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Effectiveness of Loan Delinquency Management Strategies of Formal Lenders among Farmers in Akwa Ibom State, Nigeria

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Authors' contributions

This work was carried in collaboration between all authors. Authors EEO and MAN designed the study, performed the statistical analysis and wrote the protocol. Author IAA wrote the first draft and managed the literature searches. All authors read and approved the final manuscript.

Research Article

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ABSTRACT

This paper analyses the effectiveness of loan delinquency management strategies used on farmers in Akwa Ibom State, Nigeria. The specific objectives are to; assess the management strategies aimed at reducing loan delinquency; compare the extent of loan default among lending institutions and analyze the impact of some variables in reducing loan repayment problems, under the existing regime of loan delinquency management strategies. A multistage sampling technique was used to select 8 banks and 92 farmers included in this study. The questionnaire was the primary tool of data collection. Data analyses utilized descriptive statistics and the logit model. The results show that the loan delinquency reducing strategies used were not satisfactory, with a mean management quality score of 82. The loan default rate was still high despite these delinquency reducing strategies. In fact, 82% of the loan beneficiaries were delinquent. However, the mean delinquency rate was highest in the microfinance banks (27%) and lowest in the commercial banks (11%). The findings in this research confirm that the loan delinquency reducing strategies were not judiciously implemented by the lenders. Also, the behavior of selected variables under the going delinquency management regime suggest that primary occupation, loan size, loan use, duration of loans and visits of bank officials are some of the variables that need to be manipulated to achieve the desired level of loan repayment. Invariably, proper implementation of the existing loan delinquency management strategies

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and proper manipulation of factors that support loan repayment would be invaluable in enhancing the effectiveness of the existing loan delinquency management strategies in reducing loan repayment problems in Akwa Ibom State, Nigeria.

Keywords: Loan delinquency; formal lenders; farmers; Akwa Ibom State.

1. INTRODUCTION

One problem faced by formal financial institutions in Nigeria is loan delinquency among farmers and several efforts have been made by lenders and policy makers to deal with the situation. For instance, government at the three tiers of governance have been involved directly or indirectly in providing financial assistance to farmers as a major policy strategy for increased agricultural output in an attempt to cover up the negative effect of nonperforming loans. Also, the practice of micro-credit scheme is celebrated in many government circles as poverty reduction focused programme. This informed the multiplicity of different financing program for farmers. Unfortunately, many government funding efforts have been fraught with difficulties. Notably, among these difficulties is the problem of loan delinquency among farmers, [1,2]. Strategic defaulting of loan is quite widespread among the opportunist farmers who consider Government sponsored loans more as gift than as debt that have to be paid back. Specifically, [3] noted that default rates are generally higher among those who borrow from Government sponsored sources than those who borrow from moneylenders and other informal lenders.

On the whole, the financing problems of the agricultural sector has continued to persist despite the existence of various economic reform programmes put in place by government to develop agricultural sector, [4]. In fact, efforts to ensure sustainable financial services have been fraught with the problem of loan delinquency.

There is no gain saying the fact that low level of commercialization in farming business and the problem of asymmetry information which make formal lenders unable to properly screen and monitor use of loans could be responsible for the unsatisfactory levels of loan repayment [5,6,7]. However, loan recovery is one of the critical determinants of profitability and viability of a financial institution [8,9,10]. Poor recovery hampers the institutions' capability to recycle funds and adversely affect the effective management of its resources and ultimately its profitability. The incidence of over dues in the agricultural credit system has been increasing over the years and has turned out to be the single most important factor responsible for steady erosion of the financial soundness and fitness of the financial institutions. Unless the over dues are substantially brought down, the impact of various measures to improve viability of banks would not be visible.

