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What Determines the Frequency of Loan Demand in Credit Markets among Small Scale Agro based Enterprises in the Niger Delta Region of Nigeria? An Empirical Analysis

Ubon Asuquo Essien, Chukwuemeka John Arene, Noble Jackson Nweze
Department of Agricultural Economics, University of Nigeria, Nsukka

Corresponding author: Ubon Asuquo Essien, Department of Agricultural Economics, University of Nigeria, Nsukka

Abstract. The study was designed to determine the frequency of loan demand in credit markets among Small Scale Agro based Enterprises in the Niger Delta Region of Nigeria. A multistage sampling technique was adopted in selecting 264 agro based enterprises and 96 agro based enterprises that accessed informal and formal credit through the use of structural questionnaire and oral interview. A total of 360 respondents selected were used for the study. Structural characteristics of the enterprises were described using descriptive statistical tools such as percentages, means and frequencies. The poisson regression model was employed to examine the factors affecting frequency of informal and formal credit access by the enterprises. Poisson regression analyses showed that experience in borrowing, income, guarantor, social capital and non agro based income significantly influence frequency of informal credit access, whereas, education, Interest, collateral, and non-agro-based income significantly influence frequency of formal credit access. Education is a significant factor influencing frequency of formal credit demand; therefore, entrepreneurs should be encouraged to enroll in evening programmes, and should take advantage of the current free education policy of some of the state governments in the region. Agro-based entrepreneurs should be encouraged to form community based advocacy groups where groups act as a surety for lenders. This will enhance credit access and prompt repayment.

Key Words: Credit, Access; Small Scale agro-based enterprises; Poisson Regression, Niger Delta Region; Nigeria.

INTRODUCTION

The Niger Delta region of Nigeria until recently has experienced series of unrest that has adversely affected the economy of the area and that of Nigeria as a whole (Omofonmwan and Odia, 2009). Unlike other developing countries, the unemployment and poverty rates in post-conflict Niger Delta have become predominant (Ministry of Niger Delta Affairs, 2011). Thus, majority of those engaged with investment in small enterprises are poor and therefore engulfed with serious financing obstacle to escape the vicious circle of poverty (Obanuyi, 2008).

The post-amnesty programme for ex-militants was designed to address the challenge of youth restiveness (Oladipo, 2012). But, unfortunately, the amnesty programme only concentrates on those who bore arms instead of accommodating all persons from the oil bearing communities who are willing and ready to be trained in gainful skills and education (Oladipo, 2012). Small scale enterprises as critical tools for conflict mitigation have proven to be useful in fostering recovery through vocational trainings, job creation, re-opening of businesses, and livelihood rehabilitation (United Nations, 2012). Investing in Agro-based Enterprises by opening up access to credit will promote social cohesion and reconciliation, which constitutes the building blocks for sustainable peace and development.

SMEs access to credit therefore will play an important role in enhancing economic recovery. The extent to which firms can access external financing has been shown to have an influence on the investment activity of the firm and the ability of the firm to trade internationally (McCann, 2001). Unfortunately, SMEs, the engine of economic growth and development in many developing economies are still a shadow of themselves (McCann, 2001). According to Srivasta and Basu (2004), a recent World Bank survey on rural access to finance indicates that 70% of the rural poor do not have a bank account and 87 % have no access to credit from a formal source. According to this study, Informal sector lenders remain a strong presence in many less developed economies, delivering finance to the poor on frequently extortionary

terms, and access to other financial services such as savings accounts, life, health and crop insurance also remains limited to the rural poor.

The important role of credit in agricultural enterprises development and sustainability prompted the federal government of Nigeria to establish credit schemes such as the Agricultural Credit Guarantee Scheme (ACGS) and the Agricultural credit support Scheme (ACSS) to ensure farmers' access to agricultural credit, yet the situation has not improved substantially (Badiru, 2010). Based on 2006 core welfare indication questionnaire survey, it is estimated that only 18% of farm households made up of mainly small scale farmers, have access to financial services (Akramov, 2009).

Central Bank of Nigeria (2005) noted that the formal financial system provides services to about 35% of the economically active population while the remaining 65% are excluded from access to financial services. According to the apex financial body, these 65% are often served by the informal sector through NGO-MFIs, friends, relations and credit unions. The failure of formal financial sector in most developing economies as Nigeria to serve the poor, has forced majority of rural farmers to rely on informal finance sources (Musinguzi and Smith, 2000; Fraslin, 2003, Udoh, 2005).

