$$
$1,2, \ldots \ldots, n) \quad (5)$

Where,

$Y$ = Observable dependent variable e.g the size of the loan approved by the ith lender.

$Y_i^*$ = Non-observable latent variable representing the continuous dependent variable when decision is made on the loan size (example loan approved).Tobit model is often used to study lending decisions in agricultural institutions where the institution decides on how much it prefers or wishes to give an applicant (Olagunju and Ajiboye,

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2010). The lending institution might wish that it could make a "negative response" to an unworthy candidate by not giving him any amount. In that case the underlying propensity to lend to a particular candidate can be imagined to include negative as well as positive values, with ₦0 representing a censored negative observation. In this study the data was configured and modelled via Tobit, the dependent variable is then censored at zero. Furthermore, the dependent variable was calculated for each women as access rate, that is, (Volume of money approved by lender divided by the volume requested by the borrower).

T = non-observable threshold (cut-off) point

N = Number of observation

Estimating equation (9) using Ordinary Least Square (OLS) produces biased and inconsistent estimate because $\mu_i$ the disturbance term is a function of the independent variables. This is why a more appropriate model is the "Tobit" estimation with an iterative maximum Likelihood Algorithim (Vogel 1981; Olagunju and Ajiboye 2010). In this case the Tobit gives an asymptotically normal parameter estimates. The functional form is as presented below

$$.L = \sum_{T=1}^{s} log[1 - F(\sigma Y_T - I_T)] + \sum_{T=s+1}^{N} log f(\sigma Y_T - I_T) \quad (5)$$

Where, F and f are the cumulative normal function of $\mu_i$, and T is the critical (cut-off) values which translate $Y_i^* > T$, as lender approves, and $Y_i^* \leq T$, as lender rejects the loan application. The following variables were included in the model.

Age of households head (years), Education level of Household (years spent in School), Payback Period (years), Farm Size (ha), Household Size, Farming Experience (years), Heterogeneity index (diversities of membership of the three most important institutions ), Cash contribution index (dues and any other form of contributions ), Meeting attendance (sum of attendance of household members at meetings in relation to the number of scheduled meetings), Labour contribution index (the number of days that household members worked for their institutions per year), Decision making index (ratings of participation in decision making of the three most important institutions),Density of membership (number of active household membership in existing associations),Interest on Loan, $\varepsilon_0$ =error term and $\beta_0$ = constant terms.

**Social Capital Dimension Measurement.**

This study focused on six of the social capital indices adopted by Grootaert, (1999) and Yusuf, (2008). The measurement of each is as described below.

**(a) Density of membership**: It was measured by the number of active household membership in existing associations. An account of the associations at local level institution was made; to each household member was then given that inventory to indicate which association they belong. The proportion of membership of association by individuals was found and rescaled to 100

**(b) Heterogeneity index:** Here each household response to questions on diversities of membership of the three most important institutions to them was aggregated. Each household were then requested to answer questions on the internal homogeneity of the group. Applying the approach of Lawal*et al.,* (2009), the three most important associations for each household were identified. For those associations, a number of supplementary questions were asked including the internal homogeneity of the group. This was rated according to twelve criteria: neighbourhood, kin group, same occupation, same economic status, same religion, same political, gender, same age,

and same level of education, cultural practices, belief and trust. Hence, for each of the factors a "Yes" response was coded 2 while "No" was coded 1. A maximum score of 24 for each association represents the highest level of heterogeneity. The score of the three associations was averaged for each household by dividing by maximum score 72 to obtain the index. The resulting index was then multiplied 100 (whereby a zero value represents complete homogeneity and 100 correspond to the highest heterogeneity).

**(c) Decision Making index.** The sum of the subjective responses on households' ratings of participation in decision making of the most important institutions to them was calculated and averaged across the number of groupsand then multiplied by 100. Respondents were asked to evaluate subjectively whether they were "very active" "active" or "not very active" "passive" "very passive" or not participating in the group's decision making. These responses were scaled between 4 and 0, respectively and averaged across the three most important groups in each household. The responses was averaged across the three associations and multiplied by 100 for each household.

