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*Full Length Research Paper*

# Determinants of loan acquisition from the financial institutions by small-scale farmers in Ohafia Agricultural zone of Abia State, South East Nigeria

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**The study was designed to analyse the determinants of loan acquisition from financial institutions by small-scale farmers in Ohafia Agricultural zone of Abia state, South East Nigeria. Data were collected with structured questionnaire from 100 randomly selected farmers. Data were analyzed using simple descriptive statistics and multiple regression models. Results show that, the farmers committed their loans to agricultural production and only a few divert their loans. Factors influencing the amount of loan disbursement by financial institutions are age of the farmers, level of education, farming experience and farm size. Financial institutions are encouraged to disburse more loans to farmers to improve their income and alleviate household poverty in the State.**

**Key words:** Loan, disbursement, financial institution, acquisition, credit.

## INTRODUCTION

In Nigeria, between 70 to 80% of the population live in the rural areas and a vast majority of this population totally depend on agriculture for their livelihood (Ezeugo, 1998). Agriculture provides between 80 to 90% of the country's food needs (Odife, 2002) and supports more than 70% of Africa's population. The sector employs the largest number of workers and generates a significant share of GDP in most countries. For example in 1990, the agricultural sector accounted for 68% of the workforce in sub-Saharan Africa and 37% of the workforce in Northern Africa. The main purposes of agricultural production are to meet food security needs, supply inputs to the agricultural industry and earn foreign currency.

Agricultural growth therefore is the only panacea to the problem of hunger, food insecurity and development. Agricultural growth in Nigeria has been on the decline over the years and this has perpetuated poverty. In Nigeria for example, increasing poverty levels despite several interventions, is a matter of serious concern. For instance, analysis of 2003/2004 data revealed that, national poverty incidence is 57.8%, with rural areas having 64.1% while urban area has 35.4% (NBS, 2005). This situation poses a daunting challenge to the achievement of the Millennium Development Goals and therefore calls for guided change, as it emanates from low agricultural production. Agriculture as a production process among other factors assume increasing importance in many parts of the world as a deliberate response to the needs of numerous entrepreneurs with limited capital base (IFAD, 2001). Kropp and Schnidt (1987) assert that, most small scale farmers are poor and lack savings and investment culture; besides smallholder farmers have limited access to credit compared to other beneficiaries of credit facilities (Nigerian Agriculture, 2000).

However, because of low yield and price uncertainty associated with farming in developing economies like Nigeria, farmers have low income, low savings and low investment which results in low output. The small scale farmers have been identified as constituting the greatest force in food production in Nigeria. It is pertinent to note that, these farmers are faced with different constraints among which access to credit according to Olomola (1990) is a major militating factor, against agricultural

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production and development in the country. Such difficulties in credit procurement have also been confirmed by various authors (Nto and Mbanasor, 2008; Olaitan, 2005; Okorie, 1998). This lack of credit resources according to Lawal and Shittu (2006) causes setbacks to the productivity of farmers as a result of the fact that, these farmers do not have the resources to procure improved seedlings, chemicals and hired labour, as well as transport and market their produce which would have improved their productivity and welfare.

However, due to low yield and price uncertainty associated with farming in developing economies like Nigeria, farmers have low income, low savings and low investment which results to low output. The small scale farmers have been identified as constituting the greatest force in food production in Nigeria. It is pertinent to note that these farmers are faced with different constraints among which access to credit according to Olomola (1990) is a major militating factor against agricultural production and development in the country. Such difficulties in credit procurement have also been confirmed by various authors (Nto and Mbanasor, 2008; Olaitan, 2005; Okorie, 1998). This lack of credit resources according to Lawal and Shittu (2006) causes setbacks to the productivity of farmers, as a result of the fact that, these farmers do not have the resources to procure improved seedlings, chemicals and hired labour as well as transport and market their produce which would have improved their productivity and welfare. Unfortunately, these farmers have meager financial resources to undertake innovative farming activities, the rural financial market have not satisfied their credit needs; therefore, they have to resort to formal loan sources since the credit obtained from informal sources is not always enough to carry out a meaningful production.