However, for small Agro-based businesses to realize their potential, enhance overall macroeconomic performance in the Niger Delta, their growth is crucial. Access to credit is essential to finance their investment to achieve this growth but the characteristics of small enterprises constrain them from accessing external funds (United Nations, 2001; Okoye and Arene, 2005). Despite evidence of credit constraints among micro and small businesses in the country, limited attempts has been made to mitigate the financing constraints of small businesses most especially Agro-based businesses. The estimated large gap between the demand for and supply of credit to small agro firms serves as vital research concern for investigation (UNCDF, 2005). Against this backdrop, this study seeks to examine small scale agro

based enterprises specific factors affecting the frequency of credit access in the region. However, this can only be made manifest through frequent and easy access to credit facility.

MATERIALS AND METHODS

The study area was the Niger Delta Region of Nigeria. It lies between latitude 4º2" and 6º2" north of the equator and longitude 5º1" and 7º2" east of the Greenwich meridian (Tawan, 2006). Nine of Nigeria's constituent states make up the region, namely; Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Ondo, Imo and Rivers states, with an area of 112,000 sq. km, a population of 27 million people, 185 LGAs, about 13,329 settlements; 94% of which have populations of less than 5,000 (Ojameruaye, 2008).

According to the Ministry of Niger Delta Affairs (2011), the climate of the Niger Delta Region varies from the hot equatorial forest type in the southern lowlands to the humid tropical in the northern highlands and the cool montane type in the Obudu plateau area. Further, the wet season is relatively long, lasting between seven and eight months of the year, from the months of March to October.

The region has huge oil reserves and ranks sixth exporter of crude oil and third as world's largest producer of palm oil after Malaysia and Indonesia (Omafonmwan and Odia, 2009). Further, the Delta leads in the production of timber, pineapple and fish, also; cocoa, cashew, rice, yam and orange are produced in large quantities in the area (Omafonmwan and Odia, 2009). While cassava resources can stimulate the growth of local processing industries for fufu, garri, chips, flour, glucose, starch and pellets; massive furniture, building and craft industries can be built on the regions huge bamboo resources.

The major occupation of the people is fishing and agriculture but activities of oil companies have impacted on the environment with poor access to water, transport, telecommunication, power and fuel, housing, poor waste management, and poor educational structure(Igbuzor, 2006); this lead to conflict in the region some years back. Traditional industries in the area include canoe carving, pottery, cloth weaving, mat-making, thatch making (roofing materials), palm oil processing, food processing (garri, fufu and starch from cassava), local gin distillation etc. Small and Medium scale enterprises are found almost everywhere in the region. The main characteristics of these industries found in varying proportions throughout the region, are that they are based on manual artisanal technologies, local inputs and skills transferred chiefly through family upbringing and not via formal training or education (Ministry of Niger Delta Affairs, 2011).

A multistage sampling technique was used in this study. Of the 9 Niger Delta States of Abia, Akwa Ibom, Bayelsa, Cross river, Delta, Edo, Rivers, Imo and Ondo states, three states were purposively selected based on high concentration of economic activities. The States were Bayelsa, Delta and River States. Further, three local Government Areas each were purposively selected. from each of the three states, from which one each was randomly selected for the study. The Local Government Areas were Brass, Warri North, and Phalga This was possible with the help of staff of the Ministry of Economic Development/trade, the Small and Medium Scale Enterprise Associations resident in each state and by oral interview.

In the third stage, a list of Small Scale Agro-based enterprises was obtained from the Small and Medium Scale Enterprises Associations and the Local Government Business registration office. This list was stratified into 3 sectors namely manufacturing, services and trading, out of which two enterprise types were randomly selected from each of the three sectors, making it 6. The enterprises selected where Bakery and Carpentry/furniture- Manufacturing; Restaurants and Cool Room Services- Services; Poultry Feeds and drugs- Trading. Twenty of each of

the enterprises from each sector were randomly selected for study. One hundred and twenty enterprises were selected from the three sectors in each state. In all, 360 enterprises were selected from the three states. Furthermore, the 360 enterprises were stratified along credit source lines. On the whole, 264 enterprises that accessed informal credit and 96 enterprises that accessed formal credit, where used for detailed study.

Data from the study were obtained from primary sources through the use of structured questionnaire and oral interview.