**(d) Cash contribution Index:** This was the total sum of all contributions made (dues and any other form of contributions) by the respondents to the various associations to which they are members.

**(e) Labour contribution index:** The labour contribution index was measured as the number of days that household members worked for their institutions per year. This was rescaled to hundred (100) based on the total numbers of days members are expected to work for their institutions.

**(f) Meeting attendance index:** This is obtained by summing up the attendance of household members at meetings and relating it to the number of scheduled meetings by the associations they belong to. This value was then multiplied by 100.

**Results and Discussion**

**Mapping of the Various Farmers Association in the Study Area.**

Different types and member of ginger households in local level institutions is presented in Table 2. The result shows that 10.87% of the sampled ginger farmers were from Iyanoma cooperative group while 9.13% and 9.13% were from Numawang and Tamiko ginger association respectively. However, 10.0%, 6.96% and 4.78% of the ginger farmers belonged to Bakiwuya, Khinock and Welenfu associations respectively. In providing credit to rural-asset poor, institutional innovations that combine prudent lending principles that are not based on physical asset has become increasingly important (Yaron, 1994 and Manohar and Zellar, 1997; Manor and Zellar 1997). Given the level of participation of members in association activities because of economic gains, people are always willing to join the groups (Balogun 2011, Grace, 2019)

Table 2. Different types and member of ginger households in local level institutions

| Names of association | Frequency | Percentage |
|---|---|---|
| Babeka | 9 | 3.91 |
| Bakiwuya farmers Association | 23 | 10.00 |
| Igemase Farmers | 18 | 7.82 |
| Itangiwani Welewfu ginger association | 12 | 5.22 |

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| | | | |
|---|---|---|---|
| Iyanoma association | 25 | 10.87 | |
| Kauna ginger farmers association | 16 | 6.96 | |
| Khinock association | 16 | 6.96 | |
| Kinfolu ginger Association | 16 | 6.96 | |
| Numawang ginger association | 21 | 9.13 | |
| Salama ginger association | 18 | 7.82 | |
| Tiamako ginger association | 21 | 9.13 | |
| Welenfu women association | 11 | 4.78 | |
| Women Development association | 12 | 5.22 | |
| Yimi ginger association | 12 | 5.22 | |
| **Total** | **230** | **100** | |

## Socio- Economic Characteristics of the Respondent

Table 3 profiles the socio-economic characteristics of the respondent. The result reveals that respondent's average age was about 46±11.25 years, indicating that they were economically active. The sampled ginger farmers had one form of education or the other with an average of 10 years of school education. Over 46% respondents had minimum primary school education; the level of education recorded is capable of affording respondent's access to credit. Also, the findings shows that most (56%) of the respondents were married suggesting that majority of them are responsible and probably have family responsibilities that requires expenditure of cash from time to time hence cultivation of cash crops to enhance the family earnings. The mean ginger farmer's years of farming experience in the study area were about 29 ±10.27 years meaning that an average ginger farmer has good experience in ginger farming?

Table 3.Socio- economic characteristics of the respondents.

| Variable | Frequency | Percentage | Mini | Max | Mean | Stand. Deviation |
|---|---|---|---|---|---|---|
| **Educational level of your household head** | | | 6 | 16 | 10 | 10.16 |
| Primary Education | 106 | 46.09 | | | | |
| Secondary education | 51 | 22.17 | | | | |
| Tertiary education | 73 | 31.74 | | | | |
| **Age** | | | 20 | 70 | 46 | 11.25 |
| 11-20 years | 13 | 5.65 | | | | |
| 21-30 years | 28 | 12.17 | | | | |
| 31-40 years | 51 | 22.17 | | | | |
| 41-50 years | 92 | 40.00 | | | | |
| 51 -60 | 44 | 19.13 | | | | |
| Above 61years and above | 9 | 3.91 | | | | |
| **Marital Status** | | | | | | |
| Single | 81 | 35.22 | | | | |
| Married | 129 | 56.09 | | | | |
| Divorced | 5 | 2.17 | | | | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Widow | 10 | 4.34 | | | | |
| Widower | 4 | 1.74 | | | | |
| **Farming experience** | | | 10 | 60 | 29 | 10.27 |
| 21-30 years | 55 | 23.91 | | | | |
| 31-40 years | 88 | 38.26 | | | | |
| 41-50 year | 32 | 13.91 | | | | |
| Greater than 50years | 55 | 23.91 | | | | |
| **Total** | 230 | 100 | | | | |

