Determinants of Loan Default and Repayment Rates by Cassava Farmers in South-South Nigeria: A Case Study of Bank of Agriculture and First Bank of Nigeria

Kuye, Olufemi Oludayo
Department of Agricultural Economics & Extension, Faculty of Agriculture & Forestry Cross River University of Technology, PMB 102, Obubra Cross River State, Nigeria
e-mail: dayokuye@yahoo.com
Phone: +2347069006253; +2348077136110

Abstract

The study of determinants of loan default and repayment rates by cassava farmer loan beneficiaries (CFLB) in Bank of Agriculture (BOA) and First Bank of Nigeria (FBN) was conducted between 2012 and 2014 in the South-south Nigeria. Multi-stage, purposive and random sampling techniques were used to select two hundred and fifty (250) cassava farmers who had benefitted from either BOA or FBN loans in the past five (5) years (2009-2013). Time-series data was gathered using two sets of well-structured questionnaires from the CFLB and the banks officials. The results of data analysed showed that BOA granted the highest loan of N1,671,497,140.00 compared to FBN which granted only N891,500,000.00 to the cassava farmers during the period (2009-2013).The lending criteria adopted by the two banks were similar except the difference in their interest rates- (BOA charged 12%, FBN charged 21%). Further analysis showed that BOA had a better repayment rate than FBN. Major constraints to loan administration in the study area were non-repayment of loan by beneficiaries, delay in repayment of loans and diversion of agricultural loans to non-agricultural sector among others. It was concluded that high default rate limited agricultural loan administration in the study area. It was recommended that less burdensome administrative procedures in acquiring loan should be ensured as well as adequate monitoring and evaluation of potential beneficiaries so as to minimize default rate.

Keywords: Loan Default Rate, Repayment Rate, Cassava Farmer Loan Beneficiaries Bank of Agriculture, First Bank, South-south, Nigeria

1. Introduction

The importance of using agricultural credit by farmers, irrespective of their income status, is seen from the fact that their expenditure on inputs per hectare is significantly higher. Their higher expenditure on inputs is linked to their higher productivity (Saeed et al., 1996 in Damisa, Kehinde and Omokore, 2010). This is the case with cassava farmers who use credit facilities in order to improve their production levels. Cassava (*Manihot esculenta crantz*) is a perennial crop. It is grown throughout the tropical lowland. It is regarded as a benchmark for food security in the sub-Saharan Africa. It is ranked second to maize in terms of calorie intake (FAOSTAT, 2009). Cassava was introduced to West Africa from Central America and north-eastern Brazil by slave merchants about 16th centuries ago. In Africa, Nigeria in particular, cassava is one of the most important staple foods (Polson and Spencer, 1990; Otoo, 1994 in Okpukpara, 2006).

Cassava production is very good with intercropping. It is intercropped with short-duration crops such as: maize, cowpea, melon, okra, and vegetables (Ugwu and Nweke 1996). Also, root tuber crops like yam, cocoyam and sweet potato are intercropped with cassava (Chukwuji, 2008). Traditionally, an average of three to five crops is often intercropped with cassava. The crops to be intercropped are selected based on their growth habits. They can be combined either in simple or complex mixture. This implies that cassava production in the country is characterized by a mixed cropping pattern of production systems. Aderinola *et al.* (2006), in a study of comparative analysis of three cassava-based farming systems in Nigeria which includes: cassava-sole, cassava + maize, and cassava + other crops, concluded that the Cassava Expansion Programme of the Nigerian government would enjoy a boost through the promotion of the cultivation of cassava with other crops. A similar observation was observed by Chukwuji (2008). Cassava's multiple uses facilitated its greater utilization in Nigeria.

The crop is mainly produced by farmers in the country primarily for consumption and for sale in the village markets. Beside this, cassava can be processed into many other forms useful as raw materials in industries like in livestock feed mill, confectioneries, textile and brewery. The forms include cassava chips, pellets, flour, adhesive, alcohol, and starch (Kormawa and Akoroda, 2003).