ANALYTICAL FRAMEWORK

There are many phenomena where the regressand is of the count type. The preponderance of small values and the clearly discrete nature of the dependent variable (positive numbers or count data) with non-negative integer suggest the use of a Poisson maximum likelihood regression (Greene 2000). The log-linear regression in the Poisson model naturally accounts for the non-negativity of the Poisson distribution dependent variable (Winkelmann and Zimmermann, 1995; Gujarati, 2005). The Poisson probability distribution is given as:

$$f(Y_i) = \frac{\mu^Y e^{-\mu}}{Y!} \quad \text{.....} \quad \textit{eqn (1)}$$

Where $Y_i = 0.\ 1, 2, 3,$

f (Y) denotes the probability that the variable Y takes non-negative integer values, and where Y! (Y factorial) stands for Y! = Y x (Y-1) x (Y-2) x (Y-3) x 3 x 2 x 1

The Poisson regression model is therefore specified as:

$$Y_i = E(Y_i) + U_i = \mu_i + U_i \qquad \text{eqn(2)}$$

Where the Y's are independently distributed as Poisson random variables with mean μ_i for each individual expressed as:

$$\mu_i = E(Y_i) = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \ldots\ldots\ldots \beta_k X_{ki} \qquad \text{eqn(3)}$$

Where the X's are some of the variables that might affect the mean value. The partial or marginal effect of X's on the mean value of Y_i is given as follows:

$$\frac{\delta\mu}{\delta X's} = X'Se^{\beta 1 + \beta 2X2i + \beta 3X3i + \ldots + \beta KXKi} = \beta' s\mu_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \qquad eqn(4)$$

In this study, the count variable will be the number of times agro based enterprises have access to credit in a year, this number will depend on variables such as income, liquidity, leverage, interest etc

For estimation purposes, the model is written as:

$$Y_i = \mu^Y e^{-\mu}/Y! + Ui \qquad \text{eqn(5)}$$

With μ replaced by Eqn.(2.25), the resulting regression model will be nonlinear in the Parameters, necessitating nonlinear regression estimation (Gujarati, 2005).

ANALYTICAL TECHNIQUE

In the Poisson model, the response variable is a count variable. The model was used by Katchova (2005) to investigate farm and personal characteristics that influence the number of loan demands for United State farms. It was also employed by Netere, Kutner, Nachtsheim and Williams, 1996) on geriatric study of frequency of falls in Chicago.

Following the analytical framework, the Poisson probability distribution is given as:

$$f(Y_i) = \frac{\mu^Y e^{-\mu}}{Y!} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \qquad eqn(6)$$

Where Y_i = 0. 1, 2, 3,

f (Y) denotes the probability that the variable Y takes non-negative integer values, and where Y! (Y factorial) stands for Y! = Y x (Y-1) x (Y-2) x (Y-3) x 3 x 2 x 1

The Poisson regression model is therefore specified as:

$$Y_i = E(Y_i) + U_i = \mu_i + U_i \quad \text{eqn(7)}$$

Where the Y's are independently distributed as Poisson random variables with mean μ_i for each individual expressed as:

$$\mu_i = E(Y_i) = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \ldots\ldots \beta_k X_{ki}$$

Therefore, Y = FCA = Frequency of Credit Access by i^{th} enterprise in a year (Captured as a count. 1 if enterprise accessed credit once, 2 if twice, 3 if thrice etc)

The Xs are defined below:

GEN (Gender of the entrepreneur. Defined as dummy, takes the value of 1 for male and 0 for female.

EDU=Entrepreneur's Education. (This is the level of formal education attained by the owner/manager of firm. Measured by the total number of years the entrepreneur spent in receiving formal education).

EIB = Experience in Borrowing; being the total number of years the borrower has been borrowing money.

INC= Income of firm (Receipts of the enterprises from sales in the last one year (Measured in Naira)

GPM = Gross Profit Margin; (earnings acquired the previous year after all cost must have been deducted.) It is measured in Naira as Total Revenue (TR)-Variable Cost (VC).

COL= Collateral (Defined as any valuable asset that eases the approval of formal credit

GUA= A person who pledges that a debt will be paid. (Binary; 1 if guarantor was available and 0 if not)

NAI = Non Agro-based enterprise Income. Being income from other sources apart from Agro-based business. (Measured in Naira)

SOC=Social Capital (For informal credit access; it describes borrowers acquaintance with lender. Measured as dummy. 1 if borrower is acquainted with lender, 0 otherwise. For formal credit, it describes membership of cooperative society, hence, the number of people in the cooperative.

