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Loan Repayment Performance among Crop Famers In Ekiti State, Nigeria

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Abstract
The study examined the determinants of loan repayment performance among crop farming households of the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB), Ekiti State, Nigeria. Data for the study was collected through a multi-stage sampling technique. 100 respondents were interviewed. Descriptive statistics and Tobit regression analysis were used to analyze the data on socio-economic characteristics of the beneficiaries and their repayment performance respectively. The Tobit regression results on loan repayment of Log-likelihood function (-8.1817236) indicated that age, farming experience, gender, amount borrowed and amount repaid with normalized coefficients of -0.0077933, -0.0059251, 0.1267002, -0.0226621 and 0.301575 respectively were important factors in determining the repayment performance of the beneficiaries. The study concluded that, there will be a great potential for improving the loan repayment ability of the beneficiaries if NACRDB can liaise with Nigerian Agricultural Insurance Corporation to give prompt attention to beneficiaries in case of any loss or hazard through indemnity.
Keywords: Loan repayment, NACRDB, Tobit, Ekiti State.

1. Introduction

Agricultural production has been unable to optimally keep pace with the food and raw material needs of the increasing population in Nigeria. One of the reasons for the decline in the contribution of agriculture to the economy is lack of a stable national credit policy and paucity of credit institutions which can assist farmers (Rahji 2000). Credit or loanable fund (capital) is viewed as more than just another resource such as labour, land, equipment and raw materials. Credit or loanable fund is considered from its ability to motivate other factors of production. The need for credit facilities is necessitated by the limitations of self-financing, uncertainty pertaining to the levels of output, and the time lag between inputs and output (Kohansal and Mansoori, 2009). However, its accessibility is imperative for improvement in the quality and quantity of farm products, so as to increase farmer's income and reduce rural-urban drift (Kohansal and Mansoori, 2009). It is believed that farm credit is an indispensable tool for achieving socioeconomic transformation of the rural communities.

The major aim of any government is to strive to become independent in food production. Sequel to this, credit schemes are put in place to increase the access of farmers to credit facilities so that food and cash crop production would be increased. This situation has attached the consent of Nigerian government into the creation of a specialized institution called the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB) to cater for the credit needs in agricultural sector (Oladeebo 2003).

In spite of the importance of loan in agricultural production, its acquisition and repayment are burdened with a number of problems especially among small scale farmers (Awoke, 2004). In the same vein, Olagunju and Adeyemo (2007) argued succinctly that the problem of default in the repayment of agricultural loans is one of the factors that have militated against the development of the agricultural sector in Nigeria, because it dampens the willingness of the financial institutions to increase lending to the sector

Although, researches have been done in area of loan repayment performance among farmers but none of them examined in isolation the repayment performance among small scale crop farmers. The study seeks to achieve the following stated objectives: identify the socio-economic characteristics of small scale crop farmers that are beneficiaries of NACRBD in the study area and examine the determinants of loan repayment rate among the respondents.

2. Methodology

The study was carried out in Ekiti State. The study made use of primary data through a well structured questionnaire containing the socio-economic characteristics, resources use and production activities of the farmers.

Multistage sampling technique was used to select the respondents. NACRDB was purposively selected as a case study because of their level and concentration of transactions with farmers as their key beneficiaries and the institution's nationality as the apex agricultural credit institution in Nigeria. NACRDB branches in Ado, Ikere, Ikole, Ijero and Moba Local Government Areas of Ekiti State were selected for the study. The last stage involved the random selection of twenty (20) beneficiaries which were crop farmers from each of the

Institution's branch. In all, a total of one hundred questionnaires were administered.
Data analysis involved the use of descriptive statistics (frequencies, percentages and means) to describe major socio-economic characteristics of respondents while Tobit regression analysis was used to show the relationship between beneficiaries' socio-economic characteristics and loan repayment performance.
The specification for the Tobit model is:

$$RER = \beta_O + \beta_1 AGE + \beta_2 FEX + \beta_3 LED + \beta_4 HSZ + \beta_5 GEN + \beta_6 MAS + \beta_7 LOP + \beta_8 NFJ + \beta_9 FLO + \beta_{10} FSZ + \beta_{11} ABO + \beta_{12} ARE + e_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1$$

