INNOVATIONS

Farmers' knowledge and attitude of the design and lending practices of lenders in Nigeria

Prof. Emmanuel O. Eyo[1]
Dr. Innocent A. Asuquo[2]

1. Professor, Department Of Agricultural Economics, University Of Calabar, Nigeria
2. Lecturer, Department of Agricultural Economics, University of Calabar, Nigeria

Corresponding Author: Prof. Emmanuel O.Eyo (**emaeyo@yahoo.com**)

Abstract:
Issues*: Low loan performance has remained the central problem with extending loans to farmers in Nigerian. Credit needs of farmers are met better when the lending design is good and user friendly. The knowledge of sources, lending design and practices of lenders is important for increasing outreach by formal financial institutions. What lending design and organizational practices can ensure loan performance?* ***Methods****: This paper uses from primary data and the conjoint analytical technique in evaluating the lending design and organizational practices that are farmers friendly, analyses farmers knowledge of organizational practices of lenders, attributes in the designs and organizational practices of formal lenders that are farmers friendly and suggest the design that encourage loan performance.* ***Findings:*** *The average attitude score for attributes that farmers had positive disposition to was highest (84..17%) for the bank of agriculture and lowest (75.7%) for the commercial banks, whereas the attitude score for attributes that the respondents had negative disposition to was highest (80.57%) for commercial banks, and lowest (66.62%) for the bank of agriculture. commercial banks. The results of the conjoint analysis showed that attributes such as location of financial institution, loan disbursement time, loan terms, loan amount, interest rate charged, specialization in agricultural lending and loan repayment schedule were important in an optimal choice of lenders as revealed by mean ratings of 4.66 to 6.78. on the whole, customized lending, flexible repayment plan and specialization of the lenders in agriculture would be invaluable in changing the narrative as regards the non performance of loans in Nigeria.* ***Conclusions: T****he respondents were more knowledgeable and exhibited better attitude for the design and lending practices of the Bank of Agriculture and worst attitude towards the design and lending practices of the commercial bank. The conjoint analysis showed that customised lending, flexible repayment plan and specialization of the lenders in agriculture would be invaluable in changing the narrative as regards the non performance of loans in Nigeria.*

Keywords*: 1. Knowledge2. Attitude,3. Lending Practices 4. Farmers*

Introduction

Commercial lenders are known to provide superior financial services, in the form of larger sized loan among others. For this reason several financial market innovations have been introduced in Nigeria overtime to sustain commercial loans to the Nigerian agricultural sector. For example, Agricultural credit guarantee Scheme Fund (ACGSF) was introduced primarily to induce banks to

increase and sustain lending to agriculture. In the scheme commercial banks loan to agriculture is guaranteed 75% against net final default. The rural banking scheme was also introduced in 1977 to compel the commercial banks to disburse at least 45% of savings mobilized as loans to Agriculture. The Central Bank of Nigeria (CBN) credit guidelines specified minimum proportion of commercial and merchant bank loans that must be allocated to agriculture. Other efforts included the introduction of the People's bank in 1988 through a military decree in order to reach the unbanked public, as well as the community banks, the NACB established branches in all the States by 1990. In 1991, Nigeria experimented with yet another effort to make sure that more commercial loans were extended to the sector by introducing the self Help Group (SHGs) linkage with the commercial banks under the ACGSF, among other efforts, (Eyo, 2002). Unfortunately up till date commercial lenders have not succeeded in giving commercial loans to farmers.

Overtime the practice of agricultural lending in Nigeria included: Borrowers applying for collateralized loans, Borrowers applying for uncollateralized loan guaranteed by the ACGFS or Borrowers access the loan as members of groups. Once the loan is approved, the Cheque is raised as evidence and the money is paid into the beneficiaries accounts. The majority of banks give short term loans. Some banks give moratorium on agricultural loans. The moratorium is given arbitrarily based on the gestation period of the activity being financed. The repayment of short term loans commences monthly after loan disbursement. Where there is moratorium, repayment is done monthly after the period of grace. Lenders generally target the individual farm enterprise in extending loans and allow the farmers freedom in the use of borrowed fund. The outcome of the existing lending practices makes it impossible to properly price loans, encourages loan diversion, the problem information asymmetry, adverse selection as well as moral hazard in the financial market and cannot support loan recovery .When loan maturity is too short and not coordinated with time pattern of earnings, it not only creates liquidity problem for the borrower, but exerts pressure on his cash flow. When there is liquidity problem and cash flow pressure, the ability to meet the monthly obligation for principal and interest is reduced. Those who meet those obligations do so by getting funds from other sources. Those who cannot get funds elsewhere default.

Allowing borrowers extra freedom in the use of borrowed funds does not ensure that borrowed fund are used for the purpose it were meant. This results in the problem of loan diversion. When loan funds are diverted, it will contribute nothing to growth of the farm firm and hence borrowers default.

One problem that has bedeviled formal sector financing of agriculture in Nigeria is high rate of loan default. In fact, through these years low loan performance has remained the central problem with extending loans to farmers and has persisted in the Nigerian agricultural sector. In fact, it was reported by CBN (2004), that the agricultural sector accounted for 30.5% of the total non-performing loans in the economy. The poor performance of agricultural loans not only makes it difficult for commercial loans to thrive, but it limits outreach and the extent of financial inclusion, (World Bank 2000). As a result, loan supply has significantly dropped in the last ten years.in particular, Deposit Money Banks' lending to agriculture as a percentage of total lending in the economy has been below 5% in the last ten years (CBN 2015) and in Cross River state only 589 out of more than 1.8 million farmers access credit from formal financial institutions, (Cross River State Ministry of Agriculture, 2015).