RESULTS AND DISCUSSION

Socio-economic Characteristics of Respondents

The distribution of sampled small scale agro-based enterprises according to age of enterprise as shown in table 1 below reveals that 95.45% of informal credit enterprise borrower and 83.33% of formal credit enterprise borrower are under 12years of age. The mean ages are 5.35 and 6.92 for the informal and formal credit borrower enterprises respectively. This implies that most of the small scale agro-based enterprises that borrowed from the formal credit market are older than their informal credit borrower counterpart. The most common age fell within the range of 1-4years. According to Nichter and Goldmark (2009), there is a relationship between firm age and firm growth and these tend to influence credit assess.

Gender of respondents show that 69.70% of the male entrepreneurs borrowed from the informal credit market whereas 63.54% borrowed from the formal credit market. Further, 30.30% and 36.46% of informal and formal credit borrower entrepreneurs are females. This implies that most male entrepreneurs tend to borrow from the informal credit market than the formal credit market. This could be as a result of various factors characteristic of the study area as Johnson (2006) and World Bank

(2005) report that gender at individual, household, and wider community and national context are affected by financial, economic, sociocultural, political and legal obstacles. Further, Doan *et al* (2010) explain that gender does not really matter in credit participation but plays a role in explaining loan size.

While 60.13% of agro-based enterprises have access to the informal credit market; only 21.86% have access to formal credit market. Further, 17.99% of the enterprises do not have access to formal or informal credit market. Access to external resources is needed to ensure flexibility in resource allocation and reduce the impact of cash flow problems (Bigsten *et al*, 2003). Firms with access to funding are able to build up inventories to avoid stocking out during crises while availability of credit increases the growth potential of the surviving firms during periods of macro-economic instability (Atieno, 2009). In appraising financial constraints to small scale farming in Etsako Local Government Area of Edo State, findings show that only 7% of small scale farmers have access to basic loan while 93% access loan from other sources like co-operative societies, personal savings and relations (Awotodunbo, 2008).

Further, more than 80% of agro-based enterprises who access informal and formal credit have been borrowing for more than 3 years. Further, average borrowing age for formal credit enterprise borrower is 1.5 years whereas informal credit enterprise borrowers have been borrowing for about 4 years.

Also, 96.6% of informal credit borrower entrepreneurs and 98.96% of formal credit borrower entrepreneur had one form of primary to tertiary education. This is significantly high and consistent with MNDA (2004) which indicates that the adult literacy status of the Niger Delta states is about 78%, slightly higher than the national average of 54%, although marked differences exist among the states. Most entrepreneurs who borrowed from the informal credit market however had achieved secondary education level supplemented with training compared to formal credit borrower entrepreneurs. This may imply that most people with this level of

education failed to find employment in the formal sector and thus resort to small scale enterprise activities.

Table 1: Distribution of Small Scale Agro-based Enterprises by their Socio-economic Characteristics

	Informal Credit Borrower Enterprises		Formal Credit Borrower Enterprises	
Variables	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Age				
1-4	146	55.30	41	42.71
5-8	68	25.76	26	27.08
9-12	38	14.39	13	13.54
13-16	6	2.27	12	12.50
17-20	4	1.52	2	2.08
21-24	2	0.76	2	2.08
Total	264	100	96	100
Mean	5.35		6.92	
Gender				
Male	184	69.70	61	63.54
Female	80	30.30	35	36.45
Total	264	100	96	100
Accessibility of Credit Market				
Informal Credit	264	60.13		

Formal Credit	96	21.86		
No Access	79	17.99		
Total	439	100		
Years of Borrowing Experience				
1-3	155	58.71	53	55.21
4-6	76	28.79	28	29.17
7-9	21	7.95	8	8.33
10-12	8	3.03	5	5.21
13-15	4	1.52	2	2.08
Total	264		96	1.49
Mean	3.79		4.09	
Level of Formal Education				
No Formal Education	9	3.14	1	1.04
Primary	83	31.44	18	18.87
Secondary	102	38.64	36	37
Tertiary	70	26.52	41	42.7
Total	264		96	

Source: Field Survey, 2012

Determinants of Frequency of Informal Credit Access by Small Scale Agro-based Enterprises

Factors influencing frequency of informal credit access are summarized and presented in Table 6 The Macfadden R-squared is about 0.62, which implies that all the explanatory variables included in the model were able to explain about 62% of frequency of small scale agro-based enterprises to access informal credit in the study area.

