

Effect of Microcredit on Investment Decision of Smallholder Farmers in Osun State

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Summary

In this study, we used a cross sectional data from a survey conducted in Osun State, Nigeria to assess smallholder farmers' access to microcredit and its influence on the investment decision. We used probit regression model to estimate the factors influencing access to microcredit by the smallholder farmers and OLS model to estimate the effect of microcredit on farmers' investment amount. The result of the probit model regression showed that source of credit, level of education and membership in farmers' association had significant and positive influence on access to credit. The ordinary least squares regression result also showed that age, interest on investment and access to credit had a significant and positive influence on farmers' farm investment. We recommend that financial institution should re-strategize and develop a working model that will make disbursement of loan to farmers easy and timely so that they will be able to utilize the loan for intended purpose.

Key words

microcredit, investment, smallholder, farmers, Osun, Nigeria

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Introduction

Agriculture is the foundation of economic development, growth and poverty eradication in developing countries. According to World Bank Report (2008), agriculture in developing countries contributes an average of 29% to the Gross Domestic Product (GDP) and also employs 65% of the economically active labour force of the population, from production to marketing of various agricultural produce. The success of any agricultural practise is hinged on some factors. One major importance is the availability of inputs such as; seeds, fertilizers, herbicides, equipment and credit. Among these factors, accessibility to microcredit is a crucial factor in the process of poverty alleviation (El-Komi, 2010). Nwaru (2011) has described Agricultural credit as the transferring of purchasing power from the owner to someone who is in need of it on a temporary basis with the willingness and ability to repay it back at a specified period with or without interest. The provision of microfinance services in Nigeria dates back to centuries of years. In its traditional form, microfinance functions in Nigeria with the provision of micro-credit to rural and urban low-income earners. They operate in form of self-help groups that rotate the savings and credits among the group members. There are other informal providers of microfinance services like cooperative societies and savings collectors usually called "Baba Alajo". However, the major deterrent of these informal microfinance institutions is the fact that they serve few people as a result of insufficient funds available to finance their customers' projects and extend the financial services to rural areas. In order to improve this situation, the Nigerian government has established series of financed micro/rural credit programmes that would assist the poor to fund the micro-business. Such programmes include the Rural Banking Programme, the Agricultural Credit Guarantee Scheme (ACGS), a concessionary interest rate, and sectorial allocation of credits. Others are the Nigerian Agriculture and Co-operative Bank Limited (NACB), the Family Economic Advancement Programme (FEAP), the Nigerian Agricultural Insurance Corporation (NAIC), the Peoples Bank of Nigeria (PBN), the National Directorate of Employment (NDE), the Community Banks (CBs), and the National Poverty Eradication Programme (NAPEP) which was created in 2000 with the mandate of providing financial services to alleviate poverty.

Consequently, access to microcredit is assumed to have a positive relationship with investment decisions undertaken by farmers so that farmers are able to undertake more investment projects as they have access to microcredit. Access to credit facilities affects investment decisions in that a firm is not able to commit resources into the future because of the lack of capital. Hailu (1991) and Garba (1991) identified capital constraint as a major hindrance to improved farming practices. It must be noted that when capital is limited, investment in agricultural inputs will also be minimal since farmers will not like to risk the implementation of a new technology or innovation. The importance of investment cannot be over-emphasised in a developing nation like Nigeria as it leads to provision of jobs, which leads to increase in income levels and hence an improved standard of living. In order to examine investment in the farming system effectively, it is necessary to take into consideration all social components as well as economic factors. Most of the small scale farmers are poor and cannot provide any collateral in order to obtain large amounts of loan facilities from banks, saving enough in order

to boost their productivity becomes unrealistic. In this regard, it must be noted that microcredit cannot be avoided if the aim is to improve investment alternatives and increase the productivity of farmers. The significance of this study is therefore to access the role microcredit plays in peri-urban farmers' investment decisions in Osun State, Nigeria, by examining the socioeconomic characteristics of the farmers, analysing the factors that influence farmers' access to credit, determining the effect of microcredit access on farmers' investment decision and identifying the constraints to microcredit faced by smallholder farmers.

