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EFFECTIVENESS OF CREDIT UTILIZATION AMONG FARMERS IN UGHELLI NORTH LOCAL GOVERNMENT AREA OF DELTA STATE, NIGERIA

[1]Ikpoza, E. A., [2]Ohwo, O. A., [3]Nwajei, C. A. and [1]Tabuanu, C. O.
[1]Department of Agricultural Economics and Extension,
Faculty of Agriculture, Delta State University, Abraka, Delta State, Nigeria.
[2]Department of Agronomy, Forestry and Wildlife,
Faculty of Agriculture, Delta State University, Abraka, Delta State, Nigeria.
[3]Department of Accounting and Banking and Finance, Faculty of Management Science,
Delta State University, Abraka, Delta State, Nigeria.
Corresponding Authors' E-mail: eguonoerih@gmail.com **Tel.:** 08065383192

ABSTRACT
The study sought to examine the effectiveness of credit utilization among farmers in Ughelli North Local Government Area of Delta State, Nigeria. Multi-stage random sampling technique was used in selecting 120 farmers from 20 villages randomly selected from the 5 (five) clans. Descriptive and inferential statistics was used to analyze the data. The result revealed that the respondents were predominantly males and married (56.7%). Majority (50%) had only six (6) years of formal education and 51.7% of them had between 0.50 - l.5 ha of farm size. Many of (61.2 %) also did not belong to any form of farmer association and 67.8% had other sources of income to support their farm income. Nigerian Agricultural Cooperation and Rural Development Bank (NACRDB) had the greatest mean response of 3.83 as a source of credit to farmers in the study area. The farmers had very few (20%) contacts with extension agents. The probit regression result indicated that, membership in farmers' association, number of visit by extension agents and farming experience were statistically significant at P≤0.05 confidence level. The chi-square value of 14.64 with a p-value less than 0.046 implies that the independent variables were statistically significantly in predicting the log likelihood of effective use of micro credit by respondents. It was concluded that there was no effectiveness in the utilization of credit by farmers in the study area. The study recommended prompt processing of loan applications and timely disbursement of loans to successful applicant; proper monitoring of credit utilization by credit agents; increasing amount of loans to farmers as this will help to increase their size and operation and ensure food security and Government intervention to reduce the high rate of lending by micro credit institutions.

Keywords: Agriculture, Credit, Effectiveness, Farmers, Utilization.

INTRODUCTION
In economics and finance, credit is used specifically to refer to the faith placed by lender in a borrower by extending a loan to the borrower. Micro-credit is referred to as small-credit. Odoemenem and Obinne (2010) defined micro-credit as the provision of small loans with no minimum deposit designed for poor people who live on low income.

Despite the important role they play in national development as providers of employment shelter, food and clothing. Odoemenem and Obinne (2010) referred to small-scale farmers as traditional, rural and mostly private or family owned enterprises, which are characterized by low capital, low productivity, meagre savings from agricultural investment, thus a vicious cycle of poverty.

In the past and recent years, various governments in Nigeria embarked on different efforts and programmes aimed at boosting the activities of farmers in particular and agricultural

production in general (Ololade, 2013). In pursuance of this broad objective, government tried several programmes, approaches and strategies in order to make funds accessible to farmers in the rural areas (Eboreime, 2008). Government also gives encouragement to these farmers to form co-operative societies to improve their financial base but despite these efforts at both Federal and State levels, micro-credit utilization among these farmers are still not accessible. Farmers are still found looking for micro-credit to purchase farming inputs and to pay labour. The loan terms and conditions are still not favourable.

Generally, it is assumed that rural and small-scale farmers have relatively low income and therefore are unable to repay loan or credit extended to them. Expansion and modernization of their farms depend to a large extent on capital investment, given good management. To obtain capital they must of necessity seek credit from micro-credit finance institution. The research work therefore, found out how small-scale farmers utilize their loans from micro-credits. The findings of this study serve as an eye opener to farmers who had not known about these micro-credit financing institutions (Olowa and Olowa, 2011). The lending institution will also gain from the research work since the study provides useful information on the effect of loans issued to the farmers and their level of operation to meet farmers' demand for improving their productivity and income. The extension of micro-credit to small-scale farmers is no doubt, essential to sustain agricultural production and there is the need for the constant evaluation (Awotide *et al*., 2015).