The co-efficient of Experience in borrowing was significant at 1% level with a positive sign for the informal credit borrower enterprise. This implies that there is a direct relationship between frequency of credit access by informal credit borrower enterprise in the study area and the experience they have or acquired borrowing money from informal credit source. The antilog of the co-efficient of experience in borrowing is 1.066 for informal credit borrower agro-based enterprise. This implies that small scale agro-based enterprises would only access informal credit once in a year based on their experiences in borrowing.

Table 6 Estimated Frequency of Informal Credit Access

	Coefficient	*Std. Error*	*Z*	*p-value*	
Const	0.444085	0.235115	1.8888	0.05892	*
GEN	-0.0143894	0.102009	-0.1411	0.88782	
EDU	-0.00101334	0.0100446	-0.1009	0.91964	
EIB	0.0282058	0.0082586	3.4153	0.00699	***
INC	-8.35853e-09	1.8510e-08	-4.5156	0.00616	***
INT	-7.61075e-09	6.06554e-08	-0.1255	0.90015	
GUA	-0.169503	0.07259	-2.3350	0.00486	**
SOC	0.497993	0.151539	3.2862	0.00102	***
NAI	-9.54879e-09	2.96159e-08	-3.2242	0.00259	***

McFadden R-squared	0.622930	Adjusted R-squared	0.541892
Log-likelihood	-417.9885	Akaike criterion	853.9769

Source: Estimated From Field Survey Data, 2012

***, **,* = Statistical Significant at 1, 5 and 10 Percent

The Income co-efficient is negative, consistent with *a priori* expectation signs and statistically significant at 1% for informal credit borrower agro-based enterprises. The implication of this is that frequency of informal credit access will decrease with increase in firm's income. The more income a firm attracts, the less likely it will go for external funds as internal generated income, though may not be adequate, may just be enough for start–up businesses. The antilog of the co-efficient of income of firm is 1.000 for the informal credit borrower enterprise. The implication is that agro-based enterprises in the study area will access credit only once in a year based on the income of the firm. This result could be attributed to increased income as a result of increase in economic activities in the area. The result is substantiated by Nwaru, Essien and Onouha, (2011) who reported significant negative relationship between income and informal credit demand. The result also reflects the pecking order theory that when it comes to financing operations, businesses are likely to make use of its internal resources first before external equity financing (Tsuji, 2011).

Guarantor was significant at 5% with the right *a priori* positive sign for the informal credit borrower enterprise. This implies that the frequency of access has a direct relationship with the availability of a guarantor. The more available there is a guarantor to vouch for the conduct of the respondent, the more the number of times he is able to access credit. The antilog of the co-efficient of guarantor is 1.457. This implies that *ceteris paribus,* small scale agro-based enterprises in the study area that always have guarantors will 1.457 times access informal credit in a year

as against those without a guarantor. This result agrees with Adnan(2005) who reported that through third party guarantees, guarantors obligates themselves vis-à-vis the lender to comply with given payments to secure the debt of another party in the event of the borrower failing to pay. The result is

The co-efficient of social capital for the informal credit borrower enterprise is positive, consistent with *a priori* expected signs and statistically significant at 1%. The implication of this is that the frequency of informal credit access by small scale agro-based enterprises in the study area has a direct relationship with the borrower's acquaintance with lender. The more the respondent is acquainted with the lender, the greater his chance of accessing funds. The antilog of the co-efficient of social capital is 3.140 for the small scale agro-based enterprise. The implication is that Informal Credit borrower agro-based enterprises that have acquaintance with the lender would 3.140 times be able to access funds in a year as against those without close acquaintance with lender. Informal lending is usually on trust, and being acquainted with the lender certainly tends to be a trust booster. This result agrees with Lawal, Omonona, Ajani and Oni, 2009 in Osun state and Mwangi and Ouma(2012) in Kenya.

Non Agro-based income was significant at 1% and the co-efficient negatively signed. This is an indirect relationship and in line with *a priori* expectation. It implies that an increase in Non-agro based income of the respondent will lead to a decrease in frequency of access to informal credit. Succinctly, frequency of access will decrease with increase in Non-agrobased income of respondent. The antilog of the co-efficient of non-agro based income is 1.000 for the informal credit borrower agro-based enterprises. The implication is that the informal credit borrower agro based enterprises would access informal credit only once in a year based on income from other sources other than agro based enterprises.

Determinants of Frequency of formal Credit Access

Factors influencing frequency of formal credit access are summarized and presented in table 7. Mac fadden R-squared is about 0.85 which implies that all the explanatory variables included in the model were able to explain about 85% of frequency of small scale agro-based enterprises to access formal credit in the study area.