According to Ochu and Achagh-Hyande (2005), one of the mechanisms governments use for promoting cassava production by smallholder farmers in Nigeria is the Agricultural Credit Support and Inputs Subsidy Programme (ACSISP). The inability of the smallholder cassava farmers to obtain credit at subsidized rate has been a serious problem militating against viable approaches to promote worthwhile agricultural-oriented programmes that will enhance cassava production in Nigeria. Extending credit to genuine smallholder cassava farmers is an effective approach to promote cassava production in the country. Indeed, this call for a careful administration, as the efficiency of credit delivery process largely depends on the adopted institutional framework of the programme.

According to Arene (1990) accessibility to agricultural credit from formal sources is dependent on meeting some laid down conditions for the protection of the lenders and borrowers. The success of credit application depend on the ability to process the credit application forms to the stage of approval and disbursement, evidence of the project, land and ability of the farmer to get acceptable guarantors required by the credit operators.

Concerning the criteria for lending, the banks and other agricultural credit institutions set a certain level of requirement for different categories of borrowers. Because of the credit institutions' desire to recover their credit as quickly as possible to be able to stay in business, since the credit amount at their disposal is small, only short and medium- terms credits are allowed. The short- term credit is any credit amount not exceeding N100,000.00 repayable

within 2 years. For any farmer to be qualified for this credit, he must satisfy the following conditions: i) have capacity to enter into a legally binding contract, ii) produce a completed application form with four recent passport size photographs, iii) provide two guarantors with good social values and one of them a permanent resident of the local government where the project is located, iv) provide evidence of possession of farmland and other agricultural enterprise to which credit will be committed, among others (NACRDB, 2006).

The medium-term credit is any credit amount more than N100,000.00 but not exceeding N300,000.00 and the duration is between 2-5 years. To be qualified for this credit, the farmer must satisfy all the conditions for the short-term credit in addition to the following: i) he should have obtained a short-term credit under the scheme from the bank in the past and must have fully repaid the old credit. Where he has not benefited before, an equitable mortgage would be taken in addition to the provision of guarantor, ii) the scale of operation of the applicant must satisfy the credit volume being requested, and iii) the applicant should also attach the photographs of properties and document to be offered as collateral (NACRDB, 2006).

First Bank is the premier bank in West Africa and the leading financial service provider in Nigeria. In the past 116 years, FBN has contributed immensely to the economic growth and development of Nigeria due to its provision of efficient banking services. First Bank of Nigeria provides a wide range of retail and corporate banking services. Its subsidiaries contribute to the national economic development by operating in the capital market, providing insurance brokerage, pension fund management, mortgage, bureau de change and microfinance (FBN, 2012).

However, there seems to exist a gap in knowledge on the determinants of loan default and repayment rates by cassava farmer loan beneficiaries in the South-south. This study was therefore carried out in order to bridge this gap. Therefore, answers to the following questions were sought:

(i) What is the total amount of loans granted by Bank of Agriculture (BOA) and First Bank of Nigeria (FBN) to cassava farmers from 2009-2013 in the study area?
(ii) What are the lending criteria adopted by the two banks (BOA and FBN) in agricultural loan acquisition by farmers in the study area?
(iii) What are the differences between loan repayment and default rates by the cassava-based farmers who obtained loans from BOA and FBN?
(iv) What are the constraints to agricultural loan acquisition by BOA and FBN?

1.1 Objectives of the Study

The broad objective of this study was to compare the loan default and repayment rates by cassava farmers in BOA and FBN in South-south Nigeria from 2009 to 2013.

The specific objectives were to:

(i) compare the total amount of loans delivered to cassava-based farmers by BOA and FBN from 2009 to 2013;
(ii) examine the lending criteria adopted by BOA and FBN in loan delivery;
(iii) compare the loan repayment rate in relation to default rate by the CFLB in BOA and FBN from 2009 to 2013 and;
(iv) analyse the constraints to loan acquisition in BOA and FBN in the study area.