Several authors [11,12,13] agree that loan delinquency, particularly among farmers, can be minimized. But these authors have divergent views concerning those variables that reduce repayment problems in the Nigerian agricultural sector. While some observed that income of the farmers, farm size, age of the farmers, farming experience and the level of formal education of the farmers were key factors in loan repayment, others are of the opinion that the amount of money borrowed, major occupation of the farmers, house hold size, loan duration, value of output, interest on loans, value of farm assets, distance to loan source, loan source were other variables influencing loan delinquency. More so, [14] identified delays in loan disbursement, prolonged drought and unexpected family expenses as principal reasons why farmers in Nigeria default; and [15] attributes non performance of

loans to poor credit worthiness and lack of collateral security on the part of the farmers. There is no gainsaying the fact that playing with these variables that are known to affect loan default behavior of farmers would be invaluable in minimizing agricultural loans delinquency in Nigeria. Unfortunately, the level of success achieved depends in part on the financial institution, and the delinquency management strategies used. However, [16] suggests that supervision, viability of farm, acceptable collateral, appropriate sanctions, proper farm appraisal and insurance are important default management techniques employed by banks in lending to agriculture. In particular, [5] agree that sanctions are particularly important in eliciting the willingness of individuals to repay loans. We agree with [17] that lending agencies should establish a sound and competent credit risk management units to carry out proper loan appraisals and follow ups as well as strict enforcement of loan repayments.

Proper loan delinquency management begins with a good default prevention plan, which provides farmers with a unique, long-term solution to the problem of loan default. A properly developed and executed default Prevention Plan will identify the unique root causes of default by farmers and lay out, in accountable, objective and measurable ways, the steps which financial institutions and farmers will take to address the identified problems. Proper loan delinquency management can make a delinquent farmer to recuperate and seize from being a credit risk. More so, systematic, persistent and coordinated use of collection policy and tool are critical in loan delinquency management but having an effective loan servicing and collection system depend to a large extent on the capability to generate and disseminate timely and accurate report on loan portfolio status, and past due payments [18]. Financial institutions that lend to the agricultural sector in Nigeria utilise a number of loan delinquency management strategies. The question is how effective are these strategies.

This paper assesses the effectiveness of loan delinquency management strategies used for farmers in Akwa Ibom State, Nigeria. The specific objectives are: to assess the management strategies aimed at reducing loan delinquency, compare the extent of loan default among lending institutions in the face of the on-going delinquency management strategies and analyze the impact of selected variables on their ability to reduce loan repayment problems.

2. METHODOLOGIES

2.1 Study Area

The study area is Akwa Ibom state. It is located in the Niger Delta area of Nigeria. between Cross River, Abia and Rivers states. It is bounded on the South by the Atlantic Ocean and lies between latitude 40 32' and 50 53' North and longitudes 70 25' and 80 25' East. It covers a total land area of 8,412km² encompassing the Qua Iboe river basin, the western part of the lower cross river basin and the eastern part of Imo river basin. With an ocean forest, which spans a distance of 129 kilometers, Akwa Ibom state presents a picture of captivating coastal mangrove forest and beautiful sandy resorts. The state is generally humid. The mean annual temperature of the state lies between 26°C and 29°C and average sunshine culminate to 1450 hours per year while mean annual rainfall ranges from 2100mm to 3000mm. Agriculture is an important economic activity in the state.

2.2 Sampling

A multistage sampling method was used in this study. The study area was categorized into five zones [namely, Abak zone, Eket zone, Ikot Ekpene zone, Oron zone and Uyo zone],

representative of the various tribes, languages, human activities and climate. Eight banks were selected and 92 agricultural loan beneficiaries of these banks were randomly selected and used in the study. Only banks with branches in all the selected zones and adjudged to be actively involved in lending to the agricultural sector were included in the study. The banks were, Gufax Micro finance, Akwa Savings & Loans limited, the Diamond bank plc, the Fidelity Bank plc, the First Bank plc, the Oceanic Bank plc, United bank for Africa, and the Nigerian Agricultural Cooperative and Rural Development Bank. Separate questionnaires were administered, one for the financial institution (lender) and the other for the farmers (borrowers).