The study is therefore designed to highlight the problems and prospects of micro-credit utilization among farmers in Ughelli North Local Government Area (LGA) of Delta State, Nigeria and the specific objectives were to: examine the socio-economic characteristic of farmers; identify the major sources of micro-credit among farmers; identify the ways of micro-credit utilization among the farmers; determine the effectiveness of credit utilization on the farming; and identify the problems faced by farmers in credit utilization. The study tested the null hypothesis (Ho_1) that there was no significant effect of credit use (utilization) on output of the farmers.

MATERIALS AND METHODS

The Study Area

The study was carried out in Ughelli North LGA of Delta State, Nigeria. Its headquarters is in the city of Ughelli. Ughelli is a town in Delta State, Nigeria. The city of Ughelli has an 'Ovie', which is the traditional ruler. Ughelli North Local Government Area is made up seven (7) clans namely, Ughelli, Agbarho, Ogor, Agbarha, Orogun, Evareni and Uwheru. Petroleum extraction by Shell Petroleum Development Company occurs in the vicinity. It has an area of 818 km2 and a projected population of 476,947 as at 2019 at an annual population growth rate of 2.6% (National Population Commission [NPC], 2019).

Sampling Procedure and Sample Size

The study adopted a multi stage random sampling technique. The first stage involved selection of five (5) clans from the seven (7) clans in the LGA. The second stage involved the selection of four villages each from the five (5) clans to give a total of 20 villages. The third stage involved a purposive selection of six (6) farmers who obtained credit from each of the 20 villages; this leaves the total sample for the study at 120 (Table 1).

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Table 1: Sampling Frame and Size Selection Plan of the Study

Clans	Selected clans	Selected villages	Six farmers per village	Sample size
Ughelli	Agbarha	Agbarha-Otor,Aghalokpe, Agbaide,Awirhe	6x4	24
Agbarha	Ughelli	Afisere,Ekiugbo,Ekrejebor, Eruemukobwarien	6x4	24
Ogor	Agbarho	Ehwerhe, Ekrerhavwe, Ikweghwu,Iteregbi	6x4	24
Evwreni	Owheru	Agadama,Aghanubi,Akabanisi,Avwon	6x4	24
Owheru	Orogun	Eboh, Aragba, Ekrijezue,Emonu	6x4	24
Total				120

Method of Data Collection

Primary data was used for this study. It was collected using well-structured questionnaire which was administered to the farmers in the study area. The questionnaire collected information on the socio economic characteristics of the farmers, credit utilization, sources of credit, credit use decision and constraints affecting their use of credit.

Method of Data Analysis and Test of Hypotheses

Data for the study was analysed with descriptive statistics (mean, frequency distribution, percentage and graphs) and inferential statistics (logit model). The specification of the logit model is given as:

$Y_1^* = \beta o + \beta 1X_{1i} + \beta_2X_{2i} + ...+ \beta_kX_{kt} + vi$ …(1)

so that:

$Y^*_i = 1$ if $Y^* > 0$

Yi = 0; otherwise.

where;

X_1. X_2 ... X_{ki} = vector of random variables,

β = vector of unknown parameters and v represent a random disturbance term (Nagler, 2002).

The probit model specified in this study analyses farmers' decision about whether or not their credit was effectively utilize. The model was expressed as follows:

$Y_1 = \beta 0 + \beta_1Xi + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9\ \beta_{10}X_{10} + \beta_{11}X_{11} + v$ …(2)

where;

Y_i = Farmers' decision on effectiveness of credit (dependent variable) which takes the value of 1 if the farmer effectively utilized credit, 0 otherwise

X_1 = Farm size (Ha)

X_2 = Farmers' age (years)

X_3 = number of years of formal education

X_4 = 1 if a farmer is male, 0 otherwise

X_5 = Marital status, 1 if married, 0 otherwise

X_6 = Membership of farmers' association, 1 if a farmer is member, 0 otherwise

X_7 = Farming experience (years)

X_8 = 1 if a farmer has off-farm income, 0 otherwise

X_9 = household size

X_{10} = Farm income (₦) per annum

X_{11} = Number of visits by agricultural extension officer of the previous year

X_{12} = Amount of loan received

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RESULTS AND DISCUSSION

Socio-economic Characteristics of the Farmers

The sex distribution of the respondents shows that 69.4% (Table 2) were males while 30.6% were females. Though respondents were randomly selected, the respondents were dominated by males as mostly is the case in most community farming. This is likely as a result of the women being involved in other businesses like trading. This result agrees Ogunleye and Oladeji (2007) who found out those cocoa farmers were predominantly males. Table 2 further revealed the marital status of the respondents to be dominated by married persons as 56.7% are married while 43.3% were single, widowed or divorced. This is likely because married people are believed to have more responsibilities than the unmarried and therefore seek This agrees with the findings of Ngeywo *et al.* (2015) who said that 74.3% of farmers in Kisii, Kenya were married.