Access to credit from the formal financial market is important in increasing production and the commercial banks still hold the ace for credit supply and the sector's growth, (Rahji and Fakayode, 2011, and Kuye 2015). The persistent failure of the commercial banks to succeed in financing activities in the sector is a clear evidence that the country is in need of further financial and institutional reforms that could revitalize the sector (Nwosu *et al,* 2010).

The central question is how can lending to the agricultural sector be made to achieve satisfactory levels of repayment to sustain it enough for satisfactory growth in capital stock and economic development in Nigeria. Attempts at answering this question bring the need to identify with factors

responsible for nonperformance of loans. This is particularly so because, proper loan default /delinquency management begins with a good default prevention plan with a unique, long-term solution to fixing the problem. It identifies the root causes and fashions out ways to addressing the problem. Several authors, (Arene and Aneke, 1999; Kassim, 2002, Kohansal and Mansoori, 2009; Umoren et al 2018; Rahji and Fakayode, 2011; Henri-Ukoha *et al.,* 2011; Akpan, Udoh and Akpan, 2014; Sahel 2014, and Ogbonna and Osondu, 2015) identify poor loan management, inadequate analyses, errors in loan documentation, undue emphasis on profitability at the expense of loan quality, policy and regulatory inconsistencies and abnormal competition. A close look at these factors reveal that they are a function of the design and lending cum organizational practices of lenders. Credit needs of farmers are met better when the lending design is good and a good design must take into consideration the fact that farmers differ with respect to activity, socio-economic characteristics, access to sources of credit and the conditions prescribed for granting such credits are so adjusted (Koyenikan and Abiola, 2011). Moreover, the knowledge of sources, lending design and practices of lenders is important for increasing outreach by formal financial institutions. When the lending design and organizational practices is user friendly, it enhances outreach and loan performance. The question is how knowledgeable are the farmers on the design and organizational practices of existing lenders; What design and lending practices best suits the farmers?, how can it translate into an optimal loan performance for the stakeholders in Cross River State?

2. Literature Review

This work is based on the expected utility theory, random utility theory and the theory of consumers choice. The expected utility theory of Von Neumann and Morgenstern guides choice decision under uncertainty. This theory is extended by multi attribute utility theory to consider utility with more than one attribute. The multi attribute utility function could be linear – additive multi-capture or multi-linear, (Feeney et al 2002;Keeny and Raffia 1976). Random utility theory models preferences on alternative by drawing real value scores on each alternative according to the scores. It is based on the hypothesis that every individual is a rational decision maker, maximizing utility relative to his or her choices. The statement of this theory is that a person choose what he or she prefers. An individual is assumed to draw a utility function at random on each choice. An individual's utility for a choice alternative is assumed to consist of a deterministic component and a random utility component. Given the principles of utility maximizing behavior, the probability of selecting choice alternative is then equal to the probability that its utility exceeds that of all choice alternatives in the choice set. The specification of the model depends on the assumptions regarding the distribution of the random utility components. A farmer's quest for satisfaction from a loan source depends on what the source can offer. Constraints from such a source are defined in terms of interest rates, location and the borrowing costs, etc. A farmer's preferred choice of lender is predicated on these constraints. If they are satisfactory based on his assessment, the lender becomes the farmer's "revealed preference choice.

The theory of consumer choice, basically explains how people decide to acquire consumables based on the utility generated from the satisfaction of wants and needs. Farmers face similar situations in demanding for loans. Their constraints, just like normal consumers, is determined by the lending conditions of lenders. There is no gain saying the fact that concerns over debt capacity explain the use of external finance. However, once the decision to use external financing has been made the manager is faced with the choice on source of external finance. Utility theory has it that people rank choice according to their preference. Farmers choice for a particularly lender is judged by the satisfaction gotten from a lender's lending conditions. If the conditions, (lender's constraints) fit a farmer, the lender is preferred subject to the conditions given him and in comparison with other lenders' terms and conditions. The choice of a lender depends on the lending practices of the lender and this depends on the farmers knowledge of the design and lending practices of the lenders.

Institutional design of formal lenders in agricultural credit delivery: Institutional design varies with lenders. While some lenders begin with community enquiry, interest and borrowing capacity assessment for individual loans and , others prefer lending to groups. Etwire, Dogbe and Nutsugah (2013), studied the institutional credit available to small holder farmers in the northern region of Ghana and came to the conclusion that the designs adopted by the different lenders were determined by the spread of the financial institution, the peculiarity of the target beneficiaries and the portfolio base of the financial institution. Bank of Ghana for instance, operated a two credit scheme - production and term financing. Production loan was strictly for the purpose of working capital and must be paid within a year. Since the bank was constrained in terms of having the capacity to effectively monitor loan utilization by several loan beneficiaries due to human resource base, the bank was reluctant in approving loans for individual farmers. Farmers were, therefore, encouraged to form groups. A farmer group requesting for production loan was expected to be in business and have a production and repayment plan. A farmer group with guaranteed market and good record of loan utilization and repayment plan had an added advantage. As regards term finance, the period was between 2 to 5 years and the interest rate was the bank's base rate with no arrangement or processing fee. The facility was mostly for the purposes of financing the purchase of equipment, building of infrastructure, etc. A farmer group applying for term finance must be profit oriented and financially and economically viable. The group must submit a business plan and may be required to provide collateral. Potential clients were expected to finance 15% of the requested loan. Entrepreneurial knowledge, skills and experience were a plus for any group. For Bouzali Rural Bank, a farmer or farmer group requiring credit must operate an account with the bank. Potential clients were expected to have at least 10% of the amount requested in their accounts. Group loans were encouraged as individuals were required to provide collaterals.