In Nigeria, the present government emphasizes the transformation of small holder agriculture from subsistent orientation to market orientation and this requires the availability of adequate capital credit or loan. This is regarded as more than just another resource such as land, labour and equipment because it determines access to other resources on which farmers depend. The reason is because farmers' adoption of new technology necessarily requires the use of some improved inputs which must be purchased. Traditionally, capital for investment in agriculture comes from two potential sources, namely personal savings of the farmer and farm credit. In the latter, farmers are expected to pay the principal with the accompanying interest. Meanwhile, the history of agricultural credit administration in many parts of Nigeria has not been impressive when evaluated on the basis of their repayment performance (Arene, 1993). This has further impacted negatively on the availability of credit to farmers. This deficiency in the availability of credit has ultimately affected agricultural production, leading to food insecurity and perpetual poverty. Adegbite et al. (2007) noted that in this situation, credit is the only tool required to break this vicious cycle.

Therefore, farm credit remains the major means of improving farm capital investment. Nigeria made attempts at institutionalizing agricultural credit as a means of providing much needed capital for agricultural production and this began almost 50 years ago (Osakwe and Ojo, 1984). Government intervention was also motivated by the implementation of some special agricultural project whose success depends on the administration of credit facilities to the small scale farmers for whom the project were designed (Osakwe and Ojo, 1984). To encourage financial institutions to grant loans, the Central Bank of Nigeria introduced regulations and sectoral allocations of credit advances by commercial banks (CBN, 1989). Again, in an attempt to help resource poor farmers gain more access to credit, the government established such institutions as Nigeria Agricultural and Cooperative Bank (NACB), Nigerian Industrial Development Bank (NIDB), Nigeria Bank for Commerce and Industry (NBCL), the Agricultural Credit Guaranteed Scheme (ACGS) which was under the operations of the Central Bank of Nigeria (CBN). In spite of the strategies to increase access to formal financial institutions in rural areas, the problem still persists (CBN, 2002). Secondly, there is limited information on the determinants of credit by small scale farmers from financial institutions in the study area. In view of this therefore, it becomes imperative to study the determinants of credit by small scale farmers from financial institutions in the area. The paper seeks to achieve the following objectives:

1) To identify the socio-economic characteristics of the respondents in the area,
2) Estimate the determinants of loan acquisition from the financial institutions by small scale farmers in Ohafia agricultural zone and
3) To ascertain the extent of usage of the loans in their agricultural production activities.

## MATERIALS AND METHODS

The study was conducted in Ohafia agricultural zone of Abia state, South East Nigeria. This zone was chosen because the people are predominantly farmers and have financial institutions. Majority of the farmers have benefitted from agricultural assisted loans. 5 autonomous communities were purposively selected due to the ones that have financial institutions. 2 villages were randomly selected from each community, making a total of 10 villages. 10 farmers were randomly selected from each village making a sample size of 100 farmers. The sampling frame was obtained from the financial institutions and it comprises all the farmers that acquired loan from them.

Data was collected through primary and secondary sources. Primary data were sourced through the use of structured questionnaire. Out of a 100 farmers, 92 returned their questionnaires. Secondary data were obtained through journals and other relevant literatures. Data collected were analyzed using simple descriptive statistics and ordinary least square regression. 4 functional forms namely the Linear, Semi-log, Cobb-douglas and Exponential were fitted (Olukosi and Ogungbile, 1989); so as to

**Table 1.** Socio-economic characteristics of the respondents.

| Variables | Frequency | Percentage | Frequency | Percentage |
|---|---|---|---|---|
| | Farmers who patronize bank loans | | Farmers who do not patronize bank loans | |
| Age | | | | |
| 25-39 | 10 | 19.00 | 5 | 13.00 |
| 40-54 | 28 | 52.00 | 19 | 49.00 |
| 55-69 | 13 | 25.00 | 12 | 30.00 |
| 70 and above | 2 | 3.00 | 3 | 8.00 |
| Educational level | | | | |
| 0 | 3 | 6.00 | 13 | 33.00 |
| 1-6 | 14 | 26.00 | 16 | 41.00 |
| 7-12 | 27 | 51.00 | 9 | 23.00 |
| 13 and above | 9 | 17.00 | 1 | 3.00 |
| Sex | | | | |
| Male | 31 | 58 | 12 | 13 |
| Female | 22 | 42.00 | 27 | 69 |
| Farming experience | | | | |
| 1-5 | 3 | 6.00 | 21 | 54.00 |
| 6-11 | 9 | 17.00 | 7 | 18.00 |
| 12-17 | 6 | 11.00 | 4 | 10.00 |
| 18-23 | 8 | 15.00 | 4 | 10.00 |
| 24 and above | 27 | 51.00 | 3 | 8.00 |
| Farm size (Ha) | | | | |
| 0.1-1.59 | 6 | 11.00 | 21 | 54.00 |
| 1.6-2.90 | 8 | 15.00 | 7 | 18.00 |
| 3.0-4.39 | 10 | 19.00 | 4 | 10.00 |
| 4.40-5.79 | 21 | 40.00 | 4 | 10.00 |
| 5.8 and above | 8 | 15.00 | 3 | 8.00 |

select the lead equation based on econometric and statistical criteria. The multiple regression model is implicitly specified as:

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, e)$

Where, Y = Amount of loan disbursed (₦); $X_I$ = Age of the farmers (years); $X_2$ = Sex (Dummy variable Male = 1; Female = 0); $X_3$ = Household size (number of persons); $X_4$ = Marital status (Dummy variable Married = 1; Single = 0); $X_5$ = Level of education (years); $X_6$ = Farming experience (years); $X_7$ = Farm Size (hectare); e = error term

It is expected apriori that the coefficients for $X_3$, $X_5$, $X_6$, $X_7 > 0$; $X_1$, $X_2$, $X_4 < 0$

## RESULTS AND DISCUSSION

### Socio-economic characteristics of the farmers

Table 1 shows the mean age of those who patronize bank loans to be 53 years and those who do not patronize bank loans had a mean age of 55 years, indicating that a majority of the respondents were middle aged farmers who were still active, vibrant and dynamic and are more likely to adopt to innovations better and faster than their earlier counterparts. Age bracket of 31 to 50 years contain innovative, motivated and objective individuals (FAO, 1997; Yunusa, 1999). The mean number of years spent in school for those who patronize bank loans was 6 years and those who do not patronize bank loans had 4 years, indicating that though the respondents in the area are moderately educated but those who patronize bank loans were more educated than their counterpart. Education increases their awareness of the benefits of loan and also exposes them to where and when to go for the loan.

The table further showed that, the respondents who used bank loans were reasonably experienced. This is indicated in their mean age of 17 years. The implication is that, though they were not well educated, they were well experienced in farming and can therefore understand the need for credit and access it. However, those who do not

**Table 2.** Distribution of respondents based on the extent of usage of their loan utilization.

| Type of activity | Frequency | % |
|---|---|---|
| Purchasing farm tools | 35 | 32.71 |
| Buying seeds, chemicals and fertilizers | 25 | 23.36 |
| Use for non-farming activities | 13 | 12.15 |
| Clearing accumulated debris | 18 | 16.82 |
| Hiring labour | 16 | 14.95 |
| Total | 107* | 100 |

Source: Field survey (2004); * Multiple responses recorded.

patronize bank loans are those who are not well experienced in farming, as they have a mean experience of 4 years. This could be due to the fact that, the newly introduced FADAMA III project in the area may have exposed them to the benefits of using bank loans. The mean farm size of those who do not patronize bank loans were 5 ha while those who do not patronize bank loans had a mean farm size of 3 ha. This implies that, the farmers who patronize bank loans are able to use the money to increase their hectarage. A reasonable proportion of the respondents who patronize bank loans were males (58%) while women dominated among those who do not patronize bank loans (69%). Men have access to credit facilities more than women who contribute more to food production in the area. This is consistent with the assertion made by Tanko (1994) that, women do not get the same as men in their access to critical farm resources and services such as farm land, credit and improved input due to cultural, traditional and sociological factors. Besides, rural women in particular are responsible for half of the world's food production and produce 60 to 80% of the food in most developing countries (FAO, 2004).

To identify the factors that determine loan disbursement by banks to farmers, four functional forms of the multiple regression model were fitted in the results of the multiple regression analysis as shown in Table 3. The table shows that the exponential function was chosen as the lead equation, based on having the highest value of the coefficient of multiple determination ($R^2$), conformity with apriori expectations and having more significant variable coefficients. The results showed that, the age of the farmers ($X_l$), level of education($X_5$), farming experience ($X_6$) and farm size ($X_7$ ) are significant at 1% while marital status ($X_4$ ) at 5%, implying that the greater they are, the higher the amount of loan acquired by farmers. Hence, they have a huge influence on the output of farmers. Again, these factors are important determinants of loan disbursement from the financial institutions by small-scale farmers in the area.

Sex ($X_2$) and household size ($X_3$) though had positive coefficients, but none had significant effects on the loan acquisition of the farmers. This implies that the amount of loan acquired was gender insensitive. This is consistent with the findings of Mbah (2009) who found age of farmers insignificant. Also, household size was insignificant as the number of persons in a given farming household does not have any effect on the amount of loan acquired. The value of the coefficient of multiple determination ($R^2$) is 0.7318 which implies that, 73% of the variability in the loan acquisition can be explained by the combined effect of the independent variables included in the model.