2.3 Data Analyses

Data collected were analyzed using simple statistical tool, the past due age analysis, the delinquency management score and the logit model. The delinquency management score was generated by asking management related questions with three options for the lenders to respond. The responses were scored, 3, 2, and 1 in order of merit. The total score was converted to percentages.

The resulting logit function is represented below:

$$L_i = \ln (P_i/1-P_i) = Z_i = \beta_1 + \beta_2 X_i$$

Where L_i is the logit score, the β 's are the weighting coefficient and the X 's are the standard values of the logit variables used in analysis.

The model can be represented explicitly by

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_{13} X_{13} + e$$

Where $Y =$ A dichotomous variable with value reflecting status of repayment problem [1= loans without repayment problem and 0 = loans with repayment problem].

a =intercept; e =error term

- X1 = age of beneficiary in years
- X2 = sex of beneficiary [Male = 1, Female = 0]
- X3 = household size i.e. no of people living with beneficiary
- X4 = education index
- X5 = primary occupation of beneficiary [Farming=1, Otherwise=0]
- X6 = years of existence of the farm
- X7 = farm size of beneficiary in hectares.
- X8 = borrowing experience i.e. years of previous borrowing
- X9 = Loan size in Naira
- X10 =use of loan [multipurpose = 1, others = 0]
- X11 = duration of loan to the beneficiary
- X12 = visit of loan officials [dummy: Yes = 1, Otherwise = 0]
- X13 = time lag between loan application and disbursement [days]

3. RESULT AND DISCUSSIONS

3.1 General Characteristics of Respondents

This study included eight formal financial institutions and 92 loan beneficiaries. Table 1 shows the socio economic characteristics of the loan beneficiaries.

According to this table, 60% of the respondents were male while 40% were female. The mean age of the respondents is 40 years, and most of the respondents (80%) were within the age of 31 – 50 years. A good number of the farmers were married and have been educated at the secondary school level. However, the mean household size is 8 persons and the mean years of farming experience is 8. The distribution of loan obtained by the respondents indicate that 86% of the respondents obtained loans of N500,000 and below, 11% obtained between N500,0001 – N1,000,000 of loans, and 3% obtained loans of N1,000,001 and above. However, 46%, 35% and 19% of the loans received were short, medium and long term loans respectively. Loans were repaid either monthly, quarterly or annually. The majority of the loan beneficiaries [48%] repaid loans monthly while, 42% of the beneficiaries repaid on quarterly basis and only about 9.78% repaid annually.

3.2 Loan Default Management Strategies

The loan default management strategies used by the financial institutions, are presented in Table 2. According to this table, all the financial institutions interviewed agreed that they have put in place appropriate loan disbursement strategies, carried out loan review independent of the loan officers, and adhere to the bank's credit policy to make sure that loans are repaid. In fact, 87.5% of the banks interviewed agree that they visit the farmers before loan disbursement while 62.5% of the financial institutions agree that they always visit the farmers after loan disbursement.

However, 50% of the lenders accept security that are comparable to loan value, ensure legal documents are perfected before loan disbursement, contact loan beneficiaries by phone, contact loan beneficiaries by letter writing, promptly released fund to beneficiaries, and provide loan packages they considered adequate for the farmers. Other delinquency management strategies always practiced include, charging interest that is comparable to loan risk, which is carried out by only 37.5% of the lenders, offering of post loan services which is carried out by only 25% of the lenders and training and updating loan beneficiaries which only 12.5% of the banks utilized. However, none of these financial institutions gave loans to defaulting farmers to help their businesses recuperate. On the other hand, 87.5% of the lending institutions agreed that they sometimes conduct training sessions to update farmer's knowledge, where as 50% of the lenders accepted that they sometimes contact farmers by letters; accepted securities that are comparable to loan value, released loan fund on time, and sometimes provided adequate loan packages to farmers.