Grameen Ghana, a micro-finance institution, had as its target beneficiaries, the economically active rural poor who were into farming or small businesses as well as peri-urban poor who were mostly women. Production credit was granted after a number of processes were satisfied. The process begins with community enquiry and interest assessment, followed by capacity needs assessment and then appraisal of loan application and disbursement. Loans were only disbursed to successful group farmers. SEND Ghana, a non-governmental organization, had a financial program facilitated by the Canadian cooperative association with provision of seed capital. Farmer groups were encouraged to form cooperatives and mobilized savings. Revolving credit at low interest rate was given to members of a farmer group in good standing. A farmer group requesting for credit must cultivate crops such as maize, rice and soybeans inorder to be able to make loan repayments with harvested produce. Eyo (2002), studied the model for linking savings and credit groups with banks in Akwa Ibom State, Nigeria. According to the study, each group, as a matter of necessity, must save with the commercial bank for at least 12 months. Loans were disbursed to group members at a savings-to-loan ratio of 1:4. Kuye (2015), reported that Bank of Agriculture (BOA) required potential borrowers to open accounts with 10% minimum deposit for agricultural loans and 20% for non-agricultural loans, a guarantor, who must be a civil servant for short-term loans, collateral security such as automobiles, land and landed properties for medium and long term loans with 12% interest rate charge. These conditions must be fulfilled, in addition to mandatory filling of application forms. First Bank of Nigeria (FBN) on the other hand, require opening a savings or current accounts, filling of application forms; Central Bank of Nigeria guarantee, 25% equity contribution on loan amount reported in the account; insurance policy on crop by Nigerian Agricultural Insurance Company (NAIC), provision of tangible collateral for amounts greater than Nl,000,000 such as land and landed properties, bonds, shares, automobiles, etc. This is in addition to 21% interest rate charged. According to Ibe, Okorji and Agbo (2014), just as the designs of formal lenders are different, their practices are equally different. In other words, what is practiced may be the complete opposite of

the designs of these lenders in credit delivery. Commercial bank loans,for instance, because of the business-like manner it is transacted makes it nearly impossiblefor equitable distribution of such loans to farmers (Olowa and Aina, 2011). In actuality, they arebelieve to favour big-sized farmers more in loan delivery. Ibe *et al* (2014) also believed that in addition to this, loan demand is also influenced by the value of collateral, minimum account balance and interest rates. Etwire *et al* (2013), added that as part of the conditions in granting such loans, out grower systems are usually formed and leaders of farmer groups or nucleus farmers are used as contacts to monitor the extent of use of the loans.

3. Objective of the study

The general objective of this paper is to evaluate the lending design and organizational practices for formal agricultural loans sources in Cross River State, Nigeria. The specific objectives are to; analyse farmers knowledge of organizational practices of lenders, analyse attribute in the designs and organizational practices of formal lenders that are farmers friendly and suggest the design that encourage loan performance.

4. Methods of the Study

Data analysisused descriptive statistics, the likert scaling and the conjoint analytical techniques,

Model specification: The Conjoint analysis is one of several trade-off analytical tools and is based on decompositional approach where respondents react to a set of total profile description and part-worths for the individual attributes, given some type of composition rule. The conjoint model is specified as follows:

$$X_{i1}, i_2 \ldots in \cong \sum_{n=1}^{n} X_{in} + \sum_{n<n^{-1}} t_{inin}$$

Where X_i= respondents' overall evaluation of a stimulus profile with level *i* of attributes 1, 2,... n

≡ = least squares approximation,

X = main effects,

t = two-way interaction effects.

(Attributes with *a priori* expectation are represented by '1' if favourable and '0' if otherwise)

For this study, the attributes were

1. Convenient location of financial institution (proximity)
2. Timely loan disbursement
3. Loan terms
4. Full loan amount
5. Interest rate charged
6. Specialization/ knowledge in agriculture
7. Loan repayment schedule

These attributes and their levels were, however, ranked on a scale 0 to 7, with 0 being the least important and 7, very important. For the levels, respondents were required to rate the different attribute levels on a scale of 0 to 7. Using location of financial institution, for instance, respondents were required to rate a financial institution located within 1km on a scale of 0 to 7; another located 2-10km on the same scale, and another located more than 10km using the same scale. Consequently, for the levels, the attributes were measured thus:

1. Location of the financial institution (1km, 2-10km, more than 10km)

2. Loan disbursement (within 7 days, 7-14 days, 15 days or more)
3. Loan terms (standard, typical, customized)
4. Loan amount (50%, 75%, 100% of required loan amount)
5. Interest rate charged (equal to, 1-2% greater than, 1-2% less than competitor's rate).
6. Specialization /knowledge in agricultural lending (fair knowledge, specializes, no specific knowledge in agricultural loans).
7. Loan repayment schedule (based on asset's earning pattern, based on fixed terms, irrespective of what the asset generates).