From the result of the analysis, the coefficient of age ($X_l$), level of education ($X_5$), farming experience ($X_6$) and farm size ($X_7$) are positive and significant at 1% level, implying that any increase in the variables would result to an increase in farmers loan acquisition which will invariably lead to increase in the farmers' output. The negative coefficient of marital status ($X_4$) at 5% level shows that, loan acquisition declines with marital status. Thus, the lending institutions believe that as one is married, he or she will be exposed to the danger of loan diversion due to family problems.

## Extent of loan usage in their agricultural production

The distribution of respondents according to usage of loan acquired is presented in Table 2. The table shows that (32.71%) of the respondents used their loan for purchasing of farm tools. Closely followed by (23.36%) of the respondents who used their loan proceeds in purchasing agricultural farm inputs such as seeds, chemicals and fertilizer. Also, 16.82% of the respondents used their loans in clearing accumulated debris in their farm while (14.95%) used theirs for hiring labour. A low percentage as indicated in 12.15% of the respondents, divert their loans into non- farming activities. Hence, most farmers use their loans in improving their standard of living while a few divert their loans in the area.

## Conclusion

The study analysed the determinants of loan acquisition from financial institutions by small-scale farmers in Ohafia Agricultural zone of Abia State, South East Nigeria. The

**Table 3.** Results of multiple regression analysis on factors influencing loan acquisition by farmers.

| Explanatory variable | Linear function | Semi – log | Double – log function | Exponential function |
|---|---|---|---|---|
| Age ($X_I$) | 14.5121(1.0659) | 2.6158(1.0759) | 0.0615(2.6856)** | 0.0081(2.7931)** |
| Sex ($X_2$) | 10.1908(2.974)** | 1.2283(0.8869) | 0.0218(1.1066) | 0.0052(0.9123) |
| Household size ($X_3$) | 4.1167 (1.0365) | 0.4713(1.2029) | 0.0916(1.0212) | 0.0078(1.1642) |
| Marital status ($X_4$) | -6.3714 (-1.1749) | -1.9616(-2.0198)** | -0.6371(-1.1741) | -0.0041(-2.1579)* |
| Education level ($X_5$) | 2.9182 (1.3462) | 2.0052(1.0599) | 0.0652(2.2029)* | 0.0039(3.5455)** |
| Farm experience($X_6$) | 4.3214 (2.7304)** | 1.7787(3.1689)** | 0.0313(2.5868)** | 0.0077(3.5909)** |
| Farm Size ($X_7$) | 3.8144 (3.4717)** | 1.4919(1.28865) | 0.0715(2.9916)** | 0.0065(2.8261)** |
| Constant | 52.2788 | 9.6217 | 0.8413 | 0.746 |
| Standard error | 2.9613 | 1.0553 | 0.0529 | 0.0324 |
| $R^2$ | 0.4846 | 0.3982 | 0.7318 | 0.7318 |
| F value | 11.2875** | 7.9402** | 32.7427** | 32.74** |
| No. of observations | 100 | 100 | 100 | 100 |
| Degrees of freedom | 84 | 84 | 84 | 84 |

Figures in parenthesis are t – ratios; * significant at 5%, ** significant at 1% t (0.5) 92df = 1.658

study revealed that, the amount of loan secured in Ohafia Local Government area is influenced by important socio-economic characteristics. It affirms that age, the level of education, farming experience and farm size of the respondents are statistically significant, as they affect the amount of loan acquired in the study area. It also indicates that, the coefficients of sex and household size ($X_3$) are not significant at 5%, implying that they are not important determinants of loan acquisition by farmers in the area. Also, from the result of the analysis, the coefficient of marital status ($X_4$) is negative and significant at 5% level which implies that, as one is married, the amount of loan acquired becomes smaller. The amount of loan acquired is influenced by certain factors which when considered in formulating policy aimed at improving the livelihood of farmers would further increase their income. Results show that, the farmers committed their loans to agricultural production and only a few divert their loans.

## RECOMMENDATION

Based on the findings, there is need for financial institutions to establish more of their branches in the area, as the bulk of the loan acquired are directed to agricultural production. This will act as leverage to the problem of credit acquisition in the area. Financial institutions are encouraged to disburse more loans to farmers to improve their income and alleviate household poverty in Abia State.

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