The Table 2 still discloses that 50% had spent 6 years in school, 31.6% had spent 12 years in school, and 16.6% had spent 16 years in school while 1.8% had not attended school at all. This shows that majority of the respondents had at least primary education. This result agrees with the findings of Rapsomanikis (2016) who discovered that majority of smallholder farmers do not spend more than six years in school.

The result in Table 2 also show that 51.7% of respondents have between 0.50 - l.5 ha of farm size, 33.3% of respondents had between 1.6 – 2.5 ha, 10.0% have between 2.6 - 3.5 ha while only 5% have above 3.5 ha of farm land. This implies that majority of the respondents have very small land for farming activities. This is in agreement with the findings of Iwuchukwu *et al.* (2013) that pineapple farmers in Enugu State practice their farming on small portions of land.

The distribution of respondents on whether they belong to any association show that 61.2 % belong to no association while 38.8% of respondents belong to an association. This implies that farmers in the study area operate more as an individual and not group and this often affect their chances of obtaining micro credit loans for their farm businesses.

The results of the off-farm income show that majority of the farmers have one form of off-farm income; 67.8% of farmers have other source of income to support their farm income while only 32.2% have no other sources of farm income. It shows that the farmers never depend on farm income alone to meet their daily need as they still engaged in other non-farming business. The results of the off-farm income show that 67.8% of farmers have other source of income to support their farm income while only 32.2% have no source of off-farm income. It shows that the farmers never depend on farm income alone to meet their daily need as they still engaged in other non-farming business. This result is in agreement with the findings of Ajani *et al.* (2013) who said that women in rural areas engage in different off-farm activity generating income in a bid to adapting to climate change.

The farmer had little contact with extension agents as 20% of respondent never had any contact with extension agents, 37.5% only had one contact with extension agent in a year while 30.8% of respondents were visited only twice, 7.5% were visited three times and 4.2% were visited four times. This poor contact with extension agents had great negative impact on growth of agriculture in the rural area. This result is in agreement with the findings of Iwuchukwu *et al.* (2013) who said that pineapple farmers in Enugu have very few contacts with extension agents.

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Table 2: Socio-economic Characteristics of the Farmers

Variables	Frequency	Percentage
Sex		
Female	37	30.6
Male	83	69.4
Marital status		
Married	68	43.3
Others	43	56.7
Household size (Number)		
2	20	16.7
4	40	33.3
5	20	16.5
7	28	23.1
8	12	9.9
Years in School (years)		
6 – 11	60	50.0
12 – 15	38	31.6
16 – 19	20	16.6
20 and above	2	1.8
Farm Size (ha)		
0.50- 1.5	62	51.7
1.6 – 2.5	40	33.3
2.6 - 3.5	12	10
Above 3.5	6	5
Membership of association		
Yes	46	38.8
No	74	61.2
Off Farm income		
Yes	81	67.8
No	39	32.2
Visit by extension agent (Number)		
0	24	20.0
1	45	37.5
2	37	30.8
3	9	7.5
4	5	4.2

Source: Field survey, 2019

Major Source of Micro-Credit among Farmers in Ughelli North LGA

The mean response of the farmers (Table 3) shows that the farmers had access freely to the Nigerian Agricultural Cooperation and Rural Development Bank (NACRDB) with a mean of 3.83, money lenders with mean 3.06, corporative with mean 3.70 and friends and relative with mean 3.50 while the data further shows that farmers do not benefit from the remaining financial institutions The study revealed that farmers had access freely only to the NACRDB with a mean of 3.83, money lenders with mean 3.06, corporative with mean 3.70 and Friends and Relative with mean 3.50 they have benefited mainly from these source. This is due to the low interest rate charged by the bank, since it is sponsored by the Federal Government of Nigeria. Eboreime (2008) agrees with this fact stating that successive governments in Nigeria recognize the relevance of credit as a toot in poverty alleviation among small scale rural

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farmers. Small holder farmers also collect credit from other micro-credit institutions, but the mean response was below 3.0, considering the scaling points.

