



CONSTRAINTS TO FARMERS' ACCESS, UTILIZATION AND REPAYMENT OF BANK OF AGRICULTURE'S LOAN IN NORTH CENTRAL, NIGERIA

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ABSTRACT

The study analyzed the factors constraining the ease of access, utilization and repayment of agricultural credit of the Bank of Agriculture to farmers in North Central, Nigeria. Multi-stage sampling procedure was used to sample a total of 202 beneficiary farmers of BOA credit in the region. Primary data were elicited from the farmers with the aid of structured questionnaire that was complemented with interview schedule. Data analysis was done with descriptive statistics and principal component model. The result revealed that six (6) factors constitute the major constraints adversely affecting farmers' access and utilization of BOA loans and they include bank structure and interest rates (10.8%), risks (9.5%), perception and poor loan administration (9.5%), integrity (7.8%), profitability (7.8%) and collateral constraint (7.7%) which explained a total of 53.2% of the variance in the 17 constraining variable components. The study concluded that these factors pose great threat to financing agricultural sector by formal institutions and consequently affecting agricultural productivity of the farmers in the region. It therefore calls for urgent intervention and remedy by all the relevant stakeholders. The study recommended that the procedures for the agricultural loan applications, approval and disbursement should be emended to aid farmers' ease of access of the loan and its optimal utilization which conveniently enhances the repayment. It was further recommended that the Bank embrace technology to make up for its poor spread and reach across the country.

Keywords: Access, Agricultural Credit, BOA, Farmers, Repayment, Utilization.

INTRODUCTION

Successive administrations in Nigeria have over the years developed and executed programmes, policies and interventions for an improved funding of the agriculture sector with the aim of boosting agricultural productivity and economic growth and development. One of such numerous efforts of the government to enhance productivity through the provision of agricultural finance is the establishment of the Bank of Agriculture (BOA) Limited, a specialized bank established in 1972 for the purpose of advancing agricultural credit to farmers (BOA, 2017). It is however worrisome that efforts by government and farmers to reverse this trend of low production and productivity in the country still remain elusive and have not impacted much as projected (Ade, 2002; Ugwu and Kanu, 2012) and farmers have also continued to suffer setbacks in accessing and utilizing agricultural credit facilities and other production inputs in North Central as argued by Salihu *et al.* (2018) and Adewumi *et al.* (2019). This therefore necessitated the study to identify these constraining factors which hinder the farmers from easing accessing and utilizing credits from BOA from the perspectives of the farmers in the North Central, Nigeria. The outcome of this study will be handy to the government and the management of the bank towards the improvement of the operations of the bank with the view of meeting and surpassing the targets set for its establishment.



Consequently, farmers' access to agricultural credit will be enhanced and agricultural productivity boosted in the region.

MATERIALS AND METHODS

The Study Area

The study was conducted in the North Central geographical zone of the country but was however restricted to Niger, Nasarawa and the Federal Capital Territory (FCT), Abuja, all situated in the north central geographical area of Nigeria. The north central area with total land area of 281,796 km, (representing almost 30 percent of the country's total land area) consists of six states (Niger, Kogi, Benue, Plateau, Nasarawa and Kwara) as well as the Federal Capital Territory with a total number of 24 BOA branches of the total 136 outlets mix of rural, semi-urban and urban nationwide. The North Central region is situated between Latitudes 6° 30' - 11° 20'N and Longitudes 7° – 10°E, with a population of 17.36 million (National Population Commission [NPC], 2006) and projected population of 29.3 million in 2016 (NPC, 2015). This region supports the production of large quantities arable crops and livestock and agriculture employs the larger percentage of the working population with usually small agricultural landholdings (National Bureau of Statistics [NBS], 2016).

Sampling Procedure

Multi stage sampling procedure was employed to select respondents for this study. The first stage was the random selection of three states from the states in the study area. At this stage, all 10 branches of the bank in the three states were selected and proportional sampling technique was used to select 202 respondents from these branches. Thus, each branch produced respondents based on its loan beneficiary population. Primary data were collected with the aid of structured questionnaire administered by the researchers and trained enumerators with the assistance of the loan officers of the bank. Data were collected on the factors that constraint farmers access to agricultural credit, effective utilization as well as factors that affect the repayment of the loan.