1.2 Hypotheses

The null hypothesis HO_1 tested in this study was:

i) there is no significant difference between the amount of loan given by BOA and FBN in the study area;

2. Methodology

This study was carried out in South-south Nigeria which lies between longitude 4^0 15' E – 9^0 30' E and latitude 3^0 35' N – 7^0 00' N. It extends over 70,000sq km and makes up 75% of Nigeria's land mass (Amnesty International, 2009). The average annual rainfall in the area is between 1,600mm and 2,400 mm and the temperature is between 24^0 C and 40^0 C because of climate change. Purposive, multi-stage and random sampling techniques were employed for the study. Akwa Ibom, Cross River and Rivers States were purposively selected because they predominantly produce cassava in large quantity. A total of two hundred and fifty (250) cassava farmer loan beneficiaries (CFLB) were randomly selected across the three states using a multi-stage sampling technique. Primary data was gathered by administering two sets of well-structured questionnaires to the CFLB and the bank officials (Managers and Loan Officers). The data collected were analyzed by using descriptive statistics such as frequency distribution tables, percentages and financial ratio analysis (Repayment Rate). The null hypotheses were tested by using Z-test at 5% level of significance.

3. Results and Discussion

The results of the findings of this study were presented in Tables 1, 2, 3 and 4. They were discussed based on the specific objectives of the study.

3.1 Comparison of the total amounts of loan delivered to CFLB by Bank of Agriculture and First Bank of Nigeria (2009-2013)

The result of the amount of loan granted to cassava farmers by BOA and FBN is shown in Table 1.

Table 1: Total amount of loans granted by BOA and FBN from 2009 to 2013 in South-south Nigeria

Year	BOA	% of Total loan	FBN	% of Total loan	Total
2009	227,800,000	28	32,500,000	4	260,300,000
2010	220,300,000	23	120,000,000	13	340,300,000
2011	460,800.000	36	134,000,000	11	594,800,000
2012	130,697,140	10	335,000,000	25	465,697,140
2013	631,900,000	32	270,000,000	14	901,900,000
TOTAL	1,671,497,140	26	891,500,000	14	2,562,997,140

Source: Field survey, 2014

The results of data analysed in Table 1 showed that a total of N1,671,497,140.00 and 891,500,000.00 were granted to cassava farmers by both BOA and FBN between 2009 and 2013. BOA granted the highest loan of N460,800,000.00 in 2011 and least amount of N130,697,140.00 in 2012. In the case of FBN, the highest amount of N335,000,000.00 was granted in 2012 while the least was N32,500,000.00 was granted in 2009. The analysed results above showed that BOA granted more loans to cassava farmers than FBN in all the years studied except in 2012. Different factors could have contributed to the differences in the amount of loans granted by the banks studied. This result conformed to the study of Henry-Ukoha et al (2011) who asserted that factors affecting the volume of loans disbursed by banks are level of education, farming experience and farm size among others. According to Hayami and Rutam (1971) availability of funds in an economy is sine- qua-non to the

overcoming of constraints imposed by inelasticity of supply of strategic inputs such as credit. Ihimodu and Ukpak (1996) attested to this fact when they asserted that a poorly developed financial system hinders wealth development and distribution, socio-economic welfare and human dignity.

3.2 Comparison of the lending criteria adopted by BOA and FBN in the study area

The lending criteria adopted by BOA and FBN were examined. The result was presented in Table 2. Lending criteria are the specific conditions that cassava farmers must meet before they can be granted loan by the financial institutions. These were ascertained through the responses of bank officials (Managers and Loan Officers) in both BOA and FBN in the study area. It was important to identify the lending conditions in order to know whether there is any difference between BOA and FBN lending conditions and also to discover which of the two financial institutions operates with flexible lending conditions.