Where:
RER = Dependent variable defined as:

$$RER = Repayment\ Rate = \frac{Amount\ repaid}{Amount\ borrowed} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

β_0 = Intercept coefficient
β_i = Slope coefficient
AGE = Age of farmer (years)
FEX = Farming experience (years)
LED = Level of education (years)
HSZ = Household size
GEN= Gender (male = 1, female = 0)
MAS= Marital status (married = 1, otherwise = 0)
LOP = Loaning period (months)
NFJ = Nature of farm job (full-time = 1, part-time = 0)
FLO = Farm location (km)
FSZ = Farm size (hectare)
ABO = Amount borrowed (₦)
ARE = Amount repaid (₦)
e_1 = Error term

3. Results and Discussion

3.1 Socio-economic Characteristics of Respondents

The socio-economic characteristics examined in this study were the age of the beneficiaries, their level of education, gender, household size, farm size, farming experience, nature of farm job, marital status and the distance of the farm to the bank. Institutional factors as regards the amount of loan borrowed, value repaid and loaning period were also examined.

From Table 1, about 72% of the respondents were in the age range of 20-50years and the mean age was 48years. This signifies that majority of the farmers were still in their productive age. Since traditional agricultural production still rely on crude implements powered by human, therefore, they may not really face severe energy constraints, but they may be highly vulnerable to agricultural changes unlike the aged farmers that are very conservative. Majority of the farmers were experienced in the farming business. The mean years of experience was 30years, thus, they had more practical knowledge acquired over time. It is possible to observe an improvement in farmers' production activities based on his experience and may become more efficient through trials and error over the years. About 25% of the respondents had primary education, while 44% had secondary education and 30% had tertiary education. Only one respondent did not acquire any formal education. The average years spent in school was 13years, this indicates that majority of the respondents had secondary education. Famers with high literacy level tend to be more efficient in terms of productivity, increasing ability to understand and evaluate the information on new techniques and innovations being disseminated to them through extension services. Those that are marginally educated may rely more on their experience for increased productivity rather than high educational attainment.

Majority of the respondents' household size number was between 6 and10 constituting about 69% of the distribution. The mean household size was 9. This is an indication that, there will be availability of family labour for farm work in the study area. Participation of household members in farm activities may increase farms' productivity. Also, large family size may shrink the loan as a result of high commitment of the needs of household members.

Also, table 1 shows that the majority of the beneficiaries of NACRDB were predominantly male constituting about 71%, while involvement of female in agriculture was low culminating about 29%. This may partly be due to the energy constraint faced in agricultural production. The results showed that majority (81%) of the respondents were married while just 19% were single. Since the size of household is a function of marital status, there may be likely participation of household family in farm work. Majority (70%) of the respondents were part-time farmers while 30% were full-time farmers. The observed trend may be due to the fact that majority of the beneficiaries were literate, hence, they might have other sources of income apart from farming.

The respondents' farm location to the bank was also documented as the mean distance was 3.8km. Nearness of banks to farms allows the farmers to process his/ her loan application with the bank on time. Majority of the respondents were small farm holders as about 43% of the farmers cultivated between 1 and 5 hectares of land.

On the basis of amount borrowed by the respondents, about 46% of them borrowed between ₦1000 and ₦50000, 45% borrowed between ₦51000 and ₦100000, while only 9% borrowed above ₦100000. The average amount borrowed was ₦68200. The loaning period of NACRCB were 6 months, 12 months, 18 months or more. Only 69% of the beneficiaries had 12 months of loaning period, 10% had 6 months, 18% had 18months loaning period while 3% had above 18months to payback. A year loaning period may likely be too small to pay back as a result of the timeliness of agricultural enterprises, the vagaries of climate and other unforeseen contingencies.