Table 3: Major Sources of Credit to Farmers in the Study Area

Source	X	Remark
Nigerian Agricultural Cooperation and Rural Development Bank	3.83	S
Co-operative (*Osusu*)	3.70	S
Friends and Relatives	3.50	S
Nigerian Agricultural Insurance and Cooperative Bank	3.24	S
Money lenders	3.06	NS
Agricultural Development Programme	2.89	NS
Non-Governmental Organization	2.88	NS
Commercial banks	2.68	NS
State Ministry of Agriculture	2.64	NS
Agricultural Credit Guarantee Scheme Programme	2.33	NS

Note: NS = Not significant; S = Significant; N = l20, X = means
Source: Field survey, 2019

Ways of Micro Credit Utilization among the Farmers

Farmers utilization of credit was spread across 5 point likert scale with 3.5 cut-off point mean above 3.50 are considered significant as shown in Table 4 above. Means are mean of multiple response of the respondents.

Table 4: Farmers Utilization of Micro-credit

Needs	X	Remark
Purchase inputs	3.80	Significant
Purchase farming tools	3.82	Significant
Hire labour	3.35	Not significant
Meet storage needs	3.35	Not significant
Meet land clearing needs	3.50	Significant
Purchase equipment	3.76	Significant
Servicing and maintenance of capital equipment	2.74	Not significant
Boost working capital base	3.29	Not significant
Consumption needs	2.63	Not significant
Children's school fees	2.61	Not significant

Note: N = 120; X = Mean
Source: Field survey, 2019

The Credit Utilization on Farming

The analysis on Table 5 shows that the mean response of the farmers in each activity was above 3.50. The farmers in the study area agreed that the use of credit for farming purpose increased the volume of their sales. They also agreed that the use of credit enabled them to acquire new farm equipment. Furthermore, they agreed that they used credit to acquire capital assets and finally, they agreed that they used the acquired credit to solve their social obligation. This indicated that the farmers utilized the acquired credit positively. This is in line with the work of Asante-Addo *et al*. (2016) who worked on agricultural credit provision and discovered that farmers utilized credit for improving their farming activities.

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Table 5: Mean Responses on Smallholder Farmers Utilized Micro-credit

Utilized micro credit	X	Remark
Increase my volume of sales	3.56	Effective
Enable me to acquire new farm equipment	3.87	Effective
Enable me to acquire capital assets	3.50	Effective
Solve some of my social obligation	3.55	Effective

Note: N = 120; X = Mean
Source: Field survey, 2019

Results of Hypotheses Testing

The results in Table 6 shows that P≤0.05 was statistically significant as the independent variables explained the factors that determine effective utilization of credit in the study area. Deviance R^2 0.215 shows that more than 21.5% likelihood of effective use of credit by farmers in the state is determined by socio economic status of the farmers. The result presented in Table 6 further shows that the model was able to explain the variance in the outcome. The chi-square is highly significant (Chi-square = 14.64; df. = 8 P≤0.05) as shown in the omnibus test of model coefficients in Table 7. With this result we reject the null hypothesis that there is no significant effect of credit utilization on output among farmers in the state and accept the alternative hypothesis that states that there is a significant effect of credit utilization on output among farmers in the state. This result is in agreement that of Masaood and Maharjan (2020) that studied factors affecting farmers' access to formal and informal credit: evidence from rural Afghanistan. They discovered that farmers' output was greatly influenced by their use of credit.

Table 6: Model Summary

Model Summary			
Step	**-2 Log likelihood Square**	**Cox and Snell R^2**	**Nagelkerke R**
1	1 120.315[a]	.215	.270

Note: a = Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.
Source: Field survey, 2019

Table 7: Omnibus Tests

Omnibus Tests of Model Coefficients				
Step		**Chi-square**	**Df.**	**Sig.**
Step 1	Step	14.646	8	.046
	Block	14.646	8	.046
	Model	14.646	8	0.46

Source: Field survey, 2019

Coefficient of Estimated Parameters

The results of the coefficient of estimated parameters are presented in Table 8. In Table 8 results, membership in farmers' association, number of visit by extension agents and farming experience were statistically significant at 5% level of confidence with positive signs. Being a member of a farmers' association and farming experience increases the predicted probability of effectiveness of credit utilization. Also, an increase in the number of visit by extension agents increases the predicted probability of effectiveness of credit utilization. For a unit increase in membership of farmers' association, the z-score increases by 0.870. In addition, for a unit increase in number of visit by extension agents, the z-score increases by 0.474. Finally,

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for a unit increase in farming experience, the z-score increases by 0.51. The chi-square value of 14.64 with a p-value less than 0.046 implies that the independent variables were statistically significantly in predicting the log likelihood of effective use of micro credit by farmers in the State. Since the farmers did not belong to farmers association, they had very little visit by extension agents and had few years of farm experience, we can conclude that they did not effectively utilize the credit that was received. This result also agrees with that of Masaood and Maharjan (2020).

