



Assessment of Informal Credit in Mobilizing Funds for Agricultural Production in Ijumu Local Government Area of Kogi State, Nigeria

S. J. Ibitoye^{1*}, D. Omojola¹, V. B. Omojoso¹ and U. M. Shaibu¹

¹Department of Agricultural Economics and Extension, Kogi State University, Anyigba, Nigeria.

Authors' contributions

This work was carried out in collaboration between all authors. Author SJI design the study, wrote the proposal, performed the data analyses and wrote the first and final draft of the manuscript. Authors DO, VBO and UMS managed the literature searches and participated in data collection and processing. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2015/18266

Editor(s):

(1) Jamal Alrusheidat, Assistant and Consultant to Director General for Extension Education Director of Extension Education Department, National Centre for Agricultural Research and Extension (NCARE), Amman, Jordan.

Reviewers:

(1) Mevlüt GÜL, Department of Agricultural Economics, Suleyman Demirel University, Turkey.
(2) Edem Dennis, Soil Science and Land Resources Mgt., University of Uyo, Nigeria.

Complete Peer review History: <http://www.sciencedomain.org/review-history.php?iid=1164&id=25&aid=9669>

Original Research Article

Received 13th April 2015
Accepted 21st May 2015
Published 9th June 2015

ABSTRACT

The study assessed the use of informal credit in mobilizing funds for agricultural production in Ijumu Local Government Area of Kogi State, Nigeria. A multistage random sampling technique was used to select 120 respondents for the study. Descriptive statistics and mean score were used to analyze the data collected. The result showed that 63.3 percent of the sampled respondents were literate with an average farm size of 1.5 hectares. The major source of informal credit available in the area was 'Esusu'. The result also showed that 64.2 percent of the respondents demanded for N 30,000 and below from informal source of credit while 21.3 percent of the available loan was invested on agriculture. The average loan volume per respondent recorded in the study area was N 23,080.00. Amount of credit obtained from informal source of credit, farming experience, educational status, household size and non farm income significantly influenced agricultural production in the study area. High interest rate, low lending level, inadequate number of financial agents and mode of payment were the major constraints militating against the use of informal

*Corresponding author: E-mail: drsjibitoye@yahoo.com;

credit. The study recommended that there should be an increase in the amount of loan per beneficiary to take care of both the production and consumption needs of the farmers.

Keywords: Assessment; production; informal credit; esusu.

1. INTRODUCTION

Credit plays an important role in agricultural development and agricultural modernization. Agricultural credit is extended to farmers to adopt modern farm technologies [1]. It can also improve income by enabling the farming household to undertake additional income generating activities, finance more consumption and have surplus finance available for further investments [2]. Lack of credit affects sustainable development and has relegated the rural economy to an epileptic state [3] due to the fact that the rural people have been characterized as poor, low income earners and agricultural people [4,5]. Therefore access to fund by rural people as indicated by [6] will empower the poor to engage in meaningful income generating activities which is usually agricultural enterprise.

Nweze [7] classified the sources of credit for financing agricultural production into formal and informal sources. Formal or institutional sources according to [8] include government credit institutions, cooperative, commercial banks and Bank of Agriculture (BOA). These institutions are mostly found in the urban and semi urban setting. On the other hand, informal financial sources also known as non institutional sources consists of individuals such as money lenders, personal savings, pawn broking, relatives, self help group, friends, mutual assistance groups, and savings group. An example of credit and saving group is Rotating Saving and Credit Association (ROSCA). This group operates mainly in the rural setting [9]. The Farmer Development Union (FADU) is an informal association programme which focuses on micro-enterprise development.

Esusu is a self help group which has long been in existence in Nigeria as informal or semi-formal associations. Afolabi, [10] reported that informal sources such as *Esusu* and relatives, contributed more to agricultural development than formal sources. Adebayo and Adeola [11] also reported that majority of farmers got their funding of agricultural activities from informal sources such as friends, money lenders, *Esusu* while few were sourced from formal sector. Informal saving groups exist all over the world, their local names

is their only difference. *Esusu* is a fund in which a group of individuals sharing common characteristics make a contribution of a fixed amount of money, handed to one person acting as a treasurer. Each member is able to make use of the money in turn, making an allowance for a member in urgent need of a loan or advance, these are granted without interest payment.

Presently, it has become difficult for many Nigerians to live above the poverty line. Access to credit facilities is very difficult for farmers in Ijumu Local Government Area of Kogi State, Nigeria, due to the inability of formal financial institution to make funds available to reach the farmers because of the nature of collateral security required by these formal institutions for loan disbursement. Most farmers in Ijumu local government cannot save enough from their earnings to enable them take full advantage of the improved techniques and tools which science has made available for profitable farming and so patronizes the informal financial institution for help. However, the volume of lending from these informal credit institutions is very small and may not meet the needs of the farmers.