Materials and Methods

Data Source and Description

In this study, we make use of cross-sectional data which was collected across Osun State, Nigeria in 2018. A multi-stage sampling procedure was used to select sampled areas from each Local Government Areas and households from each selected sampled areas. Following the NBS recommendation for a nationally representative data collection (NBS, 2010), 10% of the LGAs in the States and 5% of the total sampled areas per LGA were randomly selected. Interviews were conducted with the aid of a well-structured questionnaire, and a total of 100 peri-urban farmers were sampled. The questionnaire centers on respondent's socio-economic characteristics, source of micro credits, farmers' investment decision and constraints to accessing micro credit.

Econometric Model Specification

Probit Regression

In order to analyze the factors influencing access to micro credit among smallholder farmers in Osun State, probit regression was used. For the probit model, we assume that the decision of the 'i'th farmer to access micro credit or not depends on an unobservable utility index Y_i^* that is determined by the explanatory variables, and that the higher the value of this utility index the higher the probability that the farmer will access micro credit. The decision probability (dependent variable) Y_i is limited between the values of 1 and 0.

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

The probit model is expressed as:

$$\text{Prob}(Y^* > 0) = F(X'\beta) = \Phi(X'\beta) = \int_{-\infty}^{X'\beta} \phi(Z) dZ \quad (2)$$

where $F(X'\beta)$ = cumulative degree of freedom of the standard normal distribution.

$$Y_i^* = X' \beta + e_i \quad (3)$$

$$\text{Credit access}_i = \beta_0 + \beta_1 \text{AGE}_i + \beta_2 \text{GEN}_i + \beta_3 \text{EDU}_i + \beta_4 \text{LANO}_i + \beta_5 \text{CRAW}_i + \beta_6 \text{SAV}_i + \beta_7 \text{FBO}_i + \beta_8 \text{FAREX}_i + \beta_9 \text{HSIZ}_i + \beta_{10} \text{SOLA}_i + \mu_i \quad (4)$$

where AGE = Age, GEN = Gender, EDU = Education level, LANO = Land ownership, CRAW = Credit awareness, SAV = Savings, FBO = Member of a farmer-based association, FAREX = Farming experience, HSIZ = Household size, SOLA = Source of loan.

OLS Regression Model

In estimating the effects of microcredit access on farmers' investments amount, the Ordinary Least Square regression was employed following Adams (2015). This is due to the fact that the dependent variable is continuous and Ordinary Least Square procedure is the simplest type of estimation procedure used in statistical analyses Gujarati (2004).

OLS Model specification;

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i \quad (5)$$

where Y_i is the continuous explained variable, β_0 is the intercept (constant), β_i is the parameter to be estimated, X_i is the explanatory variable in the model and ε_i is the stochastic error term which is independent, identical normally distributed with zero (0) mean and constant variance. In estimating the parameter β_p , the sum of squares error must be minimized, which can be expressed as $SSE = \varepsilon\varepsilon$. In order to take the derivatives of the quantity with regard to the β_i firstly the error term, ε is expressed in terms of Y_p , X_i and β_i .

The explicit OLS model for the study was presented as

$$Investment h_a = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon \quad (6)$$

where X_1 = Age, X_2 = Household size, X_3 = Land ownership, X_4 = Awareness of microcredit, X_5 = Savings, X_6 = interest on investment, X_7 = Credit access.

Kendall's Coefficient of Concordance

Kendall's coefficient of concordance is used to calculate the agreement level among the farmers' ranking of the constraint following Adams (2015). Kendall's coefficient of concordance also known as "Kendall's W" is a non-parametric statistic which can be used for assessing agreement among rankers. The constraints identified are ranked according to the most-pressing to the least-pressing using numerals; 1, 2, 3, 4, 5, 6, 7, and 8. The constraint with the highest score (8) is ranked as the less pressing while the least score (1) represents the most pressing.

Specifically, "Kendall's W" is presented as follows:

$$R_i = \sum_{j=1}^m r_{i,j} \quad (7)$$

$$\bar{R} = \frac{1}{n} \sum_{i=1}^n R_i \quad (8)$$

$$S = \sum_{i=1}^n (R_i - \bar{R})^2 \quad (9)$$

$$W = \frac{12S}{m^2(n^3 - n)} \quad (10)$$

where R_i is total rank given to objects, \bar{R} mean value of total rank, S is the sum of squared deviation, W is Kendall's coefficient of concordance, i is the individual item being ranked, m is the number of estimators, and n is the number of items.

Results and Discussion

Socioeconomic Characteristics of the Smallholder Farmers

The socioeconomic distribution of the smallholder farmers showed that majority (72%) of the respondents were male (Table 1).