The results of lending criteria showed that BOA required a minimum of 10% deposit for agricultural loan and 20% for non-agricultural loan. But FBN required 25% equity contribution or loan amount. The results equally showed that BOA did not require the cassava farmers to have Central Bank of Nigeria guarantee while FBN needed CBN guarantee as one of its lending conditions. Similarly, BOA did not require NAIC registration for short–term loans which FBN required. Furthermore, the interest rate charged on agricultural loans by BOA was 12% while FBN charged 21%. This result showed that the lending conditions of BOA were more flexible than that of FBN in the study area. This showed the flexibility of acquiring loan in BOA by cassava farmers in the study area (Kuye, 2015).

Table 2: Lending conditions for granting loan by BOA and FBN in South-south Nigeria

Financial institutions	Lending Conditions
BOA	i. opening of an individual account ii. filling of application forms iii. 10% minimum deposit for agric loans and 20% for non-agric loans iv. civil servant guarantor or personality as guarantor for short-term loan v. collateral security such as automobiles, land and landed properties such as buildings for medium-term and long-term loans. vi. interest rate charged is 12%
FBN	i. opening of saving/current account by the clients ii. filling of application forms Iii. Central Bank of Nigeria guarantee iv.25% equity contribution or loan amount deposited in the account v. interest rate charged is 21% vi.insurance policy on crop by NAIC vii.provision of tangible collateral for amounts greater than N1,000,000 such as land and landed properties bonds, shares, automobiles etc.

Source: Field Survey, 2014
Adapted from Kuye (2015)

3.3 Comparison of loan repayment in relation to default rates by CFLB in BOA and FBN

The loan repayment is the rate at which loans are being repaid by the beneficiaries while default rate is the rate or percentage of loan not being repaid by the beneficiaries. The results of loan repayment and default rates were obtained from the responses of bank officials interviewed during field survey. The results obtained were presented in Table 3.

Table 3: Loan repayment and default rates by category of CFLB in BOA and FBN in the study area

Financial Institutions	Category of farmers	Repayment Rate (%)	Default rate (%)
BOA	i. Small scale	85.00	15.00
	ii. Medium-scale	92.00	8.00
	iii. Large-scale	97.00	3.00
FBN	i. Small-scale	71.66	28.34
	ii Medium-scale	79.00	21.00
	iii Large-scale	80.33	19.67

Source: Field Survey, 2014

The results of loan repayment and default rates of the CFLB showed that among the small scale farmers, FBN recorded the least repayment rate of 71.66 percent while BOA which recorded repayment rate of 85 percent. But among the medium scale farmers, FBN had the lowest repayment rate of 79 percent while BOA had the highest repayment rate of 92 percent. Among large scale farmers, FBN had the least repayment rate of 80.33 percent whereas BOA had the highest repayment rate of 97 percent.

By comparison, BOA had better repayment rate from medium scale and large scale farmers which also implied high repayment rate. Thus, the high performance of BOA in loan administration to the cassava farmer loan beneficiaries in the study area (Kuye, 2015). The findings of this study conformed to the work of Oke et al. (2007) who obtained an average loan repayment rate of 89.70% but contrary to the work of Adejobi and Atobatele (2008) who reported high default rate of about 77% for BOA in South-west Nigeria. The outcome of this study is also in line with the work of Obamuyi (2007) in Ondo State of Nigeria where he found that the loan default rate was very low at 6.90% of total loan obligation among small and medium scale enterprises.

3.4 Constraints to loan administration in BOA and FBN in South-south Nigeria

The result of constraints to loan administration in BOA and FBN to cassava farmers in the study area was analysed. The result is shown in Table 4.

