Determinants of Loan Repayment: A Study of Rural Women Fish Traders in Akwa Ibom State, Nigeria

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Authors' contributions

All the authors collaborated to carry out the research. Author BNE was responsible for data collection and analysis. Author KKN designed the questionnaire, typed the manuscript and assisted in sourcing the literature. Authors UES and EAA were responsible for sourcing the relevant literature and proofreading the final version of the manuscript.

Original Research Article

ABSTRACT

The paper estimated the loan repayment index and examined the determinants of loan repayment from a sample of 80 rural women fish traders obtained through a multi-stage sampling in four selected markets in Akwa Ibom State, Nigeria. Data were collected in May, 2013 and analyzed using descriptive and inferential statistics. Findings revealed that informal sources of loan were popular among the fish traders. The result of the probit analysis revealed that educational level, interest rate charged, spouse income, marketing experience, personal income of traders, non fish marketing income and household size were the major determinants of loan repayment in the study area. The reasons for loan default in order of importance were; family commitment, untimely loan disbursement, high interest rate charged as well as unforeseen circumstances. The study further revealed that only 63 percent of the total loan accessed by respondents was repaid. The paper recommended the evolution of a more proactive loan monitoring procedure by lenders such as verification of the loan worthiness and previous loan repayment history of borrowers before granting loans, encouraging the patronage of formal credit sources, pursuing policies that would reduce household sizes as well as the setting - up of loan delinquent court to prosecute defaulters as the way out.

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1. INTRODUCTION

Credit provision has been advocated and used increasingly by government and donor agencies as an important tool for raising the income of the rural farming population [1]. Other studies such as [2,3,4,5,6] have also highlighted the importance of credit in promoting economic development and improving household's income. Unarguably, women are integral part of agricultural production in Nigeria, performing tasks which range from land cultivation, processing of agricultural produce to marketing of processed products, including rearing and marketing of fish and other livestock products. Hence, they contribute a great deal towards the reduction of global hunger and poverty to the barest minimum. Of recent, research on the need to ensure credit availability to rural women has increased tremendously, owing to several reasons. First, more than two third of all farm activities are carried out by women [7]. Secondly, female farmers are poorer than their male counterpart [8]. Also, access to loan by small scale farmers in general has been limited due to frequent discrimination. Lastly, apart from being physically vulnerable to male force [9], most agricultural workers in most farming regions of the world are women [10], carrying out activities like planting to post harvest processing on their immediate and extended family's land [11].

Undoubtedly, the fishery subsector remains one of the key sectors that require prompt attention by financial stakeholders. This arises as a result of the relative importance of fish in promoting economic development, generating foreign exchange and employment opportunities as well as minimizing incident of protein deficiency among rural households. For instance, [12,13] documented that 40 percent of annual protein in the diets of Nigerian in 2003 was attributed to the fishery subsector.

In realization of the enormous potentials of the fishery subsector in addressing rural hunger, successive governments in Nigeria had evolved several financial programmes and established specialized formal financial institutions, all aimed at ensuring credit availability to the fishery and other subsectors. Example of such institutions include but not limited to, establishment of Agricultural Credit Guarantee Scheme Fund (ACGSF), Nigerian Agricultural Cooperative Development Bank (NACB) which later became the Agricultural Cooperative and Rural Development Bank (NACRDB) as well as the creation of several Micro Finance Banks (MFB) across the country.

In spite of these laudable efforts of the government, the fish marketing subsector continued to be plagued by capital inadequacy due to high rate of loan default. There is rampant incidence of diversion of loanable funds to other uses. This informed the continuous demand for collateral by banks and other formal financial institutions. This justifies the increased patronage of informal lenders, whose interest rates are higher with short loan gestation period by our rural women. Studies such as [14,15,16,5,17,18,19,20], documented that small holder loan schemes in Nigeria are characterized by high rate of loan default. Varying factors have been identified by researchers as being liable for the high rate of loan default. For instance, [21,22] attributed it to fund diversion, poor marketing opportunities, low pricing of products, low yield and negative attitude of farmers towards government owned credit system. [23] attributed it to interest rate problem, inadequate loan volume, loan diversion as well as unprofitable interest rate.

Against this backdrop, the study estimated the loan repayment index and examined the various determinants of loan default among rural women fish traders in Akwa Ibom State, Nigeria, with a view to ensuring efficiency in loan repayment.