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Accordingly, the resulting OLS equation is as follows:

$$Yi = \beta_0 + \beta_1\ 1km + \beta_2\ Qd + \beta_3\ CR + \beta_4\ AMT + \beta_5\ IRLT + \beta_6 SA + \beta_7\ LRA + \beta_8\ LRP + \beta_9 LRA\ 1km + \beta_{10}\ LRA\ Qd + \beta_{11} LRA\ CR + \beta_{12}\ LRA\ AMT + \beta_{12} LRA\ IRLT + \beta_{14} LRA\ SA + \beta_{15}\ LRP\ 1km + \beta_{16} LRPQd + \beta_{17}\ LRPCR + \beta_{18}\ LRPAMT + \beta_{19}\ LRPLT + \beta_{20} LRPSA + e$$

Where:

Y_i = the overall utility of the *i* th profile (*i*=1)

β_0 = intercept

β_1 - β_7 = coefficients for main effects

β_9 – β_{20} =coefficients for the 2-way effects

1km = "1km or less for financial institution location" attribute

Qd = "Quick disbursement of loan or disbursement within 7 days" attribute

CR = "Convenient Repayment or customized loan terms" attribute

AMT = "100% of the loan amount" attribute

IRLT = "Interest rate 1-2% less than competition" attribute

SA = "Specializes in agricultural loans" attribute

LRA = "Loan repayment schedule base on asset earning pattern"

LRP = "Loan repayment schedule base on fixed payment term"

LRA 1 KM = Interaction of "loan repayment based on asset earning pattern" and "1km or less for financial institution location" attributes.

LRP 1 KM = Interactions of "loan repayment based on fixed payment terms" and "1km or less for financial institution location" attributes

LRAQd = Interaction of "loan repayment based on asset earning pattern" and "Quick disbursement of loan" attributes

LRPQd = Interaction of "loan repayment based on fixed payment term" and "Quick disbursement of loan" attributes

LRACR = Interaction of "Loan Repayment based on asset earning pattern" and "Convenient Repayment" attributes.

LRPCR = interaction of "Loan Repayment based on fixed payment terms" and "convenient repayment" attributes.

LRA AMT = Interactions of "Loan Repayment based on asset earning pattern" and "100% of the loan amount" attributes.

LRP AMT = Interaction of "Loan Repayment based on fixed payment terms and" 100% of the loan amount" attributes.

LRAIRLT = Interaction of "Loan Repayment based on asset earning pattern" and "Interest rate 1-2% less than competition" attributes.

LRPIRLT = Interaction of "Loan Repayment based on fixed payment terms and "Interest rate 1 -2% less than competition" attributes.

LRASA = Interaction of "Loan Repayment based on asset earning pattern and "Specialization in agricultural loans" attributes.

LRPSA = Interaction of "Loan Repayment based on fixed payment terms" and "specialization in agricultural loans" attributes.

5. Data used

A multistage random sampling technique was used in obtaining primary data from 307 farmers on the practices of commercial, microfinance and bank of agriculture.

6. Data Analysis

Table 1.0 Selected demographics of respondents

S/n	Demographic	Frequency n=307	Percentage	Mean
1	Age			
	30 and younger	42	13.7	
	31-40	77	25.1	
	41-50	108	35.2	44
	51-60	59	19.2	
	61 and older	21	6.8	
2	Sex			
	Male	183	59.6	
	Female	124	40.4	
3	Marital status			
	Single	51	16.6	
	Married	202	65.8	
	Divorced	17	5.5	
	Widowed	19	6.2	
	Separated	18	5.9	
4	Highest educational qualification			
	FSLC	19	6.2	
	OND/NCE	55	17.9	
	SSCE/WASC	56	18.2	
	HND	77	25.1	
	B.Sc	94	30.6	
	M.Sc/Ph.D	6	2.0	
5	Household size			
	1-5	127	41.4	
	6-10	169	55.1	6
	11-15	11	3.6	
6	Respondents' other engagements (jobs) other than farming			
	None	124	40.4	
	Public /civil servant	79	25.7	
	Private business	99	32.2	
	Students	5	1.63	

Source: Field survey, 2021

Table 2.0: Distribution of Respondents by knowledge score

Types of Bank	Knowledge Classes	Frequency	%	Minimum	Maximum
Bank of Agriculture	60 – 62 63 – 65 66 – 68 69 – 71 Mean	30 85 48 144 67	9.8 27.7 15.6 46.9	60	71
Commercial Bank	56 – 58 59 – 61 62 – 64 65 – 67 68 - 70 Mean	54 53 162 22 15 62	17.6 17.3 53.1 7.2 4.9	56	70
Micro Finance Bank	62 – 64 65 – 67 68 – 70 71 – 73 Mean	176 112 17 2 64	57.3 36.5 5.5 0.7	62	73

Source: Field survey, 2021

Table 3.0: t – test for bank mean knowledge scores

Bank type and mean score	**T- VALUES**
BOA (66.66) VS CB (61.93)	11.24 : P>0.05
BOA (66.66) VS MFB (64.49)	5.35 : P>0.05
MFB (64.49) VS CB (61:93)	7.1 : P>0.05