An assessment of the loan default reducing strategies indicates that the loan delinquency management ability of the lenders is not satisfactory, with a mean management quality score of 82.

Table 1. Farmers' personal data

S/No	Characteristics	Frequency [N=92]	Percentage
1	Sex		
	Male	60	65.22
	Female	32	34.78
2.	Age in years [mean = 40]		
	21 - 30	4	4.35
	31 - 40	47	51.09
	41 - 50	33	35.87
	51 - 60	7	7.61
	61 and more	1	1.09
3	Marital status		
	Single	19	20.65
	Married	66	71.74
	Divorced	3	3.26
	Widowed	2	2.17
	Separated	2	2.17
4	Education		
	No formal education	12	13.04
	SSCE/WASC	32	34.78
	NCE/OND	22	23.91
	HND	12	13.04
	BSc.	8	8.70
	Post graduate	6	6.52
5	Household size [mean = 8 persons]		
	1 – 5	20	21.74
	6 – 10	43	46.73
	11 – 15	20	21.74
	16 – 20	5	5.43
	21 – 25	1	1.09
	Above 25	3	3.26
6	Occupation		
	Major – farming	67	72.83
	Minor – others	25	27.17
7	Experience in years [mean = 8]		
	1 – 5	31	33.70
	6 – 10	37	40.22
	11 – 15	16	17.39
	16 – 20	8	8.70
8	Loan size [N'000]		
	500 and below	79	85.87
	501 – N1000	10	10.87
	1001 and above	3	3.26
9	Loan duration [Months]		
	3 - 12 [short term]	42	45.65
	13 – 60 [medium term]	50	54.35
10	Loan repayment		
	Monthly	44	47.83
	Quarterly	39	42.39
	Annually	9	9.78

Source: Field survey 2010

Table 2. Default management strategies

Serial No	Default management strategies	Lenders practicing [%]
1	Loan disbursement strategy	100
2	Loan review independent of loan officer	100
3	Adherence to credit policy	100
4	Visit before loan disbursement	87.5
5	Visit after loan disbursement	62.5
6	Comparability of security to loan purpose	50.0
7	Perfection of document before disbursement	50.0
8	Contacts by phone	50.0
9	Contact by letter	50.0
10	Regular/timely release of funds	50.0
11	Adequate/sufficient loan package	50.0
12	Interest rate charged is related to loan risk	37.5
13	Post loan services	25.0
14	Training and update of farmers	12.5
15	Additional credit as recovery strategy	0.0

Source: Field survey 2010

Table 3 shows the distribution of the lenders by their management quality score. According to this table, all the lenders had a mean management score of between 75 and 92. However, 50% of the lenders had a management score of between 75 and 80, while 25% each, of the lenders had a management score of 81 – 86 and 87 – 92.

Table 3. Management quality score

S/No	Management quality score[mean = 82]	Frequency	Percentage
1.	75 – 80	4	50.00
2.	81 – 86	2	25.00
3.	87 – 92	2	25.00

Source: Field survey 2010

3.3 Comparison of Loan Default in Lending Institutions

An assessment of the loan default situation at these financial institutions reveals that, 82% of loan beneficiaries are defaulters and the mean amount in default was highest in the agricultural bank with N2.482m in default; closely followed by the microfinance banks with N1.729 m and commercial banks with N0.909 m in default.