2. METHODOLOGY

2.1 The Study Area

The study was conducted in Akwa Ibom State which lies between Latitude 4º 31 and 5º 53 North and Longitude 7º 25 and 8º 25 East of the Greenwich Meridian. It has a total population of 3,920,208 and land mass of 6,900 sq km [24] and comprises of 31 Local Government Areas with Uyo as the State capital. The people are predominantly farmers, fishermen and traders, respectively.

2.2 Data Collection and Analysis

Data for the study were primary data collected through a multi- stage sampling procedure from 80 fish traders. The first stage involved selecting four Local Government Areas from the existing thirty one, these were; Uyo, Itu, Mbo and Ikot Abasi. The second stage involved the selection of one market from each of the Local Government Area making a total of four markets. Utaewa market was chosen from Ikot Abasi, Itu market from Itu, Ibaka market from Mbo and Ishiet market in Uruan Local Government Areas respectively. The third stage involved choosing 20 respondents in each market making a total of 80 respondents. A well structured questionnaire was randomly distributed to the fish traders. Data were analyzed using both descriptive and inferential statistics. Apart from mean and simple percentages, the inferential statistics used was the probit model and is implicitly expressed as:

$$Y = b_o + b_i X_i + e_i \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$

Where Y = dependent variable which takes the value of 1 if a fish trader defaults and 0 if he/she did not default.

b_o is the intercept
b_i are the regression coefficient to be estimated
e_i = the error term
X_i = the independent variables (i = 1,2,3 . . ….….. 11).

The explicit form of the model is given as;

$$Y= b_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 \dots\dots\dots \beta_{11} X_{11} + e_i \dots\dots\dots(2)$$

X_1 = Educational level of fish traders (years)
X_2 = Age of respondents (years)
X_3 = Household size (number of persons in a household)
X_4 = Proximity to loan (Kilometer)
X_5 = Interest rate charged on loan (percentage)
X_6 = Personal income of the fish traders (naira)
X_7 = Marital status (Dummy: Married 1, single 0);
X_8 = Spouse income (naira);

X_9 = Loan   amount granted (naira);
X_{10} = marketing experience (years); X_{11} = Non- fish income (naira).

3. FINDINGS AND DISCUSSION

3.1 Socio Economic Characteristics of Respondents

Table 1 presents the socioeconomic characteristics of respondents, the dominant household size was 5-8 persons with mean of 7 persons. This is an indication that a greater part of the borrowed fund might be spent on households' domestic needs rather than loan repayment. This justifies the positive and significant value of household size obtained in the study area. Age wise, a higher percentage of respondents (45.00%) were within the age bracket of 31-40 years, followed by 41 years and above, the least being 0 - 20 years. This is an indication that traders were in their youthful and matured stage. In terms of marketing experience, traders were quite experienced with 56.25 percent having between 6 - 10 years experience. 25.00 percent had between 0 - 5 years experience while 12.50 percent and 6.25 had 11 - 15 and above 15 years of marketing experiences respectively. The high years of experience is likely to increase fish marketing efficiency and income, thereby reducing loan default rate because more money would be left at the disposal of traders to offset and service debts. This justifies the negative significant relationship between experience and loan default as revealed by the study. Also, about 75 percent of traders were literate. 40 percent attended secondary school, 30 percent attended primary school, 5 percent attended post secondary school while 25 percent did not have formal education. This high percentage of literate respondents would impact positively on fish marketing by enhancing efficiency and income, which invariably enhances loan repayment.

Table 1 further revealed that about 56.30 percent of the fish traders were married while 20.00 percent and 23.70 percent were divorcees and widows respectively. The high percentage of married respondents is capable of reducing loan default because extra funds could be sought from spouse income and use to either service or offset loans. [25] documented that women married to spouses with high income status rarely take up loans.

3.2 Sources of Obtaining Loan

Table 2 revealed that majority of respondents (67.5%) obtained loan from informal sources, only 3.75 percent received loan from formal sources like commercial banks while 8.75 percent patronized both formal and informal sources. In terms of the informal sources, 37.5 percent borrowed from friends and relatives, 31.25 percent borrowed from cooperative societies, 12.5 percent and 6.25 percent borrowed from money lenders and *Osusu*. The implication of the high patronage given to informal sources of loan is likely to encourage loan default. This is possible because informal lenders are noted for charging high interest rates. Also, the high patronage of informal sources may be due to the less stringent loan conditions such as non requirement of tangible collateral as well as flexibility in loan procedure that are associated with informal lending. The finding is consistent with [5].