Table 4: Percentage distribution of constraints to loan administration as indicated by BOA and FBN officials in the study area

Parameters	Frequency (n=9)	Percentage
Non- repayment of loan by beneficiaries	9	100

Delay in repayment of loans	9	100
Diversion of agric loan to Non-Agric sector	9	100
Inability of farmers to produce collateral	7	77.78
Inadequate fund for loan disbursement	1	11.11
Low patronage due to lack of awareness by farmers	7	77.78
Unsteady government policies	2	22.22
High default rate	9	100
Inadequate monitoring and evaluation	9	100
Uneven distribution of agricultural loan	4	44.44
Illiteracy of farmers	9	100
High cost credit administration	6	66.67
Lack of farmers awareness about bank product innovation	9	100
Total	9	100

Source: Field Survey, 2014

The result showed that non-repayment of loan by farmers (100%), high default rate (100%), inadequate monitoring and evaluation (100%), illiteracy of farmers (100%) and lack of farmers' awareness about bank products (innovation) were among the greatest constraints that hinder loan administration by bank officials in the study area. But the least constraints were: inadequate fund for loan disbursement (11.11%), unsteady government policies (22.22%) and uneven distribution of agricultural loans among others. The findings of this study is similar to the work of Okojie et al (2010) who reported that limited access of farmers to loan facility from banks is as a result of lack of bank account, lack of collateral and limited knowledge of loan acquisition procedures. Also, Dayo *et al*. (2009) cited in Kuye (2015) opined that large loan funds from banks could not be accessed by most rural small-holders because of issues of lack of collaterals as identified by this study. This result also conformed to the work of Adejobi, Atobatele and Agnet (2004) who reported that farmers access to credit was hindered by high loan default and cumbersome loan acquisition procedures operated by the commercial banks.

3.5 Test of null hypotheses 1 ($H0_1$)

The null hypothesis I (HO_1) which stated that there was no significant difference between the amount of loan given by Bank of Agriculture and First Bank of Nigeria within the period of study was tested with Z-test at 5% level of significance. The result obtained is contained in Table 5.

Table 5: Z – test result showing the difference between the amount of loan given by BOA and FBN

Variable	N	Mean	S.D	Zcal	Z critical	Level of significance
BOA	5	29.33	5.21			
FBN	5	50.91	8.32	60.33	1.96	5%

Source: Field data analysis, 2014

The result of test of difference of two means between the amount of loan given by BOA and FBN showed that Z-cal was 60.33 while Z –tabulated was 1.96. Since Z-cal was greater than Z-tab at 5 percent level of significance, the null hypothesis was rejected while its alternative was accepted. This showed that there was significant difference between the volume of loan granted by BOA and FBN in the study area.

4. Conclusion and Recommendations

This study showed that high default rate hindered loan administration in the study area. Cassava farmers were hindered to by administrative, institutional and bureaucratic bottlenecks as they strive to access agricultural loans for their cassava production. However, the study showed that improved access to credit facilities would improve cassava farmers' production, their annual farm income and well-being as well as enhance food security in the South-south Nigeria.

The following recommendations were made:

1. There should be less burdensome administrative procedures in acquiring loan in order to encourage more farmers to gain access to loan facility in their areas.
2. Regular monitoring should be ensured by bank officials to minimize default rate among cassava farmer loan beneficiaries.
3. Applicants should be well screened and evaluated before loan delivery, so as to select honest cassava farmers.
4. Extension Agencies in the zone should be strengthened and supported by the government to ensure efficient service delivery.

References

Adejobi, O. and Atobatele, J.T (2008) Analysis of loan delinquency among small-scale farmers in southwestern Nigeria: Application of logit and loan performance indices. East Africa Agricultural and Forestry Journal 74(3).

Aderinola, E.A., Fasoranti, M. M., and Ojo, S.O. (2006). Resource-productivity in Cassava-Based farming systems in Ondo state: Implications for Cassava Expansion Program in Nigeria *Applied Tropical Agriculture*, 11(1 & 2): 40-46.

Agnet, C.O. (2004). Making farm credit work for the small-scale farmers.<http://www.agnet.org/library/nc/145b>Accessed on July 20, 2010.

Amnesty International (2009). Nigeria: Petroleum pollution and poverty in the Niger Delta. United Kingdom Publication. International Secretariat, London.