Table 1. Description of socio-economic characteristics of respondents

Variable	Frequency	Percentage
Age (years)	96	96.0
16-64	4	4.0
>64	40.39 (± 9.687)	
Mean		
Gender (Male)	72	72.0
Marital status		
Married	70	70.0
Others	30	30.0
Household size (People)		
1-5	86	86.0
6-10	13	13.0
10-15	1	1.0
Mean	4.03 (± 2.298)	
Farm experience (years)		
≤ 10	44	44.0
11-20	49	49.0
≥ 21	7	7.0
Mean	11.53 (± 5.880)	
Years of education		
None	1	1.0
1-6	8	8.0
7-12	25	25.0
≥ 13	66	66.0
Land ownership		
Self-owned	65	65.0
Rent	33	33.0
Joint-ownership	2	2.0

Note: Figures in parenthesis are standard deviation

This implied that the male gender was more involved in farming than their female gender counterparts. The male domination in farming might be attributed to their access to resources such as credit and land. The average age of the farmers was 40.39 ± 9.68 years. This implied that the farmers were still in their active and productive age and were thus expected to be efficient in carrying out their farm operation since they possessed the required energy. This is because the use of traditional farm implements still dominates production practices in the area. Majority (70%) of the respondents were married. The result was in agreement with Anang et al., (2015) and Adams (2015) that marriage has a direct relationship with family stability, therefore the high percentage of married respondents suggested that the farmers were stable and able to make good business decisions. The mean household size of the respondents was 4.03 ± 2.298 people. This implies that farmers had a small household size, they were thus expected to make use of hired labour to carry out farming activities. The average years of experience for the respondents was 11.53 ± 5.88 years. This implies that farmers have been into farming for a considerable numbers of years. It is expected that as farming experience increases, the chances of farmers' accessing credit might also increase. This is because microfinance institutions are more assured when given out credit to farmers who are well experienced because the farmers are well aware of farming situations which could increase their productivity. The results also revealed that majority (66%) of the respondents had acquired 13 or more years of education. Thus, they were expected to be able to interpret, understand and use available resources to boost their level of production and improve their managerial abilities. The result presented in Table 2 shows that about 84% of the respondents acknowledged that they had access to credit whereas 16% had never accessed credit. 26% of those who had access to credit got it from cooperative societies (credit unions). Other sources include NGO (17%), family and friends (15%), Microfinance and agricultural development (11% each), commercial banks (3%) and rural and community banks (1%).

Table 2. Distribution of respondents by source of microcredit

Microcredit source	Frequency	Percentage
Commercial bank	3	3.0
Agricultural development	11	11.0
NGO	17	17.0
Credit union	26	26.0
Rural and community bank	1	1.0
Microfinance	11	11.0
Others (friends and family)	15	15.0

Determinants of Access to Micro-Credit among Smallholder Farmers (Probit Regression)

The factors that influenced the farmers access to micro credit were examined using probit model and is presented in Table 3. The results from the probit model used in examining the

factors that affect the access to micro credit were obtained using maximum likelihood estimation technique. An additional insight was also provided by analyzing the marginal effects, which was calculated as the partial derivatives of the non-linear probability function, evaluated at each variable sample mean in line with Greene (2008). Considering the likelihood factors in Table 3, the likelihood estimates of the probit model indicated that the Chi-square statistic of 56.18 was highly significant ($p < 0.01$) suggesting that the model had a strong explanatory power. The pseudo coefficient of multiple determination (R^2) shows that 63.89 % of the variation in farmers' access to micro credit in the study area was collectively explained by the independent variables. Access to micro credit by the farmers was significantly influenced by membership in farmers association, loan source and education level of the farmers.

Membership in a farmers' association had a positive coefficient which was statistically significant at 1% on access to micro credit. The result of the marginal effect shows that the membership in a farmers' association has had the likelihood of increasing access to micro credit by 17.6%. This might be due to the fact that most financial institutions prefer to disburse credit to farmers belonging to an association for easy recollection of the loan. This helps to reduce the moral hazards associated with credit access. This result is in agreement with Obisesan (2013). Furthermore, the source of the micro credit was found to be positive and statistically significant at 10% on access to micro credit by the farmers. The result of the marginal effect shows that source of credit had the likelihood of increasing access to micro credit by 6.1%. This implies that farmers who access micro credit from informal sources have an increased probability of having access to credit than from formal sources. This might be due to the fact that formal credit source requires collateral which the smallholder farmers might not possess.