## Source of credit to Ginger Farmers

The various Forms of access to credit by the women farmers in the study area areas shown in Table 4. Three major categories of women ginger farmers were identified in the study area with regards to access and sources of credit. The result indicates that 76.08% of the farmers had access to informal sources such as cooperatives and farmers associations. The share of agricultural Bank loans had been falling in Nigeria below the minimum level prescribed by the Central Bank although multiplicity of institutional designs has been put in place to enhance farmers' access to credit. Olagunju and Ajiboye, (2010), reports that the declining trend has continued to persist due to lack of commitment to the concessional interest rates, high rate of default and delinquency, high transaction costs and low credit recovery rates and patronage This result indicates that the social network/capital in the area is highly responsible for ginger farmer's source of loans.

Table 4.Forms of access to credit by the women Farmers in the study area.

| Sources to Credit | Frequency | Percentage (%) |
|---|---|---|
| Formal Institutions (Banks) | 25 | 10.87 |
| (Cooperatives/Associations) | 175 | 76.09 |
| No Credit at all | 30 | 13.04 |

## Status of Social Capital among Ginger Farming Households

Table 5 shows the different dimensions of social capital among the ginger farming' households. The mean density of membership index (DM) was below average (45.3%) for the study area. Also, cash Contribution Index (CCI) was generally low (40.2%). Although members were fully aware of the benefits of contributions to group associations, it was noted that members complained of hard times and that the down turn in the economy during the period of the study which may impact negatively on the group financial activities. Afolami, Obayelu, Agbonlahor, Lawal-Adebowale (2012) and Iyanda*et al* (2014) reports that poor financial strength of groups could result into a major constraint to group activities and development and that the extent of membership financial contributions has a superseding effect on group's sustenance.

On labour contribution index (LCI), an estimated value of about (50.2) was obtained for the study in the area. This result is in agreement with group's ideals and community spirit exemplified by possessors of social capital. This is the evidence of individuals coming together on

a free and voluntary basis and with a spirit of cooperation to work together for social and economic benefit of the group. The decision making index (DMI) was moderately high across credit sources (various associations) with an average of about 63.2% for the area. This give an evidence of the value placed on democratisation of the group decisions and activities. Grootaert (1999) had observed that associations which follow a democratic pattern of decision making are more effective than others.

Furthermore, the meeting attendance index (MAI) was also slightly above average, Afolami *et al.* (2012) observed that loan acquisition by group members is contingent on their regular meeting attendance. According to Okunmadewa, Yusuf and Omomona (2007), Yusuf (2008), Lawal *et al.,* (2009) and Balogun *et al.* (2011)

households that regularly attend group meetings are better positioned to obtain credit than others who do not. Therefore, this findings buttress the significance of this social capital variable on the access to credit by the women ginger farmers. The heterogeneity index (HI) (46%) which is a reflection of the diversity in membership of associations was slightly low. This is low index recorded does not necessarily call for concern in the study area as this seems to be desirable. Similar results were previously reported by Yusuf (2008); Awoyemi and Ogunyinka (2010). They noted that a low level of heterogeneity could be tolerated due to the fact that high degree of heterogeneity in an association usually have negative implication, because it makes trust among members more difficult, since it implies lesser degree of homogeneity.