Table 4. Loan default comparison

Category	Financial institutions	Percentage of total category loans	Amount in default	Past due [< 90 Days]	Past due [>90 Days]	Past due [>180 Days]	Delinquency rate
A. Microfinance banks							
	AKWA Savings	[29.45]	2.3M[29.0]	[24]	[4]	[1]	[44.0]
	GUFAX	[70.54]	1.2M[23.0]	[15]	[3]	[5]	[9.3]
Mean value			1.7M[26.0]	[19.5]	[3.5]	[3]	[27]
B. Commercial banks							
	Diamond bank Plc	[14.10]	0.74M[17.0]	[15]	[2]	[0]	[14.9]
	Fidelity bank Plc	[14.80]	0.66M[14.0]	[11]	[3]	[0]	[12.7]
	First bank Plc	[24.20]	1.13M[15.0]	[7]	[3]	[5]	[13.0]
	Oceanic bank Plc	[17.90]	0.69M[12.0]	[10]	[2]	[0]	[0.01]
	United bank for Africa Plc	[28.70]	1.33M[15.0]	[7]	[5]	[3]	[13.2]
Mean value			0.91m[14.6]	[10]	[13]	[1.6]	[11]
C. Agricultural bank							
	NACRDB	[100]	2.5m[18.0]	[3]	[2]	[3]	[14.9]
Mean value		[100]	2.5m[18]	[3]	[2]	[3]	[14.9]

Figures in parenthesis are percentages
Source; Field survey 2010

Table 4 shows the distribution of the financial institutions by loan default status. According to this table, the micro finance banks had the highest mean percentage default of 26%, the agricultural bank had a mean percentage default of 18% while the commercial banks had a mean percentage default of 14.6%. The past due age analyses reveals that of the amount of loans in default, 19.55% had a mean past due of less than 90 days for the microfinance banks, 13.0% had a mean past due of less than 90 days in the agricultural banks and only 10% had the same past due period in the commercial banks. Debts that were due after 90 days but not beyond 180 days was only 2.0% in the agricultural banks, 3.0% in the commercial banks and 3.5% in the microfinance banks. However, bad debts were smallest in the commercial banks with a mean of 1.6% and only 3.0% in agricultural and microfinance banks, respectively [Table 4].

3.4 Effectiveness of Loan Delinquency Management Strategies

Table 5 shows the logit model estimates on how the selected variables reduce or increase agricultural loan repayment problems under the existing loan delinquency management strategies.

According to this table, the likelihood ratio statistics is 22.36 with a p- value of 0.05, which is very small thus confirming that all the regressors have significant impact on reduction or otherwise of loan repayment problems. The result of the logit regression analysis also shows that, age of the farmer, household size, educational level, number of years of farm existence, farm size, loan size, loan use, loan duration, number of times banks' officials visited borrowers as well as time lag between loan application and disbursement were positively related to reduction of loan repayment problems where as gender of the respondents, their primary occupation and borrowing experience were negatively related. However, only primary occupation of borrowers, loan size, loan use, duration of loan and visits by bank officials have statistically significant effect in reducing loan repayment problems.

The B-coefficient for primary occupation is -18.94. This implies that if the primary occupation of the loan beneficiaries increases by one unit, the logit decreases by 18.94 units. However, the odds ratio of zero suggests that farmers who are exposed to other occupation are not likely to ensure reduced loan repayment problems any more than farmers who are not exposed to other occupation. This is particularly so considering the fact that only about 27% of the respondents were involved in farming as a minor occupation, [Table 1]. An increase of one unit in primary occupation implies movement from other occupations to farming. Consequently, the negative coefficient confirms that loan repayment problems reduce with other occupation than with farming. This agrees with earlier findings by [12].

The B- coefficient for loan size is positive and zero, meaning that with other variables held constant, if loan size increase by one unit, on average the estimated logit, although increases, has zero effect on the logit. The percentage of odds ratio is also zero, suggesting that farmers exposed to the present loan size are not likely to achieve any reduction in loan repayment problems. However, the positive coefficient for loan size points to the fact that increases in loan size will reduce loan repayment problems, but in this study such effect is zero. This zero effect of loan size conveys the notion that the amount of loans given by the financial institutions is grossly inadequate given the existing high rate of inflation. This corroborate earlier works by [19,20,21,22,23,24,25,26].

The coefficient for loan use of 17.65 means, with other variables held constant, that if the use of loan increases by one unit, on average the estimated logit increases by 17.65 units,

suggesting a positive relationship between loan use and the reduction in loan repayment problems. However, the percentage of odds ratio is zero suggesting that farmers who actually use loan funds for a variety of purpose are not likely to achieve any reduction in loan repayment problems any more than farmers who use loan funds for a single purpose.