In addition, education level is statistically significant at 1% with a marginal effect of 0.012. This implies that the probability of the smallholder farmers who are educated to access credit increases by 1.2%. This might be attributed to the fact that farmers who are educated are better informed. This result is consistent with that of Okurut (2006 and 2008); Bakhshoodeh and Karami (2008) who established that education level is a positive and significant determinant to credit access.

Gender of farmers was not statistically significant but it shows a positive relationship between gender and access to credit. This implies that male farmers have a higher probability of accessing credit than their female counterparts. This is in agreement with Dzadze et al., (2012); Olatinwo et al., (2012); Adegbite (2011). This awareness is not statistically significant but it indicates a positive relationship between awareness and access to credit. This implies that the probability of farmers who are aware of credit facilities to access the credit is higher than their counterparts who are not aware of such credit facilities. This also agrees with Anang et al., (2015) and Okoronko et al., (2014) who reported a positive correlation between the access to credit and awareness. Savings are also not statistically significant but the results shows a positive relationship between savings and access to credit. This implies that the probability of accessing credit by a farmer who saves in a financial institution is higher compared to other farmers who do not save. Farm experience is also not statistically significant but the

Table 3. Parameter estimates of Probit regression model

Independent variable	Coefficient	Marginal effect	P-value
_cons	-3.917	—	0.036
Age	-0.013	-0.001	0.817
Gender	0.397	0.024	0.536
Household size	0.074	0.004	0.711
Land ownership	-0.065	-0.003	0.911
Credit awareness	0.701	0.062	0.285
Farmers' association	1.649	0.176***	0.009
Loan source	1.306	0.061*	0.057
Years of experience	0.015	0.176	0.855
Savings	1.88E-05	9.87E-07	0.307
Education level	0.236	0.012***	0
Log likelihood	-15877174		
Number of observations	100		
LR chi2 (10)	56.18		
Prob > chi2	0		
Pseudo R-squared	0.6389		

Note: ***, **, * - significant at $P < 0.01$, $P < 0.05$, and $P < 0.10$ level, respectively

results indicated a positive relationship with access to microcredit. This implies that farmers with more farm experience have a higher probability of obtaining credit than their counterparts who lack farm experience. This result is consistent with Obisesan (2013) reporting a positive relationship between access to credit and farm experience.

Effect of Microcredit on Farmers' Investment Decision

The result of the effect of microcredit on farmers' investment using OLS regression is shown in Table 4. From the result, the adjusted R-squared (0.7913) implies that about 79% of the changes in the dependent variable are jointly influenced by the explanatory variables. Thus, it can be concluded that the entire coefficients of the explanatory variables of the model are not simultaneously equal to zero statistically. This identifies that the explanatory variables influence farmers' decision to access microcredit to invest in their farming activities.

From the result, interest on investment was statistically significant at 1% level of significance. This implies that as interest on investment made by farmers increases by 1 unit, farmers' farm investment amount also increases by 5.07E-5 units. Also, access to credit was statistically significant at 1% level of significance. This implies that if access to credit goes up by 1 unit, the investment decisions of farmers increases by 9.772 units. This is consistent

with the study of Adams (2015) who hypothesized a positive correlation between access to credit and farmer investment amount. Age was found to be statistically significant at 1% level of significance. This implies that as the age of farmers increases by one unit, farmers' farm investment amount increases by 0.564 units. The results indicate that household size, land ownership, awareness and savings were not statistically significant.

Table 4. Estimates of the OLS Regression

Variable	Coefficient	Std. Error	t-value	P-value
_cons	-15.773	7.240	-2.18	0.032
Interest on investment	5.07E-5***	3.56E-06	14.27	0
Age	0.563***	0.199	2.83	0.006
Household size	-0.737	0.776	-0.95	0.345
Credit awareness	-1.442	3.075	-0.47	0.64
Credit access	10.396***	3.63	2.86	0.005
Savings	-3.13E-05	3.70E-05	-0.85	0.399
Land ownership	0.881	2.627	0.34	0.738
R-squared	0.8061			
Adjusted R-squared	0.7913			
Probability	>0.0000			

Note: *** - significant at $P < 0.01$

Kendall's Coefficient of Concordance Result

The constraints of smallholder farmers in accessing microcredit were identified and presented in Table 5. The Kendall's 'W' was found to be 0.412 and significant at the 1% level. There is an agreement among the farmers in the ranking of the constraint. The Kendall's 'W' of 0.412 indicates that there was 41.2 percent agreement between the respondents in ranking the constraint they faced in accessing microcredit. The 3 major constraining factors of accessing credit by the smallholder farmers were collateral requirement, association membership requirement, and distant collection point.