3.3 Reasons for Loan Default

Table 3 presents the reasons for loan default and the revealed that 50 percent of fish traders likened their inability to repay loans to family commitments, 31.25 percent attributed it to high interest rate charged by loan providers, and 12.5 percent attributed it to untimely loan

disbursement while 6.25 percent attributed to unforeseen circumstances such as accident, business losses and theft. High family commitments imply that a sizeable proportion of loanable funds would be diverted to carter for domestic responsibilities. Untimely disbursement of loan would equally encourage diversion. In Oyo State, Nigeria, [5] reported that about 46.7 percent and 17.31 percent of the small scale farmers attributed the inability to repay loan to family commitments and untimely disbursement of loan respectively. Untimely loan disbursement may lead to diversion of loan to other uses other than fish marketing. Unforeseen circumstances such as accident, business losses and theft would reduce the marketing income accruing to fish traders, hence, constraining their loan repayment ability. High interest rate would absorb a greater portion of the fish traders' profit and in most cases capital (during periods of unfavorable businesses) leaving them with little to service and offset their loans.

Table 1. Socio-economic characteristics of respondents

Variable	Frequency	Percentage
Household size		
0-4	23	28.70
5-8	42	52.50
9-12	10	12.50
Above 12	5	6.30
Age of Respondents		
0-20	2	2.50
21-30	14	17.50
31-40	36	45.00
41 and	28	35.00
Marketing Experience		
0-5	20	25.00
6-10	45	56.25
11-15	10	12.50
Above 15	5	6.25
Educational Level		
No Formal Education	20	25.00
Primary School	24	30.00
Secondary School	32	40.00
Post Secondary School	4	5.00
Marital Status		
Married	45	56.30
Divorced	16	20.00
Widow	19	23.70

Source: Computed from Field survey data, 2013.

Table 2. Distribution of respondents based on sources of obtaining loan

Sources of loan	Frequency	Percentage
Formal sources informal sources	3	3.75
Friends and relatives	30	37.5
Cooperatives	25	31.25
Money Lenders	10	12.50
Osusu	5	6.25
All Sources	7	8.75
Total	80	100

Source: Computed from field survey data, 2013.

Table 3. Distribution of fish traders according to reasons for loan default

Causes of loan default	Frequency	Percentage
Family Engagement	40	50.00
Untimely loan disbursement	10	12.50
High interest rate charged	25	31.25
Unforeseen circumstances	5	6.25
Total	80	100

3.4 Repayment Performance of the Fish Traders

Table 4 revealed that of the total sum of seven million, three hundred and fifty five thousand and thirty six naira (₦ 7,355,036) accessed by fish traders in the study area, only four million, four hundred and ninety seven thousand, eight hundred and fifty three naira (₦ 4,497,853) translating to 61.15 percent was repaid. Traders in Ibaka Market had the least repayment index of 0.46, Ibeno and Utaewa had a repayment index of 0.62 while Ishiet traders had the highest repayment index of 0.81. The high repayment index associated with Ishiet can be attributed to good attitude of fish traders towards loan repayment as well as proper monitoring by loan providers, the reverse being the case in Ibaka Market, Ibeno and Utaewa Markets. It is also an indication that loans are given to productive traders. On the average, a repayment index of 0.63 was recorded in the study area, implying that only 63 percent of the total loan accessed by the fish traders was repaid. This finding contradicts [16,14,19] that small holders loan schemes in Nigeria is characterized by high rate of default.

Table 4. Marketers repayment index

Market	Amount accessed	Amount repaid	Repayment index
Ukpenekang	1,795,250	1,121,150	0.62
Ibaka	2,023,120	929,780	0.46
Ishiet	1,311565	1057,230	0.81
Utaewa	2,225,101	1,389,693	0.62
Average	1,838,709	1,124,463.2	0.63

Computed from Field survey data, 2013.

3.5 Probit Result

Table 5 presents the probit result for the determinants of loan default among rural women fish traders. The estimated equation showed goodness of fit and significance at 10 percent level of probability, with autonomous level of loan default of 1.74132. The entire estimated coefficients were significant except age, proximity to loan source, sex, marital status and loan amount given.

From the result, household size had a positive and significant relationship with loan default at the 10 percent level, implying that an increase in household size would increase loan default. This is true since a greater chunk of the loan amount would be channeled towards satisfying domestic obligations rather than the purpose to which the loan was granted. Hence, increase expenditure on family needs would increase the default rate. This finding is in agreement with [5] who reported that 46.20 percent of small scale farmers attributed the inability to repay loan to family commitments. This finding contradicted that of [17] who

reported a negative insignificant relationship. [26] also reported a negative significant relationship.