Source: Field survey, 2021

Table 4: Mean attitude score on designs and lending practices for BOA, CB and MFB

S/n	Design variable	Attitude score		
		BOA	**CB**	**MFB**
1	Opening of saving/current account(+)	93.5	96.4	95.1
2	Fill of application forms(+)	99.0	96.4	95.1
3	A guarantor is required(-)	92.5	97.1	94.5
4	10% minimum deposit of the required loan(+)	66.4	60.9	62.2
5	15-25% minimum deposit(-)	30.3	67.4	50.8
6	Land/Landed properties and other asset must be used as collateral for an amount greater than #1,000,000(-)	36.8	80.8	63.2
7	Loan officials from the bank must visit the farm before loans are given(-)	92.5	87.9	86.0
8	Interest rate charged is between10-15%(+)	84.4	58.0	63.2
9	Interest rate is between 16-30%(-)	22.1	62.2	54.4
10	Loans are given to individual farmers(+)	77.2	72.6	85.3
11	Loans are given to farmers cooperatives(-)	95.1	90.9	92.2
12	Insurance policy is required(-)	53.7	90.6	66.4
13	Loan amount of between #100,000-#200,000 must be repaid within 1 year(+)	85.3	93.8	93.8
14	Loan amount of between #500,000-#1 ,000,000 is repaid within 3 years(-)	90.6	96.4	94.1
15	Loan amount of more than #1 ,000,000 is repaid in more than 3 years. (-)	86.0	86.6	84.7
16	1-3 years grace period or moratorium for long term loans of about ten years. (+)	83.4	51.8	51.8
	Mean +	84.17	75.7 80.57	78.07 76.26
	Mean -	66.62		

Source: Field data analysis, 2021

Table 5a: Attributes rating statistics for optimal loan programme

Statistics	Location advantage	Timely loan disbursement	Loan terms	Loan amount	Interest rate	Agricultural specialization	Loan re pay Term
Mean	4.66	6.47	6.45	6.73	6.78*	6.28	6.27
Mode	7	7	7	7	7	7	7
Standard deviation	2.783	1.004	.970	.864	.972	1.439	1.280
Minimum	0	0	0	0	0	0	0
Maximum	7	7	7	7	7	7	7

*highest rating score

Source: Field data analysis, 2021

Table 5b: Degree of acceptance for attribute levels

SN	ATTRIBUTES	CLASS	MEAN
1	Location	1.0	4.77
		2 – 10	4.66
		>10	3.55
2	Loan Disbursement	≤ 7	5.56
		7 – 14	4.91
		≥ 15	3.10
3	Loan terms	Standard	3.47
		Typical	5.50
		Customised	5.94
4	Loan amount	50%	2.76
		75%	4.76
		100%	6.22
5	Interest Rate	Competitors Rate(CR)	4.22
		1-2% greater than CR	2.55
		1-2% less than CR	6.20
6	Agric Specialisation	Fair knowledge	5.26
		Specialises	6.29
		No knowledge	3.06
7	Loan repayment terms	Flexible,	5.19
		based on fixed terms	4.95
		irrespective of what the asset generates	2.66

Source: Field data analysis, 2021.

Table 6; Conjoint analysis of the main effects of attributes on satisfaction of borrowers

Attribute	Coefficient	p-value
Ikm 7days	.117* -.021	.000 .325
Customized Lending	.064*	.001
100% of loan amount	-.027	.283
1 -2% less than interest	.078*	.007
Specializes in Agric. Lending	.108*	.000
Flexible repayment	.078*	.000

*= significant at 1%

Source: Field data analysis, 2021

Table 7: Interaction effects between loan type and other attributes.

Attribute levels	**FLEXIBLE LOANS**		**STANDARD LOAN**	
	Coefficient	P-value	Coefficient	P-value
1km	.005	.921	.068	.111
7 days	.452*	.000	-.221*	.000
Customized terms	.005	.937	-.084	.125
100% of loan amount	.100	.222	-.192*	.009
Lesser interest rate	-.029	.754	.122	.143
specialization	.294*	.002	.094	.262
* significant at 1%				

Source: field data analysis, 2021

Findings

Socioeconomic characteristics of respondents: Information on Table 1.0 reveals that the mean age of respondents across the three zones was 44 years, with more than 50% of the respondents being males. 65.8% were married, 30.6% had university degrees, and the mean household size was 6. About 30% of the respondents had university degrees, and more than 90% of the respondents had senior school certificate (SSC) or West African School Certificate (WASC). Most respondents had household size of 6-10, representing 55.1%. However, 41.4% had 1-5, and 3.6% had 11-15. Only 40.4% of the respondents took up farming full time.

Knowledge of the design and lending practices of lenders: Respondents were more knowledgeable of the lending practices of the Bank of agriculture and less knowledge of the lending practices of commercial banks. Table 2.0 shows the distribution of respondents by knowledge score for each of the bank of agriculture, commercial banks and the microfinance bank. According to this table, the minimum knowledge score was lowest for the commercial banks (56) and highest for one microfinance banks (62) while the maximum knowledge score was lowest for the commercial bank (70) and largest for the microfinance bank (73). However, the mean knowledge score is highest (67)for the bank of agriculture, 64 for microfinance banks and lowest (62) for the commercial banks.