3.2 Determinants of Loan Repayment

Table 2 shows the Tobit parameter estimates of loan repayment for NACRDB beneficiaries in Ekiti state. The result showed that the coefficients of the variables AGE, FEX, GEN, ABO and ARE were significant. Variables AGE and FEX were significant at 10 percent level of significance while variables ABO and ARE were significant at 1 percent. But variable GEN was significant at 5 percent. The coefficients of the variables LED, HSZ, MAS, LOP, NFJ, FLO and FSZ were not significant. All the coefficients of the significant variables have negative signs except for the variables GEN and ARE that exhibited positive signs. All the coefficients of the non-significant variables exhibit positive signs except LED, HSZ, MAS and LOP. The negative sign on the variable AGE implies that younger people work hard to repay their outstanding loan when compared with older people. Also, variable FEX coefficient with negative sign contradicts the *a priori* expectation, that farmers with more farming experience are likely to pay back as at when due, because they had more practical knowledge. The consequence of this is that, majority of the farmers in Ekiti state have the experience, but their response to loan repayment is very low.

The negative (non-significant) sign exhibited by the coefficient of variable LED was not expected, as it contradicts existing assertion. This shows that high level of education is not necessarily a criterion for prompt repayment performance. Education is expected to boost the response of farmers to improved technologies and innovation that could enhance better returns from farm investments which will encourage loan repayment.

The negative sign displayed by variable HSZ conforms to the *a priori* expectation that farmers with large family size could divert some of the borrowed money. Also, households with large size could mount pressure on the farm income generated from which the loan would to be repaid. This implies that small household size encourages loan repayment. This confirmed the finding of Afolabi (2010) in his study "Analysis of loan repayment among small scale farmer in Oyo State, Nigeria." The positive sign on the coefficient of the variable GEN shows the dominance of male in agriculture. This implies that male borrowers have higher tendency to repay loan collected when compared to their female counterparts. The negative (non-significant) sign exhibited by the coefficient of variable MAS gave an inference that, married farmers rate of loan repayment is lower than those that are singles. Married borrowers are more prone to delinquency stemming from high tendency to use borrowed funds for other purposes. Also, the negative (non significant) sign exhibited by LOP indicated that, repayment rate was higher among the borrowers granted shorter periods to pay back their loans. This implies that the longer the repayment period the lower the rate of repayment. The implication of the positive sign on the variable NFJ is that, the borrowers that took farming as full time have better chance to repay their loans.

The positive non-significant sign exhibited by the coefficient of variable FLO contradicts the assertion that, the closer the farmers' farm to the bank, the better the accessibility to loan, thus encouraging repayment primarily because of reduced cost of travelling, time required and the risk of travelling. The implication of this non-conformity may be that, farmers with distant farm are not exposed to pilferers and thefts. This guarantees maximum security of goods produced unlike farms that are exposed or easily accessible. The positive (non-significant) sign exhibited by the coefficient of variable FSZ conforms to the *a priori* expectation that, the size of the farm can be used to predict the output of the farmers, because large expanse of land makes commercial agriculture and bush fallowing system possible. This implies that large hectares of land cultivated boost the rate of repayment among borrowers. Most of the time, an increase in hectarage of farm land leads to increase in farm income

The negative sign on the coefficient of variable ABO conforms to the *a priori* expectation that, farmers that borrow less are more likely to pay back as at when due. Borrowing frequency may therefore be increased for farmers with such attribute. Diversion of loan to unproductive uses may be recorded among famers with large amount of loan. True to *a priori* expectation, the results of the study revealed that amount repaid (ARE) had a positive effect on the rate of loan repayment. This implies that, the higher the amount repaid by the borrowers the better the loan repayment performance.