Table 5.The different dimensions of social capital among ginger farming households

| Social Capital Index | Mean | Mini | Max | SD |
|---|---|---|---|---|
| Density of Membership | 45.3 | 15 | 98 | 25 |
| Cash Contribution | 40.2 | 3.6 | 86 | 21.7 |
| Labour  Contribution | 50.2 | 10 | 100 | 25 |
| Decision Making | 63.2 | 6.8 | 100 | 23 |
| Meeting attendance | 68.8 | 7.0 | 100 | 20 |
| Heterogeneity | 46 | 8.6 | 96 | 22 |

**Factors Affecting Gingers Farmers Access to Credit in Jema'a L.G.A.**

Determinants of access to credit among the ginger farming households is presented in Table 6. The result shows that age, farm size, household size, cash contribution index and decision making index significantly influenced access to credit among the ginger farming households. The estimated coefficient of age has negative sign implying that access to credit significantly decreases as women farmers' advances in age. Furthermore, a unit increase in age increases the probability likelihood of credit access by 66.2%.This is expected as the

capacity to co-ordinate strenuous farming activities decreases with age thus the capacity to pay back loans. Consequently, creditor's decision to approve loan for aged women reduces with advancement in age. Estimated parameter of farm size was found to be positive and significantly influenced respondents' access to loan. Invariably, the probability of the respondents access to credit increases by 0.33%As respondents cultivated more hectares of ginger, they have brighter chances of getting credit approval. The coefficient of household size was positive and also significantly influenced women farmers' access to loan at

2% t level. Farmers with large families had favourable disposition from loan sources. Large households normally have implication for large farm sizes in most developing countries as family labour are readily available. These agrees with the findings of Olagunju and Ajiboye, (2010), who observed that larger households may have implication on readily available family labour and subsequent timeliness of operation and cultivation of large area of land hence its influence on approval decision. On the social capital variables, the effect of social capital on access to loan was traceable to cash contribution to associations, meeting attendance and decision making index.

These variables were positive and significantly influenced credit access at 1 percent level. This result means that the more the women farmers contribute to their various associations the more the access to credit. Moreover, a unit increase in meeting attendance and participation in decision making increases the likelihood of loan access by 29.58% and 6.3% respectively.

Table 6. Determinants of Access to Credit among the Ginger farming households

| Variable | Marginal effect | Standard error | Z |
|---|---|---|---|
| Age | -6.62000*** | 2.74000 | 2.42 |
| Level ofEducation | 0.01992 | 0.02467 | 0.81 |
| Payback period | 0199264 | 0.02122 | 0.94 |
| Farm size | 0.00337** | 0.00167 | 2.02 |
| Household Size | 0.01386** | 0.00684 | 2.03 |
| Farming exp. | 0.12048 | 0.078892 | 1.53 |
| Heterogeneity index. | 0.02567 | 0.048482 | 0.52 |
| Cash index | 0.00008*** | 0.000032 | 2.72 |
| Meeting Index | 0.295808*** | .0844769 | 3.50 |
| Labour Index | 0.040657 | 0.044990 | 0.90 |
| Decision index | 0.063636*** | 0.016872 | 3.77 |
| Interest charged | 0.009640 | 0.009330 | 1.03 |
| Mean dependent var | 0.597 | SD dependent var | 0.281 |
| Pseudo r-squared | 0.278 | Prob> chi2 | 0.087 |
| Chi-square | 20.338 | Bayesian Crit.(BIC) | 120.987 |
| Akaike crit. (AIC) | 82.838 | | |

*** $p<.01$, ** $p<.05$, * $p<.1$

## Conclusion

The women farmers were they are still in their active age with good enough education background for progressive decision making. They were quite experienced in ginger farming with a mean of about 29 years. The social capital indices were moderate for most dimensions except for meeting attendance and decisions making that were slightly high. Socio-economic variables that affected access to credit among the women are age and household size while, cash contribution meeting attendance and decision making variables were the social capital variables that significantly increased access to credit. It was recommended that credit institutions should leverage on well organised social network/capital for better loan management to women farmers.

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