Table 2.0 shows that 9.8% of the respondents scored 60 – 62% on their knowledge of the lending practices of the Bank of Agriculture (BOA); 27,7% had 63 – 65% rating, 15.6% had 66 – 68% rating and the majority (46.9%) had 69 – 71% rating. Similarly, about 17.0% of the respondents had 56 – 58% and 59 – 61% knowledge of the lending practices of commercial banks each and the majority (53.1%) had 62 – 64% knowledge of the lending practices of commercial banks. The majority of respondents were more knowledgeable of the design and lending practices of the microfinance banks. In fact about 90.8% were in the 62 – 67% knowledge class with 57.3% having 62 – 64% knowledge, 36.5% having 65 – 67% knowledge, 5.5% having 68 – 70% knowledge and 0.7% having 71 – 73% knowledge score. Although the micro finance bank enjoyed the highest minimum and highest maximum knowledge score, the t-test reveals that the mean knowledge score was not only higher than but was significantly different from that of microfinance banks and significantly different from that of commercial banks as well (see table 3.0). However, the mean knowledge score of respondents on the design and lending practices of microfinance banks was higher and significantly different from that of commercials banks.

Farmers attitude towards the designs and lending practices formal lenders in Cross River State: Tables 4 show farmers' attitude as regards selected but key design variables and practices of Bank of Agriculture, Commercial banks and microfinance banks in the study area. The design variables comprises nine negative questions and seven positive ones. For the positively directional variables, respondents have attitude rating for having functional accounts with the different banks, 93.5%, 96.4% and 95.1% before acquiring loans; attititude rating of 99%, 96.4%, 95.1% for completing application forms; and attitude rating of 66.4%, 60.9% and 62.2% for10% minimum deposit of the required loan in each of BOA, commercial banks and microfinance banks, respectively.

The attitude rating for Interest rate charged being between10-15% are 84.4%, 58.0% and 63.2%; giving loans to individual farmers had attitude score of 77.2%, 72.6% and 85.3%; Loan amount of between #100,000-#200,000 to be repaid within 1 year had attitude score of 85.3, 93.8 and 93.8 for each of BOA, commercial banks and microfinance banks, respectively. The attitude score for 1-3

years grace period or moratorium for long term loans of about ten years were 83.4% for bank of agriculture and 51.8% for each of the others.
Among the negatively worded design variables, Tables 5 shows that A guarantor is required has attitude score of 92.5%, 97.1%, 94.5% for BOA, CB, MFB; 15-25% minimum depos an attitude score of 30.3%, 67.4%, 50.8% for BOA, CB, MFB, and Land/Landed properties and other asset must be used as collateral for an amount greater than #1,000,000(-) attracted attitude score of 36.8%, 80.8% and 63.2% respectively for each of the banks. Other attributes that the farmers were negatively disposed to include Loan officials visit with attitude score of 92.5% for BOA, 87.9% for commercial banks and 86.0% for the microfinance bank; Interest rate between 16-30% with attitude score 22.1% for bank of agriculture, 62.2% for commercial banks, 54. 4% for microfinance banks; Loans are given to farmers cooperatives(-) with attitude score of 95.1%for BOA, 90.9% for CB, 92.2% for MFB; and for Insurance policy as prerequisite the attitude score were 53.7%, 90.9% and 92.2% for the respective banks. Respondents were generally negatively disposed to volume of loans of over N500, 000.00 for all the banks with over 84% attitude score. On the whole, the average attitude score for attributes that farmers had positive disposition to was highest (84..17%) for the bank of agriculture and lowest (75.7%) for the commercial banks, whereas the attitude score for attributes that the respondents had negative disposition to was highest (80.57%) for commercial banks, and lowest (66.62%) for the bank of agriculture. Invariably, the respondents exhibited better attitude for the design and lending practices of the Bank of Agriculture and worst attitude towards the design and lending practices of the commercial bank.

Lending attribute rating of respondents: Tables 5a and 5b show attributes rating and degree of acceptance for attribute for the respondents. According to these tables, all seven attributes were important to the respondents. With ratings ranging from 4.66 to 6.78 on a 7-point scale, the respondents showed clearly how important these attributes impact on satisfaction derived from the various lenders activities. A standard t-statistic test was conducted to compare the difference in means. With the lowest t-value of -0.567 and the highest as 0.565, compared with $t_{0.01} = 2.920$ and $t_{0.05} = 6.965$, the test revealed that no attribute was statistically different from the others in terms of rating and satisfaction level for a loan programme. In other words, for a desirable loan programme in Cross River State, the location of the financial institution, loan decision time (timely loan disbursement), loan terms, loan amount, interest rate charged, financial institution specialization in agricultural lending and the loan repayment terms are important variables to consider. In Table 6b, respondents were asked to rate their preferences for specified levels of the attribute using a scale of 0 to 7. The difference in the ratings for each level reflect clear and expected preferred and least preferred levels of each attribute. A financial institution located within a kilometer of a respondent's residence or business area was most preferred. Respondents equally preferred loans that are disbursed within 7 days of application. A customized loan appears to be the most preferred level in lending terms; and receiving 100% of the loan amount was clearly preferred for loan amount attribute. For interest rate attribute, 1 -2% greater than other banks' rate was the least preferred. Again, specializing in agricultural lending received the highest overall preference score for attribute levels in addition to being preferred by respondents to having a fair knowledge or no specific knowledge in agricultural lending.