The co-efficient of education is positive and significant at 10% level for the formal credit borrower agro based enterprise. This is consistent and desirable. The implication is that the frequency of access to credit by agro-based enterprises in the study area has a direct relationship with education level of the entrepreneur. The higher the level of education of the entrepreneur, the more enlightened they are about the importance of credit; hence the more they are likely to access funds. The antilog of the co-efficient of education is 1.0387. The implication is that formal agro-based entrepreneurs would 1.0387 times access credit based on level of education. The result corroborates that of Asah and Fotoki, 2011 in South Africa and Wangai and Messh, 2011 in Kenya.

Interest amount was significant at 1% with the right *a priori* negative sign. This implies that the frequency of access has an indirect relationship with interest. The more the amount to be paid as interest, the less formal credit that is accessed. The antilog of the co-efficient of interest is 78.704. This implies that a unit increase in interest amount will reduce frequency of access by 78 times.

Table 7 Estimated Frequency of Formal Credit Access

	Coefficient	*Std. Error*	*z*	*p-value*	
Const	-2.67812	0.751582	-3.5633	0.00037	***
GEN	0.3832	0.279465	1.3712	0.17032	
EDU	0.0162415	0.0095916	1.6933	0.08815	*
EIB	-0.0153395	0.0453864	-0.3380	0.73538	
INC	3.709e-09	7.00765e-08	0.0529	0.95779	
INT	-1.89676e-08	5.95921e-07	-3.1829	0.00491	***
COL	2.03148	0.597637	3.3992	0.00068	***
SOC	0.0146394	0.0152587	0.9594	0.33735	
NAI	-7.49248e-08	2.66276e-08	-2.8138	0.00874	***

McFadden R-squared	0.854670	Adjusted R-squared	0.768955
Log-likelihood	-88.75837	Akaike criterion	195.5167
Schwarz criterion	218.5959	Hannan-Quinn	204.8457

Source: Estimated From Field Survey Data, 2012

***,**,* = Statistical Significant at 1, 5 and 10 Percent

Collateral co-efficient is positively signed and significant at 1% level for the small scale agro based formal credit borrower enterprise. The implication of this is that frequency of formal credit access by the respondent has a direct relationship with collateral. The more available a collateral, the greater the number of times in which credit can be accessed. The antilog of the co-efficient of collateral is 107.398, implying that a unit increase in collateral will increase frequency of accessibility by 107 times. This figure reveals the level of importance placed on collateral by financial institutions in the study area before credit is secured. The result of this work agrees with Okojie *et al*, 2010 in Edo state, Nigeria and that of Bingsten, 2003 in Africa. Formal credit institutions in the region usually would demand for

collateral before credit is disbursed, unfortunately most time, small scale enterprise are denied these credits because of lack of viable collateral.

Non-agro-based income was significant at 1% and the co-efficient negatively signed for the enterprise that borrowed from formal credit institution. This is an indirect relationship and in line with *a priori* expectation. It implies that an increase in Non-agrobased income of the respondent will lead to decrease in frequency of access to formal credit. The antilog of the co-efficient of the non-agro-based income is 1.000 for the formal credit borrower agro-based enterprises. This means that once in a year, the respondent will access formal credit based on non agro-based income of the respondent.

CONCLUSION

The study examined frequency of credit access among small scale agro-based enterprises in the Niger Delta. Empirical evidence from the Poisson regression estimates from both groups of enterprises reveal that, for the informal credit borrower enterprise, Experience in borrowing, Firm income, Social Capital and Non-Agro-based income all significantly influence credit access. Gender, Education and Interest reported insignificant results. Furthermore, interest, Collateral, Education and Non-Agro-based income significantly influences frequency of formal credit access, whereas Gender, Experience in borrowing, Income and social capital where insignificant. It could be concluded from this study that there are similarities and differences between the credit sources regarding the factors determining frequency of loan demand.

RECOMMENDATION

- Small scale agro based enterprises in the region should be encouraged to form co-operative groups to enhance their ability to access formal credit

- Education is a significant factor influencing formal credit demand.Therefore, entrepreneurs should be encouraged to enroll in evening programmes and should take advantage of the current free education policy of some of the state governments in the region
- Agro-based enterprises should be encouraged to form community based advocacy groups where groups act as a guarantor for borrowers. This will enhance credit acquisition and payment as well as lower default tendencies.

- The role of collateral for formal credit access cannot be overemphasized as evident in the result of the study. Formal credit institutions therefore should review collateral requirements in other to enable easy access to funds.

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