The data collected were analyzed using descriptive statistics and principal component analysis (PCA), a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarize the essential information contained in the variables. Varimax orthogonal rotation developed by Kaiser (1958) was chosen in order to create more interpretable clusters of factors. The factor solution should explain at least half of each original variable's variance. The number of factors retained was determined by the value of eigen value or characteristic root (eigen value) which must be greater than 1.0 (Chong *et al.*, 2013). Three criteria defined the basis for model acceptance as follows: each variable, in order to be included in the variable cluster of a factor, must load to it more than 0.5, each factor had at least two variables while variables that load in more than one constraint were discarded. The principal component model used was adapted from Adewumi *et al.* (2019) and thus presented as:

$$Y_1 = a_{11}X_1 + a_{12}X_2 + *** + a_{1n}X_n$$

$$Y_2 = a_{21}X_1 + a_{22}X_2 + *** + a_{2n}X_n$$

$$Y_3 = a_{31}X_1 + a_{32}X_2 + *** + a_{3n}X_n$$

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$$Y_n = a_{n1}X_1 + a_{n2}X_2 + *** + a_{nm}X_n$$

where;

Y_1, Y_2, \dots, Y_n = observed variables impeding effective performance of BOA;



$a_1 - a_n$ = Constraint loading or correlation coefficients;

X_1, X_2, \dots, X_n = Unobserved underlying factors constraining farmers' access to credit, its utilization and repayment of the BOA loans.

In order to ascertain the sampling adequacy and the factorability of the entire matrix, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were used. A data set with KMO test value exceeding 0.60 was considered acceptable and appropriate for factor analysis. Bartlett's test of sphericity relates to the significance of the study and therefore shows the validity and suitability of the responses collected (Chong *et al.*, 2013).

RESULTS AND DISCUSSION

Constraints to Farmers' Access, Utilization and Repayment of BOA Loan

The result of the analysis of the data matrix for the sample adequacy and factorability is presented in Table 1. It revealed that all the 17 variables correlated with at least 0.3 with at least one other variable, indicating that there is relationship between the variables, suggesting reasonable factorability. The results show that Kaiser-Meyer-Olkin (KMO) was 0.761 (middling) which was considered acceptable for sampling adequacy based on the KMO classification. The Bartlett's test of sphericity was significant ($\chi^2 = 382$; $p < 0.01$) which shows that the matrix is significantly different from zero (0) and the matrix is significantly different from identity matrix. This showed that there were sufficient inter-correlations to conduct the factor analysis based on the results.

Table 1: KMO measure of sampling adequacy and Bartlett's test of sphericity

Test category	Value
Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy	0.761
Bartlett test of sphericity (Chi-square)	382.640***
Degrees of freedom	136
Probability value	0.000

Source: Field survey, 2019.

The result presented in Table 2 shows the six factors that were retained after the varimax orthogonal rotation of the beneficiaries' farmers' responses on constraints to hinder access, utilization and repayment of BOA loan in the study area. The retained factors were listed according to the proportion of variance associated with them and were renamed as factor 1 (Bank structure and interest rate constraints), factor 2 (risks constraints), factor 3 (perception and poor loan administration constraints), factor 4 (integrity constraints), factor 5 (Profitability constraints) and factor 6 (collateral constraints). The factors that were retained explained 53.2% of the variance in the 17 constraining variables. The first combination of variables in the first factor explained about 10.8% of the variance, the second and third factors explained about 9.5% each of the variance, the fourth and fifth factor explained about 7.8% each of the variance and the sixth factor explained about 7.7% of the variance.