Result of the conjoint analysis of the main effects of attributes: The Conjoint Analysis of the main effects of attributes on optimal loan design is presented on Table 6. This analysis provide information on each individual's preferences. The results for each respondent are treated as an individual observation, however, since marketing is typically targeted to segments of the overall consumer population, the individual preferences are aggregated such that the coefficients represent a positive or negative change in the participants' preference rating in relation to the comparison level. For

instance, a 0.117 coefficient for I Km distance from financial institution implies that, this affects the rating by 0.117 on a 7 point scale compared to 2 Kms or more. Thus, if a respondent's rating was 4.0, the profile rating will increase to 4.117 if a financial institution was located within a kilometer of a respondent's residence or business environment; other attributes remaining the same. Similarly, for customized loans, it means that the rating will increased by 6.064 assuming the respondent's profile rating was 6.0. That is, if loan repayment is customized to a specific farmer's situation, a farmer's rating increases by this amount in comparison to standard or typical repayments.

For location of a financial institution, the coefficient for within one kilometer was significant positively related to the satisfaction derived from use of lending programe, compared to 2kms or more. The coefficient for Customized loans was significant and positively related to the satisfaction respondents derived from the use of existing credit programmes, in comparison to standard or typical loans. The coefficient for Interest rate of 1-2% less than the competition rate was significant and positively related to satisfaction derived by the respondents, compared to 1-2% greater than competitors' rate or equal to competitors' rate. The coefficient for Specialization in agricultural lending was positive and significant compared to fair knowledge or no knowledge at all. The coefficient for Flexible Repayment terms when loans are customized was positive and significant compared to fixed repayment terms. However, location of a financial institution has the largest coefficient of the seven main effects coefficients, making it the most important attribute. However, a distance of within 1km increases the satisfaction derived by borrowers by 11.7%; customized lending increased satisfaction by 6.4%, 1 – 2% less than competition rate of interest increases satisfaction by 7.8%, specializing in agricultural lending increases satisfaction by 10.8% and the coefficient for flexible repayment plan increase satisfaction by 7.8%. Although not significant in its effect on respondents utility, the coefficient of time to loan of 7 days was negatively related, indicating poor timing of lending.

However, the Interaction effects between type of loan and other attributes shows that The interaction between flexible loan repayment and loan decision time of 7 days or less and specialization in agricultural lending are important variables that ensure satisfaction of borrowers. Table 7.0 shows the Interaction effect. According to this table, the interaction between flexible loan repayment and loan decision time of 7 days or less and specialization in agricultural lending are significant and positively related to respondents' utility. This implies that for with flex loans farmers utility is enhanced with loan decision time 0f 0 – 7 days and specialization in agriculture by financial institutions. is considered, loan decision time of 7 day maximum and by bank will enhance success. On the other hand, the interaction between loan repayment based on fixed repayment terms and 7 days or less loan decision time and 100% of loan amount are negative and statistically significant. According to Table 7, a time-to-loan decision of 7 days or less if loans were flexed has a coefficient of 0.452; indicating that a lender with a loan decision time of 7 days or less would have a 0.452 point higher rating on a scale of 0 to 7. Similarly, a lender with a time-to-loan decision of 7 days or less and offering a repayment schedule based on fixed terms would have -0.221 rating on a 7 point scale. Consequently, if a borrower could obtain a faster loan decision with repayment based on flex repayment plan and fixed payment terms, the results indicate that an average borrower would not go for fixed payment terms.

A 100% of full loan amount and fixed payment terms has a coefficient of -0.192, which indicates that a lender offering a 100% full loan amount but with fixed payment terms would have a -0.192 point rating on a 7 point scale thereby impacting negatively on satisfaction of the respondents. Specialization in agricultural lending for the flex loans has a coefficient of 0.294. This shows that, a lender who specializes in agricultural lending and offers flex loans, would have a 0.294 point higher rating on a 7 point scale, thereby enhancing attitude of the borrowers. It also implies that an average

borrower would not go for a fixed repayment term even when the lender specializes in agricultural lending.

7. **Conclusion:** This study confirms that respondents were more knowledgeable of the lending practices of the Bank of agriculture and less knowledge of the lending practices of commercial banks; analysis of Institutional design and lending practices of formal lenders showed that BOA exhibited the most preferred, compared to microfinance and commercial banks. In fact, the average attitude score for attributes that farmers had positive disposition to was highest (84..17%) for the bank of agriculture and lowest (75.7%) for the commercial banks, whereas the attitude score for attributes that the respondents had negative disposition to was highest (80.57%) for commercial banks, and lowest (66.62%) for the bank of agriculture. Invariably, the respondents exhibited better attitude for the design and lending practices of the Bank of Agriculture and worst attitude towards the design and lending practices of the commercial banks. The results of the conjoint analysis showed that attributes such as location of financial institution, loan disbursement time, loan terms, loan amount, interest rate charged, specialization in agricultural lending and loan repayment schedule were key in an optimal choice of lenders as revealed by mean ratings of 4.66 to 6.78. on the whole, customized lending, flexible repayment plan and specialization of the lenders in agriculture would be invaluable in changing the narrative as regards the non performance of loans in Nigeria.