4. Conclusion and Recommendations

The results obtained in this study indicated that age, farming experience, gender, amount borrowed and amount repaid were the major significant variables determining loan repayment performance among crop farmers in the study area. The mean age of the farmer was about 48years while averagely 13years were spent in formal schools. Also, on the average the respondents had 30years farming experience with large household size. The majority of the farmers were male and married. The mean amount borrowed was ₦68200 with mean farm size of 8.4 hectares. Most of the respondents took farming as part time job.

Based on the results of the study, the following recommendations were made:

- The negative significant influence of variable "AGE" on the probability of loan repayment calls for the need to encourage youth by the government, so that they can venture into agriculture. Government should therefore mandate the bank to accord farmers that are not aged the highest consideration during loan disbursement. They should also make the rural areas habitable and conducive for youth by providing more incentives, subsidies and rural infrastructures.
- The significant influence of amount repaid by beneficiaries' calls for the bank to ensure prompt record keeping, so that farmers that repays promptly would be easily identified and considered. Also, incentives should be given to farmers that have prompt repayment.
- The size of loan made available to farmers should be on the basis of their production capacity.
- Agricultural investment is a very risky business that depends on weather, the control of which is beyond the farmers' power. NACRDB should therefore liaise with Nigerian Agricultural Insurance Corporation to give prompt attention to beneficiaries in case of any loss or hazard through indemnity.

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Table 1: Distribution of respondents by socio-economic characteristics.

Variables	Frequency (f)	Percentage (%)	Mean ($\bar{X}$)
Age (years)			
20-30	*09*	9.0	
31-40	*27*	27.0	47.8
41-50	*36*	36.0	
>50	*28*	28.0	
Educational level			
No formal education	*1*	1.0	
Primary education	*25*	25.0	12.8
Secondary education	*44*	44.0	
Tertiary education	*30*	30.0	
Gender			
Male	*71*	71.0	
Female	*29*	29.0	
Marital status			
Married	*81*	81.0	
Single	*19*	19.0	
Farming experience (years)			
1-10	*12*	12.0	
11-20	*23*	23.0	
21-30	*26*	26.0	30.2
31-40	*23*	23.0	
>40	*16*	16.0	
Household size (number)			
1-5	*22*	22.0	
6-10	*69*	69.0	8.5
>10	*09*	9.0	
Nature of farm job			
Full-time	*30*	30.0	
Part-time	*70*	70.0	
Farm location (km)			
1-5	*77*	77.0	
6-10	*15*	15.0	
11-15	*04*	4.0	3.8
>15	*04*	4.0	
Farm size (ha)			
0-5	*43*	43.0	
6-11	*37*	37.0	
12-17	*11*	11.0	8.4
>17	*9*	9.0	
Amount borrowed (₦'000)			
1-50	*46*	46.0	
51-100	*45*	45.0	68.2
>100	*09*	9.0	
Loaning period (months)			
6	*10*	10.0	
12	*69*	69.0	
18	*18*	18.0	
>18	*03*	3.0	

Source: Field survey data, 2012.

Table 2: Tobit regression analysis of loan repayment performance

Variables	Coefficient	Standard error	P>/t/
Age (AGE)	-.0077933	.0040634	.058*
Farming experience (FEX)	-.0059251	.0032401	.071*
Educational level (LED)	-.0067605	.0087225	.440
Household size (HSZ)	-.0003416	.0124202	.978
Gender (GEN)	.1267002	.0608196	.040**
Marital status (MAS)	-.0254292	.0743307	.733
Loaning period (LOP)	-.0024001	.0077468	.757
Nature of farm job (NFJ)	.0056743	.0640245	.930
Farm location (FLO)	.0001644	.0091202	.986
Farm size (FSZ)	.0002887	.0055302	.956
Amount borrowed (ABO)	-.0226621	.0021530	.000***
Amount repaid (ARE)	.0301575	.0022612	.000***

Source: Field survey data, 2012. Note, ***, **, * mean significant at 1, 5 and 10% respectively, Loglikelihood = -8.1817236, Number of observation = 100, Pseudo R^2 = .9240, Prob. > chi^2 =.000, LRchi^2 (R) = 198.8.

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