Women educational level was negative and significant at 1 percent probability level, implying that increase in years of schooling would reduce loan default. Educational fish traders are often in a position to better understand and process marketing and pricing information provided by various sources regarding fish marketing, hence, increasing income which can be used to service debts. This fin ding is in agreement with apriori expectation and supports the findings of [17,26].

The age variable was positive but insignificant meaning that age was not a major determinant of loan default. [17,26,16] all reported a positive significant relationship between age and loan default.

The interest rate charged was positive and significant at 10 percent probability level, implying that the higher the interest rate charged, the higher the loan default rate. This result is in conflict with the findings of [17,5] who reported a negative insignificant relationship between interest rate and loan default.

The coefficient of personal income of traders was negative and significant at 10 percent. The implication of this is that increase in the personal income of the fish traders will decrease loan default, reason being that such traders would have enough liquidity with which to upset loan. This result corroborates [25].

Spouse income was negative and significant at 10 percent. This means that women married to spouse within the high income group would invariably pay off their debts because additional funds could be sourced from the spouse. This finding support [25], who reported that a woman married to a man with high income status, would seldom collect a loan from informal sources.

Loan amount collected was positive and insignificant. This is surprising, given that a huge loan amount can foster investment in marketing research as well as the adoption of of other marketing innovations that can enhance marketer's income. [26,5] reports a positive and significant relationship between loan amount and repayment.

The coefficient for marketing experience was negative and significant thereby conforming to apriori expectation. This implies that loan default reduces with increasing marketing experience. This result corroborates [5], who reported that experienced marketers are knowledgeable in fish marketing and, hence, increase their income and enhances their loan repayment capacity. Similar result was also reported by [27] in Oyo State.

The coefficient for non-fish marketing income was negative and significant at the 1 percent level of significance. This is not surprising because fish traders with additional income from other sources would rarely take on loan or default. This shows the importance of additional income in reducing loan default in the study area. This finding is consistent with [5] in Oyo State, Nigeria.

Table 5. Result of probit model

Variable	Reg. coefficient	Standard error	t-statistics
Constant	-1.741	-1.692	-1.029
Education	-0.140	0.062	-2.258*
Age	0.065	0.0513	1.2670
Household size	0.147	0.061	2.4098*
Proximity to loan source	0.0011	0.051	0.0216
Interest rate charged	0.086	0.023	3.739***
Personal income of traders	-0.063	0.0081	-7.778***
Marital status	0.516	0.428	1.2056
Spouse income	-0.034	0.0071	-4.7887***
loan amount given	7.286E-06	8.60E-06	0.8472
Marketing experience	-0.785	-0.237	-3.3122***
Non fish income	-0.898	-0.516	-1.7403*

Mean dependent variable = 0.317858   *Standard error of regression = 0.441716*
L.R = -44.60973   *Restr. Log Likelihhod = -49.15775*
Probability (LR stat) = 0.018608   *S.D of dependent variable = 0.471163*
*, **, *** = Significant at 1, 5 and 10%   *Source: Output of probit result analysis*

4. CONCLUSION

The study has estimated the loan repayment index and examined the determinants of loan repayment among rural women fish traders in Akwa Ibom State, Nigeria. Findings revealed that majority of the fish traders were literate and patronized informal loan providers. Though the estimated average repayment index was high, a greater proportion of the fish traders attributed their inability to repay loan to family commitments. The educational level of fish traders, interest rate charged by loan providers, spouse income, marketing experience of traders, non marketing income and household size were the major determinants of loan default among the sampled fish traders.

5. RECOMMENDATIONS

The following recommendations evolved from the findings:

Since majority of the fish traders attributed their default to family commitments, effort should be directed towards the reduction of household sizes. Measures such as awareness campaign on various family planning techniques should be encouraged.

Fish traders should be encouraged to patronize formal loan providers. This can be achieved through the provision of information on available cheap long term formal loan sources with less stringent conditions to fish traders.

Lastly, a more proactive loan monitoring procedure should be evolved by lenders such as verification of the loan worthiness and previous loan repayment history of fish traders before granting them loan. If possible, government should set up loan delinquent courts to prosecute defaulters. Such measure would serve as deterrent to potential defaulters.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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