Arene, C.J. (1998). Introduction to the Economic Analysis of Projects in Tropical Agriculture. Fulladu Publishing Company, Nsukka pp. 63-64

Chukwuji, C.O (2008). Comparative analysis of enterprise combination costs and returns in cassava-based food crop farming systems in Delta, Nigeria. Journal of Agricultural and Biological Sciences, 3(4): 27-32.

Damisa, M.A., Kehinde, E.A. and Omokore, D.F. (2010). Impact of credit and the farmer's socio economic characteristics on livestock productivity in the northern Guinea Savanna of Nigeria. Proceedings of the 11th Annual National Conference of National Association of Agricultural Economists (NAAE) Federal University of Technology, Minna, 30th Nov. 3rd Dec. 2010. pp.17.

FAOSTAT (2009). Online Statistical Database. Rome, Italy.www.fao.org.

First Bank of Nigeria (2012). Annual Report and Statement of Account.

Hayami, Y. and Rutam, V.M. (1971). An Alternative Perspective. Baltimore: The John Hopkins Press. USA.

Henry-Ukoha, A., Orebiyi, J.S., Obasi, P.O., Oguoma, N.N., Ohajianya, D.O., Ibekwe, U.C. and Ukoha, I.I. (2011). Determinants of loan acquisition from the financial institutions by small scale farmers in Ohafia Agricultural Zone of Abia State, South-east Nigeria Journal of Development and Agricultural Economics, 3(2): 67-74.

Ihimodu, P.U. and Ukpak, A.N. (1996). Relevance of rural finance for efficient management of agricultural production in post-Structural Adjustment Programme in Nigeria. Proceedings of the Conference organized by NES, Uyo"

Kormawa, P. and Akoroda, M. O. (2003)**.** Cassava Supply Chain Arrangements for Industrial Utilization in Nigeria, IITA, Ibadan

Kuye, O.O. (2015). Comparative analysis of performance of Bank of Agriculture and selected commercial banks (FBN and UB) in enhancing cassava production by farmers in South-south Nigeria (2009-2013). Unpublished PhD Thesis submitted to the Department of Agricultural Economics, Management and Extension, Ebonyi State University, Abakaliki. Pp 96 - 108.

Obamuyi, T.M. (2007). An exploratory study of loan delinquency among small and medium enterprises (SMEs) in Ondo State of Nigeria. Land and Management in Development (LMD) J., 8: 1-10.

Ochu, A.O. and Achagh-Hyande, N. (2005). Promoting indigenous cassava processing knowledge for poverty eradication among Nigerian farmers: Implications for farmers education. In: Obinne, C.P.O (ed) Readings on Indigenous Processing, Storage and Marketing for Poverty Reduction in Nigeria. NSIKAD 2005 CEKARD Associates (Publishing Dept.) Makurdi, Nigeria. Pp132-147.

Oke, J.T.O., Adeyemo, R. and Agbolahan, M.U. (2007). An empirical analysis of microcredit repayment in South-western Nigeria. Humanity & Social Sciences Journal 2(1): 63-74.

Okojie, C.A., Monye-Emina, K., Eghafona, G., Osaghae, O. and Ehiakhamen, J.O. (2010). Institutional and environmental access to micro finance by self-employed women in rural areas of Edo State. NSSP Brief No. 14. Washington D.C. International Food Policy Research Institute.

Okpukpara, B.C. (2006). Credit constraints and adoption of modern cassava production technologies in rural farming communities of Anambra State, Nigeria. In: Proceedings of the 20th Annual National Conference of Farm Management Association of Nigeria held at Forestry Research Institute. Jos. 18th -21st Sept. 2006 pp282-290.

Polson, R.A. and Spencer, D.S.C. (1990). The technology adoption process in subsistence agriculture: The case of cassava in south-western Nigeria. Agricultural Systems 36(1): 65-78

Ugwu, B.O. and F.I. Nweke (1996). Determinants of cassava distribution in Nigeria. Agriculture, Ecosystems and Environment, 60: 139-156.