1.1 Objectives of the Study

The broad objective of the study is assessment of informal credit in mobilizing fund for agricultural production in Ijumu local Government Area of Kogi State, Nigeria. The specific objectives are to:

1. Describe the socio economic characteristics of the farmers;
2. Identify the sources of informal credit in the area;
3. Identify the amount of credit demanded and the amount obtained by farmers in the study area;
4. Assess the use to which farmers put the credit obtained from the informal financial institution
5. Determine the effect of informal credit on farm income;
6. Identify the major constraints affecting the use of informal financial institution in the study area.

2. METHODOLOGY

The study was carried out in Ijumu Local Government Area (LGA) of Kogi State, Nigeria. The headquarters is at Iyara. It is located on Latitudes 7°51' 5°58'N and Longitudes 7°85' 5°96'E. The LGA has a total land area of 1306 km² and a population of 118,593 [12].

A multistage random sampling technique was used to select respondents from the three [3] districts in the study area namely; Ijumu Oke, Ijumu Aarin, and Gbedde. In stage one, two [2] villages were selected from each district making a total of six [6] villages. In stage two, twenty respondents were randomly selected from each village. A total of 120 respondents were used for the study. Descriptive statistics was used to describe the socioeconomic characteristics of the respondents, identify the amount of credit demanded and the amount obtained by farmers, and the use to which farmers put the credit obtained from informal sources.

Ordinary Least Square (OLS) multiple regression analysis was used to determine the relationship between informal credit and agricultural production (farm income). For this study, three functional forms were tested on the primary data collected, but the Cobb-Douglas function was chosen based on the R², value of the estimated coefficients, number of significant variables and conformity with the *a priori* expectation. The Cobb-Douglas production function investigated in this study is expressed as;

$$Y=f(X_s)$$

$$Y=f(X_1, X_2, X_3, X_4, X_5, X_6, e_i)$$

$$\ln Y=b_0+b_1\ln X_1+b_2\ln X_2+b_3\ln X_3+b_4\ln X_4+b_5\ln X_5+b_6\ln X_6+e_i$$

Where:

Y= Farm income (₦),
 β_0 = Intercept (₦),
 β = Marginal effect of X_s on Y,
 X_1 = Amount of informal credit demanded (₦),
 X_2 = Amount of informal credit obtained (₦),
 X_3 = Farming experience (years),
 X_4 = Educational status (years),
 X_5 = Household size (number),
 X_6 = Non-farm income (₦) and e_i = Error term.

It is expected that the value of each of the variables, that is, $b_1 - b_6$ will be positively related to agricultural production (farm income) in the area. By implication, the higher the amount of these variables, the higher the level of agricultural production.

Mean score was used to identify the various constraints encountered by farmers in the use of informal credit institution in the study area. The mean score was calculated after farmers' responses to each problem were obtained using a four point Likert type of scale. The four point Likert type of scale was as specified below:

Opinion	Point
Very serious (VS)	4
Serious (S)	3
Not serious (NS)	2
Not a Constraint (NC)	1

The mean response to each item was calculated using the following formula:

$$\bar{X} = \frac{\sum FX}{N}$$

Where

\bar{X} = mean response,
 \sum = summation,
 F = number of respondents choosing a particular point,
 X = numerical value of the scale point and
 N =total number of respondents to the item.

The mean response to each item was interpreted using the concept of real limits of numbers. The numerical value of the scale points (Response modes) and their respective real limits are as follows:

Not a Constraint (NC) =1 point with real limits of 0.5-1.49
 Not serious (NS) = 2 points with real limits of 1.50-2.49
 Serious (S) = 3 points with real limits of 2.50-3.49
 Very serious (VS) = 4 points with real limits of 3.50-4.49

2.1 Decision Rule

Any mean score above 2.50 was considered as a serious constraint to farmer's use of informal credit in the study area while any mean score below 2.50 will be considered as not a serious constraint.