Collateral requirement was found to be the most constraining factor of credit access. Nevertheless, the success of credit access is hinged on collateral to avoid moral hazards; the situations become unbearable when the farmers do not have any or sufficient assets to be used as collateral. This result is in agreement with the findings of Adams (2015) that collateral requirements as well as high interest rate among others are some of the major factors influencing the demand for microcredit. Also, in the findings of IFAD (2001), the major factors hindering farmers' chances of accessing microcredit were lack of collateral due to limited ownership of assets. Association membership was the second major constraining factor identified. Due to many reasons including moral hazards associated with credit disbursement to the farmers, many formal financial institutions, both government and private agencies prefer to give loans to a group of farmers or individual farmers involved in group/association settings so that when the loan repayment

is defaulted, the association/group will be held responsible. This result agreed with Barham and Chitemi (2009) and Adams (2015) that farmers' association membership increased their chance of accessing credit to enhance farm operations. Distant collection point was identified as the third major constraint to accessing microcredit. For microcredit to be effectively and efficiently used, it must be available and readily accessible. In other words, the distance between the microfinance institutions providing the credit should be close to the locality of the farmer accessing the credit, not at a very far place. Late disbursement of microcredit was identified as the fourth constraining factor farmers' faced. In farming, when loans are issued out to farmers before or after a particular farming season, the money usually gets rechannelled into other business which might not be profitable. It is therefore important that farmers receive credit early to interface their farming activities to ensure productive use. The fifth constraint experienced by farmers in accessing microcredit is high interest rates charged on loans by financing institutions like commercial banks. This increases the farmers' risk and becomes more serious when there is a situation of crop failure due to bad weather or unpredicted change in human behaviour, which could affect the living standards of smallholder farmers. This result is consistent with the results of Anyanwu (2004) and Okojie et al. (2010) that high interest rates imposed by microfinance institutions are one of the major constraints being faced farmers in accessing credit.

Table 5. Constraint in accessing microcredit

Identified constraint	Mean score	Rank
Short repayment period	5.66	6 th
Inadequate credit size	6.18	7 th
Collateral requirement	2.11	1 st
Guarantor requirement	6.44	8 th
Association membership requirement	3.08	2 nd
High interest rate	4.94	5 th
Distant collection point	3.43	3 rd
Late disbursement	4.17	4 th
Diagnostics		
Number of observations	100	
Kendall's W	0.412	
D.f	7	
Asymptotic Sig.	0.000	

Source: Author's computation from field survey (2018)

Conclusions

The study concluded that smallholder farming was dominated by male farmers with relatively good educational background. The result from the probit analysis indicated that the factors influencing farmers' access to credit were the level of education, source of loan and farmers' association membership status. The result from the OLS regression shows that the farmer's investment amount/decision was influenced by age, interest on investment and credit access. The major constraints farmers faced in accessing credit were; collateral requirement, association membership requirement and distant collection point. It was recommended that collateral security demanded from farmers by microfinance institutions should be minimized as this would motivate farmers to access the credit needed to boost their production. There is a need for the farmers to join farmers' association group so that they could have access to micro credit in their locality. Also, financial institution needs to re-strategize and develop a working model that will make disbursement of loan to farmers easy and timely so that the farmers will be able to utilize the loan for intended purpose.