References

1. *Akpan, U. A., Udoh, E. J. & Akpan, S. B. (2014). Analysis of loan default among agricultural credit guarantee scheme (ACGS) loan beneficiaries in Akwa Ibom State, Nigeria. African Journal of Agricultural Economics and Rural Development. 2(2): 121 - 128.*
2. *Central Bank of Nigeria (CBN) (2004). Annual reports and statistical bulletin, Abuja.*
3. *Central Bank of Nigeria (CBN) statistical bulletin (2015), CBN, Abuja.*
4. *Central Bank of Nigeria Anchor Borrowers' programme (2015) ABP: A financing model for small holder farmers. CBN, Abuja.*
5. *Cross River Geographic and Information Agency - CRGIA (2016). Calabar - Cross River State.*
6. *Cross River State Ministry of Agriculture and Natural Resources Handing Over notes. April, 2015.*
7. *Eyo, E. O. & Asuquo, I. A. (2011). Farmers credit reserve and the success of microfinance institutions in Cross River State, Nigeria. Medwell Agricultural Journal 6(3): 74 -81.*
8. *Eyo, E. O. (2002). The model for linking savings and credit groups with Banks in Akwa Ibom State, Nigeria. GlobalJournal of Pure and Applied Sciences. 8(2): 245-251.*
9. *Etwire, P. M., Dogbe, W. & Nutsugah, S. K. (2013). Institutional credit available to smallholder farmers in the northern region of Ghana. International Journal of Agriscience. Vol. 3(6): 502 - 509.*
10. *Feeny, D., W. Furlong; G. W. Torrance; C. H. Goldsmith; Z. Zhu; S. Depauw; M. Denton and M. Boyle (2002); Multiattribute and Single Attribute Utility Functions for Health Utility Index Mark 3 system. Medical Care, Volume 40, Number 2, Pp113 – 128.*
11. *Green, P.E. & Srinivasan, V. (1990). Conjoint analysis in marketing: New developments with implications for research and practice. JournalofMarketing. 54:3-19*
12. *Gwin, J. W. & Lindgren, J. H. (1986). Reaching the service sensitive retail customer. J. Retail Banking. 8: 36*
13. *Henri-Ukoha, A., Orebiyi, J. S., Obasi, P. C., Oguoma, N. N., Ohajianya, D. O., Ibekwe, U. C. & 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):69-74.*

14. *Ibe, J. C., Okorji, E. C. & Agbo, F. U. (2014). Access to formal credit by farmers cooperative societies in green economy: A study of Enugu State, Nigeria. Proceedings of the 15th Annual conference of Nigerian Association of Agricultural Economist 13th -17th October, 2014.*
15. *Kassim, A. J. (2002). Risk asset management in financial institutions: banks experience. Union digest vol. 7 no.1 & 2 December (Lagos: Union Bank of Nigeria Pic).*
16. *Keeney, R. L;and Raiffa, Howard (1976); Decision making with multiple objectives: Preferences and Value tradeoffs.Wiley, New YorkPpXXVii +569*
17. *Kohansal, M. R. & Mansoori, H. (2009). Factors affecting loan repayment performance of farmers in Khorasan-Razari province of Iran. Conference on international research on food security, natural resource management and Rural development. Tropentag 2009, University of Hamburg, October 6-, 2009.*
18. *Koyenikan, M. J. & Abiola, M. O. (2011). Access to sources of agricultural credit by farmers in Ukwuani local government area of Delta state. Proceedings of the 12th Annual conference of Nigerian Association of Agricultural Economists. Nov. 12th - 16th, 2011.*
19. *Kuye, O. O. (2015). Determinants of loan default and repayment rates by cassava fanners in south-south Nigeria: A case study of Bank of Agriculture and First Bank of Nigeria. European Journal of Agriculture and Forestry Research. Vol. 3 No. 4:4-57.*
20. *Nwosu, F. O., Oguoma, N.N. O., Ben-Chendo, N.G., Henri-Ukoha, A. (2010). The agricultural credit guarantee scheme: It's roles, problems and prospects in Nigeria's quest for agricultural development. Researcher 2(2).*
21. *Ogbonna, S. I. & Osondu, C. K. (2015). Determinants of supply of funds to agricultural sector from formal sources in Nigeria from 1992 to 2012. Greener Journal of Agricultural Sciences. 10(4).*
22. *Olowa, O. W. & Aina, O. S. (2011). Factors affecting the use of commercial bank credit facility among fish farmers in western Nigeria. Proceedings of the 12th annual conference of Nigeria Association of Agricultural Economists. Nov. 12th - 16th, 2011.*
23. *Rahji, M. A. Y. & Fakayode, S. B. (2011). A multinomial logit analysis of agricultural credit rationing by commercial banks in Nigeria. Journal of African Economics and Finance. Issue 3:21-31.*
24. *Sahel (2014). Financing the agricultural sector. Vol.5 June 2014. Retrieved from www.sahelcp.com on March 15th.*
25. *World Bank (2003). Reaching the rural poor: A renewed strategy for rural development. Washington, D. C.*
26. *Umoren, A. A.; E. O. Eyo, and S. B. Akpan; 2018; Investigating the Nexus between Non-performing Loans in Nigerian Banking System and Lending to Micro-Small Medium Enterprises. International journal of contemporary research and review 9(06):20778 – 20791.*