3. RESULTS AND DISCUSSION

3.1 Socio-economic Characteristics of the Respondents

The distribution of respondents according to their socio-economic characteristics is presented in Table 1. The result shows that 61.7 percent of the respondents were males while 38.3 percent

were females which may be attributed to the intensive labour requirement of agricultural production. The mean age was 47 years indicating an ageing farming population in the study area. Majority (70 percent) of the sampled respondents were married. The result further showed that majority (63.3 percent) of the respondents had formal education while 36.7 percent had no formal education. This finding corroborates [13] who reported a high level of education in rural farming households. The mean household size was 7 persons which is expected to have a multiplier effect on the availability of family labour. The result in Table 1 also showed that majority (80 percent) of the respondents had secondary occupation. Secondary occupation serves as source of extra income and also helps farmers to have steady income especially during the off season. The mean farming experience was 37 years, which implies that most of the farmers are expected to be productive as farming experience is positively related to farmers' efficiency. This finding agrees with [14] who reported that the number of years a farmer had spent in farming business may give an indication of the practical knowledge he has acquired on how to cope with the challenges associated with farm production. The result further showed that the mean farm size in the area was 1.5 hectares; this implies that most of the farmers in the area are operating on a small scale. This agrees with the result of separate studies by [15,16] who reported that the average hectares cultivated per farmer was 1.5 hectares.

3.2 Sources of Informal Credit

The distribution of respondents according to sources of informal credit in the study area is presented in Table 2. The result in Table 2 showed that majority (77.5 percent) of the respondents sourced for funds through 'Esusu', 15 percent of the sampled respondents obtained credit from personal saving, and 7.5 percent of the respondents obtained credit through money lending. This finding agrees with [17] who identified 'Esusu' as the major source of informal credit among rural farmers in Nigeria.

3.3 Amount of Credit Demanded and Amount Obtained

Distribution of respondents according to the amount of credit demanded and the amount obtained is presented in Table 3.

Table 3 showed that majority (64.2 percent) of the respondents demanded for ₦ 10,000 - ₦

30,000 while the remaining 35.8 percent demanded for ₦ 30,000 and above. The result also revealed that the amount of funds received by each respondent from various sources of informal credit in the study area was generally low. Majority (36.7 percent) received less than ₦ 10,000, 26.7 percent received between ₦ 10,001- ₦ 20,000, 17.5 percent received between ₦ 20 001 and ₦ 30 000, while the remaining 19.1 percent received above ₦ 30,000.

3.4 Uses of most Recent Funds

The distribution of respondents according to uses of recent funds obtained from informal source of credit is presented in Table 4.

Table 4 revealed that the total amount received by all the sampled respondents was ₦ 2 769 620.00 which implies that on the average each respondent received ₦ 23 080.00. Out of the total money received, 25.7 percent (₦ 710 900.00) was expended on business expansion, 22.4 percent (₦ 620 590.00) was expended on training of children. Agricultural investment carried 21.3 percent (₦590 830.00), acquisition of assets carried 17.0 percent (₦470 210.00) of the amount received. This was followed by payment of debts which accounted for 10.5 percent (₦ 290 195.00) of the amount received. Ceremonies like weddings, funerals, and other festivals takes 2 percent (₦55 640.00), while 1.1 percent (₦ 31 255.00) of the amount received was used for feeding the family.

3.5 Relationship between Informal Credit and Agricultural Production in Ijumu LGA

The regression analysis on the relationship between informal credit and agricultural production in the study area is presented in Table 5. Ordinary Least Square (OLS) estimation technique was used. Three functional forms such as linear, semi-log, and double-log were fitted into the model.

After some econometric considerations such as number of significant variables, F – ratio and R^2 value, the double-log functional form was selected as the lead equation.

The regression result indicated an R^2 value of 0.69 meaning that 69 percent of the variability in the model was explained while the remaining 31 percent could be attributed to error terms and omitted variables. The F-ratio was 128.76 at 1 percent significance which means that the

Table 1. Distribution of respondents according to socioeconomic characteristics

Socio-economic indicators	Frequency	Percentage	Mean/mode
Age			
18-25	06	5.0	
26-35	26	21.7	
36-45	40	33.3	
46-55	27	22.5	
56-65	17	14.2	
Above 65	04	3.3	
Total	120	100	47 years
Sex			
Male	74	61.7	
Female	46	38.3	
Total	120	100	Male
Marital status			
Single	16	13.3	
Married	84	70.0	
Widowed	11	9.2	
Widower	07	5.8	
Divorced	02	1.7	
Total	120	100	Married
Educational status			
Non-formal education	44	36.7	
Primary education	22	18.3	
Secondary education	39	32.5	
Tertiary education	15	12.5	
Total	120	100	Non-formal
Secondary occupation			
None	24	20.0	
Artisan	10	8.4	
Civil service	43	35.8	Trading/civil service
Trading	43	35.8	
Total	120	100	
Family size			
1-5	51	42.5	
6-8	57	47.5	
9-12	12	10.0	
Total	120	100	7 members
Farming Experience			
1-10	05	4.2	
11-20	43	35.8	
21-30	22	18.3	
Above 30	50	41.7	
Total	120	100	37 years
Farm size (hectare)			
Less than 1	32	26.7	
1-2	50	41.7	
2.1-3	25	20.8	
Above 3	13	10.8	
Total	120	100	1.5 hectares

Source: Field Survey, 2014

independent variables jointly explained the dependent variable.