References

- Adams D. (2015). Determinants of Microcredit Access and Farmers Investment in Small-Scale Peri-Urban Agriculture: A Case Study of Dzorwulu Vegetable Farmers. (Unpublished master's thesis). University of Ghana, Legon, Ghana
- Adegbite D. A. and Adeleye O. A. (2011). Determinants of Farmers' Access to Micro-Credit in Oyo State. *Nig J of Agric Res and Dev*. 10 (1): 44-56
- Anang B. T., Sipilainen T., Backman, S., Kola J. (2015). Factors Influencing Smallholder Farmers Access to Agricultural Microcredit in Northern Ghana. *Afri J of Agric Res*. 10 (24): 2460-2469. doi: 10.5897/AJAR
- Anyanwu C. M. (2004). Microfinance Institutions in Nigeria: Policy, Practice and Potentials. Review of Small Farmer Access of Agricultural Credit in Nigeria. International Food Policy Research Institute (IFPRI). Policy Note No.25.
- Atieno R. (2001). Formal and Informal Institutions Lending Policies and Access to Credit by Small-scale Enterprises in Kenya: An empirical Assessment. African Economic Research Consortium, Nairobi.
- Ayamga M., Sarpong D. B., Asuming-Brempong S. (2006). Factors Influencing the Decision to Participate in Microcredit Programmes: an Illustration for Northern Ghana". *Ghana J of Dev Studies* 3(2): 57-65. doi: 10.4314/gjds.v3i2.35043
- Bakhshoodeh M., Karami A. (2008). "Determinants of Poor Accessibility to Microcredit in Rural Iran," International Conference on Applied Economics (ICOAE), September 2008.
- Barham J., Chitemi C. (2009). Collective Action Initiatives to Improve Marketing Performance: Lessons from Farmer Groups in Tanzania. *Food Policy* 34: 53-59
- Dzadze P., Osei Mensah J., Aidoo R., Nurah G. K. (2012). Factors Determining Access to Formal Credit in Ghana: A Case Study of Smallholder Farmers in the Abura-Asebu Kwamankese District of Central Region of Ghana. *J of Dev and Agric Econ*. 4 (14): 416-423. doi: 10.5897/JDAE12.099
- El-Komi M. S. (2010). Poverty Alleviation Through Microfinance and Implications on Education, Dissertation Publishing UMI13421471, ProQuest.

- Garba, B. (1991). *Le Changement Technologique au Sahel: Le cas de Maladi au Niger* Centre Sahel, Universite Lavel, April 1991.
- Gaih R, Thapa G (2006). *A Methodology for Assessment of the Impact of Microfinance on Empowerment and Vulnerability*. International Fund for Agricultural Development (IFAD). Available at: www.ifad.org/operations/projects/regions/pi/paper/2.pdf [Accessed 12 08. 2020].
- Gujarati D. N., (2004). *Basic Econometrics*; fourth edition. Tata McGraw-Hill Publishing Company Limited, New Delhi, India, pp.: 580-625.
- Hailu Z. (1991). *The Adoption of Modern Farm Practices in African Agriculture*. Nyankpala Agricultural Research Report No. 7 GTZ. West Germany.
- IFAD (2001). *Rural Poverty Report 2001: The Challenge of Ending Poverty*. Oxford University Press.
- Nwaru J. C. (2011). Determinants of Informal Credit Demand and Supply among Food Crop Farmers in Akwa Ibom State, Nigeria. *J of Rural and Comm Dev* 6 (1): 129-139.
- Obisesan A. A. (2013). Credit Accessibility and Poverty among Smallholder Cassava Farming Households in Southwest, Nigeria. *Greener J of Agric Sci*. 3 (2): 120-127. doi: 10.15580/GJAS.2013.2.112712295
- Okojie C. Monye-Emina A, Eghafona K, Osaghae G. (2010). Access to Microfinance by Self- Employed Women in the Rural Areas of Edo State. NSSP. Brief NO. 14 Washington. D.C. Int. Food Policy Res. Inst.
- Okoronko U. L., Joseph E., Naenwi M. (2014). Access and Utilization of Micro Lending Scheme among Rural Farmers in Cross River State: Potentials for Sustainable Agricultural Development in Nigeria. *J of Rural and Comm Dev*. 6 (1): 129-139
- Okurut F. N. (2006). Access to Credit by the Poor in South Africa; Evidence from Household Survey Data 1995 and 2000. *J of App Econ and Policy An*. 1 (1): 25-42
- Okurut F. N. (2008). Determinants of Credit Market Access in Botswana. *Asian African journal of Economics and Econometrics* 8 (1): 65-75
- Olatinwo K. B. Muhammad-Lawal A., Ayojide S. (2012) Analysis of Rural Farming Households' Access to Credit in Kwara State. *Nig J of Agric Food Sci*. 10 (2): 50-62. doi: 10.4314/jafs.v10i2.5
- World Bank Report (2008). *Agriculture for Development*. The World Bank Washington, D.C. Available at: http://siteresources.worldbank.org/INT/INDR2008/Resources/WDR00_book.pdf. [Accessed 31 03. 2013].

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