Factor 1: Bank structure and interest rate constraints

The bank branch network and interest rate variables can be considered twin evil that load very high in factor 1 among the farmers' respondents. The analysis of responses from farmers in the study area showed that absence of the bank branch in locality (0.767), tenor of the loan (0.715), high interest rate (0.601) jointly form factor one that constraints farmers from accessing formal institutional credits. The branch spread and network of the bank is considered inadequate to cater for the huge farming population of the country especially in the rural areas.



Adofu et al. (2012), Adebayo et al. (2017) and Owueye and Toluwase (2020) affirmed this result that, high interest rates, unavailability of banks in the rural areas and late approval of farmers' request are among the constraints to accessing and utilizing agricultural credit from formal sources. The findings of Ololade and Olagunju (2013) revealed that high interest rate offered by the bank for agricultural loan remains a major barrier to accessing institutional credit in Nigeria.

Table 2: Principal component analysis on constraints to farmers' access, utilization and repayment of BOA loan

Table with 8 columns: Constraints, 1, 2, 3, 4, 5, 6, and Community. Rows list various constraints like 'Tenor of the loan', 'No bank branch in locality', etc., with corresponding factor loadings and communalities.

Extraction method: Principal Component Analysis; Rotation method: varimax with Kaiser Normalization.

Note: * Total variance

Source: Field survey, 2019.

Factor 2: Risks constraints

The variables that load high in factor 2 were fluctuation in prices of farm output (0.725), losses to the farmer due to losses from natural disaster (0.683) and fluctuation in prices of farm inputs (0.614). The price fluctuation of the agricultural inputs and outputs as well as the natural disaster projects the agricultural sector as a high-risk business and therefore formal institutions are less interested in financing the sector.



(preferred sector) lending, guarantee of exposure and subsidized fund schemes, most commercial banks prefer not to lend for farming, citing its relatively lower productivity and higher risk to the non-agricultural sector as their reason.

Factor 3: Perception and poor loan administration constraints

The variables that load high in factor 3 were perception of the loan as share of national cake (0.785) and disbursement of inadequate or excess fund to the farmers (0.658) and poor loan administration especially in supervision and monitoring (0.571). There is an unfortunate perception by many farmers who believed that loans from public lending institutions are share of their national resources and this notion has led to failure of many government interventions in financing the agricultural sector due to high defaults rate. This wrong perception was re-echoed in the opinion of Alamba (2017) while reacting to complaints by farmers over the delay in loan disbursement by the bank. The study by Herliana *et al.* (2018) agreed that formal institutions are less interested in financing the agricultural sector on the grounds of high transaction costs, asymmetric information, among another factor.

Factor 4: Integrity constraints

The variables that load high in factor 4 were diversion of the loan to other uses other than the purpose it was meant for (0.830) and far distance of the branches of the bank from the locality of the farmer (0.374). The study by Amadhila and Ikhida (2016) agreed that lenders are reluctant to provide finance because loans are used for purposes other than agriculture and most farmers do not understand the implications of asking for a loan, hence when banks grant loan to this type of farmers, it runs the risk of loan default.

Factor 5: Profitability constraints

The variables that load high in factor 5 were low profitability of the farm business (0.805), poor timing of loan disbursement (0.599) and low presence or non-availability of extension services to the farmers (0.337). Amadhila and Ikhida (2016) observed that low profits, among other factors, restrict farmers from accessing credit as well as repaying the loan when it is due. In addition, poor timely response to farmers has been shown to have an undesirable effect on enhancing production, therefore causing low profits.

Factor 6: Collateral constraints

The variables that load high in factor 6 were lack of proper collateral as stipulated by the bank (0.800) and the level of the farmers' education (0.498). Despite the lands bequeathed to most farmers by their families, Eze *et al.* (2010) and Amadhila and Ikhida (2016) pointed out that the types of properties that are needed by the bank to serve as collateral or security is not the ones owned by many farmers who need loans and the existing legal system for registration and perfection of collateral are cumbersome and weak. The findings by Ololade and Olagunju (2013), Filli *et al.* (2015) and Adebayo *et al.* (2017) also revealed that stringent demands for guarantors and collaterals constitute big obstacle to meeting the institutional funding needs of the farmers especially peasant rural farmers. This constraint will be even more severe when the farmers are less educated to understand the procedures, government's policies and directives of the perfection of lands and other tangible assets that can be used as collateral acceptable by the bank.