Table 8: Coefficient of Estimated Parameters

Variables	B	S.E	Wald	Df.	Sig.	Exp.(B)
Constant	-2.404	1.322	3.306	1	.069	.090
Sex	-.368	.572	.415	1	.520	.692
Farm Size	-.144	.216	.445	1	.054	.866
Marital Status	.564	.499	1.276	1	.259	1.757
Household Size	.243	.151	2.575	1	.109	1.275
No years in school	-.047	.047	1.008	1	.315	.954
Membership	.870	.521	2.791	1	.025	.419
No of visit	.474	.224	4.489	1	.034	1.607
Farming Experience	.051	.017	.008	1	.030	1.001

Source: Field survey, 2019

Problems Faced by Farmers in Credit Utilization

The response of the small holder farmers from Table 9 indicates that they experience some problems while obtaining credit from the financial institutions. Based on the decision rule, all the listed factors or items having a mean response of 3.50 and above should be interpreted as positive and therefore constitute problems which include as indicated in Table 9 with ($\dot{x}$ of 3.50 and above). Other problems with mean scores below 350 were not considered as constituting problems to farmers, they include items number 34, 38 and 39. The view of the above therefore, small holder farmers were faced with problems in the process to acquire micro- credit.

On ways of utilizing micro-credit among farmers, the study showed that the micro credit acquired was utilized properly. The rural farmers mean response on how they utilize the credit showed that the mean score of each item was above 3.50. This is above the decision cut-off point. This shows that the loan has positive effect on the small holder farmer's income. This is an indication that the income of the rural farmers improved as a result of the credit obtained. It has also increase their volume of farm output, enable them to acquire new farm tools, it has enable the small holder farmers to acquire capital access and solve some of their social obligations. Nwaru *et al.* (2011) agreed with this fact when he stated that, credit, if well applied, should increase size of farming tools and operations, productivity and therefore income.

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Table 9: Farmer's Mean Response on Difficulties Encountered in Micro-Credit Utilization

Difficulties	**$\dot{X}$**	**Degree of constant**
High interest rate charged	3.61	Significantly high
Delay in processing loan application	3.63	Significantly high
Difficulty in processing loan application	3.24	Significantly high
Late disbursement schedule	3.52	Significantly high
Cost of transportation	5.53	Significantly high
Inadequate amount approved	4.07	Significantly high
Inability to provide required collateral	3.27	Not high
Difficulty in having a reputable guarantor	3.19	Not high
Lack of awareness/proper communication	3.92	Significantly high
Insufficient available credit	3.96	Significantly high

Note: N = 120, $\dot{\mathbf{X}}$ = mean
Source: Field survey, 2019

CONCLUSION AND RECOMMENDATIONS

From the findings, it can be concluded that the credit acquired by the small-scale farmers was used to the fullest in such items, as purchase input farm tools, equipment, hire labour meet storage needs, and boost working capital base. The rural farmers still felt that the credit should transform them from small-scale to middle or large scale of production. The sources of credit available to these rural farmers were relatively small. The rural farmers obtained loan mainly from NACRDB. Other sources need to do something to their loan terms in other to soften it for farmers to obtain loan. The loan obtained by the rural farmer though small was properly utilized because their production and income was increased. It must be stress that the farmers find it extremely difficult to achieve optimum progress and high performance because of what they encountered in obtaining the credits. The study recommended as follows:

1. Government need to consider the views of the small-scale farmers to assist most of these financial institutions, so that farmers will obtain loan easily for production to increase.
2. There is the need to increase the loan given to small-scale farmers to increase their income and production.
3. It is important that other financial institutions should follow the NACRDB to soften their loan terms and for the Federal Government to support these sources so that small- scale farmers can produce in large quantity and improve the economy of the country.
4. Prompt processing of loan applications and timely disbursement of loans to successful applicant without delay.
5. Proper utilization of credit acquired.
6. The credit to farmers needs to be increased so that the farmers could make greater impact on crop production and economic growth of the Nation.
7. The interest rate should be reduced to 5%. High interest rate wills scare potential rural farmers Strong enlightenment campaign to educate the farmers on the implication of loans.
8. Government should fund more financial institution, so that their interest rate would be reduced for small-scale farmers to obtain credit with ease.
9. Finally, government policies, aimed at improving the quality life of sector should be such that creates additional opportunities for employment and source of income among the farmers.

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