Using loan for a variety of purpose is an insurance against covariant risk and this is expected to lead to an improvement in repayment performance. The positive relationship between loan use and reduction in loan repayment problem agrees with work by [24], who opined that positive diversification of loan for purposes such a buying of inputs or engaging in economic activities other than agriculture will go a long way in improving loan repayment.

Table 5. Factors of loan repayment problems

Variable	Coefficient (B)	S.E	Z – statistics	Odds Ratio	% of odd ratio	Calculated P - values
X ₁ - AGE	0.056	0.09	0.615	1.058	5.8	0.5140
X ₂ - SEX	-.755	1.116	-0.677	.470	-53	0.3197
X ₃ - HHS	.115	.065	1.769	1.122	12.2	0.5287
X ₄ - EDU	.325	.424	0.767	1.384	38.4	0.5805
X ₅ - POC	-18.938	12067.982	-0.002	.000	0.00	0.00
X ₆ - EXIS	.135	.333	0.405	1.144	14.4	0.5335
X ₇ - F.SIZE	.37	.061	0.607	1.038	3.8	0.5093
X ₈ - BOE	-1.190	.414	-0.459	.827	-17.3	0.4526
X ₉ - LOAN SIZE	.000	.000	0.000	1.000	0.00	0.00
X ₁₀ - LOAN USE	17.652	12067.982	0.002	0.00	0.00	0.00
X ₁₁ - DOL	.040	.065	0.615	1.041	4.1	0.00
X ₁₂ - VISITS	18.204	9737.362	0.002	0.00	0.00	0.00
X ₁₃ - DISLAG	.101	.196	0.515	1.106	10.6	0.5251
Constant	-20.767	9737.364	-0.002	000		

Nagelkerke $R^2 = 0528$, LR Statistics = 22.362

Source; Field survey 2010

The B-coefficient for duration of loan of 0.04 means that if the duration of loans increases by one unit, the logit increases by 0.04 units, suggesting a positive relationship between duration of loans and reduction in loan repayment problems. When one considers the odds ratio, it becomes clear that as the duration of loans increases, farmers are more than 4.1 times likely to experience reduction in loan repayment problems. The positive relationship between duration of loan and reduction in repayment problems is an indication that the longer the duration of loan the longer the time at the disposal of the farmers to repay loans. [27,12] all accept this fact.

The number of visits paid by banks' officials has a B-coefficient of 18.2 and a zero percentage odds ratio. Consequently, the number of visits has the potential of reducing loan repayment problems. Findings by [28] suggests that repayment rate may be low notwithstanding the frequency of visits by banks' official, if farmers are unwilling to repay, and not because they are not properly monitored.

On the whole, the number of visits of bank officials, and the loan size have the potential of reducing loan repayment problems. Also loan repayment problems reduce when loans are used for agricultural and non – agricultural activities, and when the primary occupation of the

farmers in not farming. This points to the fact that loan repayment problem persists among the operators of the agricultural sector. Of special significance is the zero B – coefficient for loan size, which suggests that the sizes of loan given to the farmers are too small to make any contribution to the reduction of existing loan repayment problems.

4. CONCLUSION

The Nigerian financial market is still in search of a satisfactory level of loan recovery, to make the financial market vibrant. As a result of this quest, a number of loan default reducing strategies have been put in place. Unfortunately, this study reveals that of the fifteen management strategies identified only three was implemented by all the lenders. The other measures were either partly implemented or not implemented at all. The inability to thoroughly implement the loan delinquency management strategies as evident in the mean percentage default was more severe in the microfinance banks, and least severe in the commercial banks. Primary occupation, loan size, loan use, duration of loans and visits of bank officials are some of the variables that can be manipulated to ensure adequate reduction in loan repayment problems.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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