Figure 1 shows the scree plot which confirmed the number of constraining factors retained after factor analysis of the responses of the beneficiary farmers' respondents. The plot showed that six factors were retained and that represents the number of variables that are above the simulated data or where the rate of change on the slope is quite minimum. Kaiser criterion suggests retaining those factors with eigenvalues equal or greater than 1.

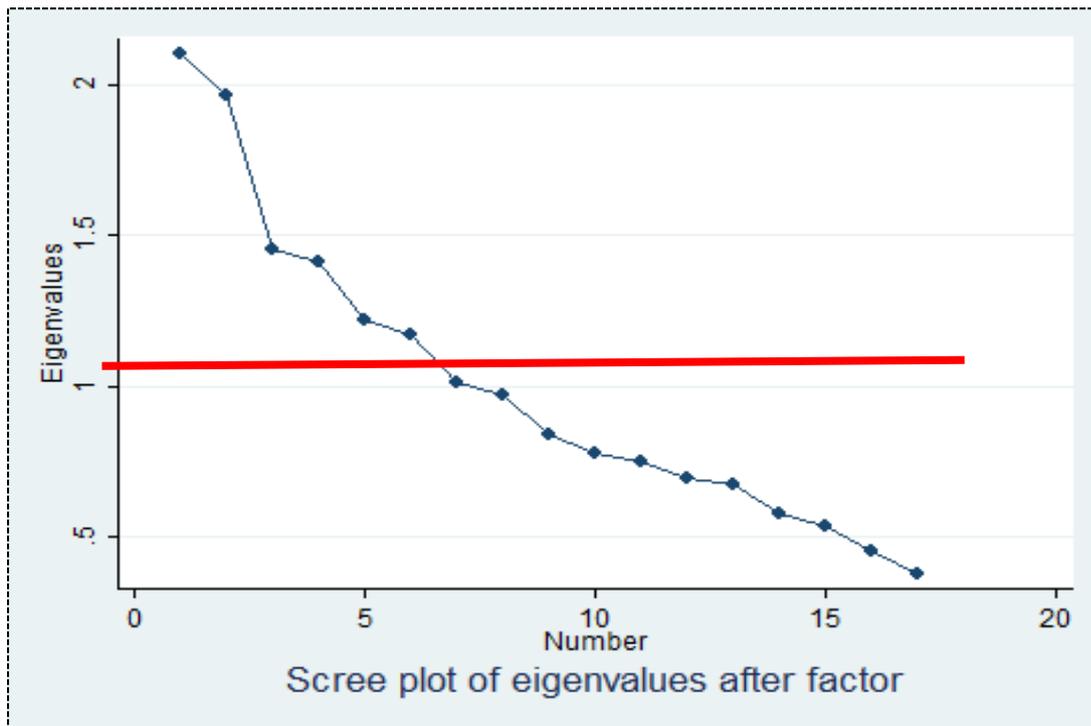


Figure 1: Scree plot of retained factors

CONCLUSION AND RECOMMENDATIONS

It was concluded from the findings of this study that there are several factors constraining the farmers’ ease of accessing, utilizing and subsequently repaying agricultural loans obtained from Bank of Agriculture’s in the North Central, Nigeria. The major constraints include factors relating to the bank structure and interest rate, inherently risky nature of agriculture, perception and poor loan administration, lack of integrity by the farmers and banks’ staff, profitability constraints and collateral related factors. These factors pose great threat to financing agricultural sectors by formal institutions and consequently affecting agricultural productivity of the farmers in the region. This study, therefore call for urgent intervention and remedy by all the relevant stakeholders. It was recommended that the procedures for the agricultural loan applications, approval and disbursement should be emended to aid farmers’ ease of access of the loan and its optimal utilization which conveniently enhances the repayment. It was further recommended that the Bank embrace technology to make up for its poor spread and reach across the country.

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