The result of double log regression shows that amount of informal credit obtained, farming experience, educational status, household size

and non farm income were significant variables that influence agricultural production in the study area. The coefficient of amount obtained from informal source of credit was positively signed and significant at 1 percent. This implies that the higher the amount of money obtained from

informal source of credit the higher the farm income. Farmers tend to increase their scale of production when there is easy access to credit.

Farming experience was significant at 5 percent. By implication, an increase in this variable will increase agricultural production. A long experienced farmer is more likely to have different farming techniques with its multiplier effect on increased farm income.

Table 2. Distribution of respondents according to source of informal credit

Sources of informal credit	Frequency	Percentage
Esusu	93	77.5
Money lending	09	7.5
Personal savings	18	15.0
Total	120	100

Source: Field Survey, 2014

The coefficients of educational status and household size were also positively related to agricultural production and significant at 5 percent. This implies that the higher the number of these variables the higher the level of agricultural production and increased farm income.

The regression result further revealed that non farm income had a positive relationship with

agricultural production in the study area. The relationship was significant at 5 percent. This implies that the earning from non-farm activities is most likely to influence agricultural production in the study area. If farmers are intensively involved in these non-farm activities like petty trading, hair dressing, sewing etc they are likely to save or accumulate more capital than those who are not involved. The accumulated capital can be used in agricultural production which will lead to increased farm income.

3.6 Factors Affecting the Use of Informal Source of Credit

The distribution of respondents according to factors affecting the use of informal source of credit in the study area is presented in Table 6.

Table 6 showed the constraints encountered by respondents in the use of informal source of credit. The result revealed mean score and the corresponding rank of each problem identified by the respondents. From the result, high interest rate ranked first with a mean score of 3.57 and rated as the most serious constraint encountered by the respondents in the use of informal source of credit. This was followed by low level of lending (M = 3.42), inadequate number of financial agents (M=3.21), diversion of funds (M=3.18), poor management (M=2.66) and mode of repayment (M=2.50).

Table 3. Distribution of respondents according to amount of credit demanded and amount obtained

Amount demanded (N)	Frequency	Percentage	Amount obtained (N)	Freq	Percentage
10 000 – 30 000	77	64.2	Less than 10,000	44	36.7
30 001- 60 000	12	10.0	10001-20,000	32	26.7
60 001 – 90 000	2	1.6	20001-30,000	21	17.5
90 001 – 120 000	6	5.0	30001-40,000	6	5.0
120 001 – 150 000	12	10.0	40001-50,000	10	8.3
Above 150 000	11	9.2	Above 50,000	7	5.8
Total	120	100		120	100

Source: Field Survey, 2014

Table 4. Distribution of respondents according to uses of most recent funds

Uses of fund	Frequency*	Percentage	Amount used (N)	Percentage of total amount
Training of children	108	90.0	620 590. 00	22.4
Agricultural investment	74	61.7	590 830. 00	21.3
Business expansion	62	51.7	710 900.00	25.7
Feeding family	08	6.7	31 255.00	1.1
Acquire more assets	77	64.2	470 210.00	17.0
To pay debts	35	29.2	290 195.00	10.5
Ceremonies	49	40.8	55 640.00	2.0
Total			2 769 620	100

Source: Field Survey, 2014; * = multiple response

Table 5. Relationship between informal credit and agricultural production

Variables	Linear	Semi-log	Double-log
Constant	0.451(2.346)	-3.985(-1.216)	6.754(3.060)
Amount demanded (₦)	0.516(2.828)**	0.47(2.518)**	0.110(1.272)
Amount obtained (₦)	0.022(1.160)	0.891(4.899)**	0.484(3.226)**
Farming experience (years)	0.112(1.351)	0.283(2.750)**	0.259(2.452)*
Educational status (years)	0.764(3.239)**	-0.521(-2.546)*	0.254(2.090)*
Household size (numbers)	0.308(2.220)*	-0.649(-1.229)	0.446(2.142)*
Non-farm income (₦)	0.148(1.202)	0.118(0.438)	0.195(1.532)
R ²	0.547	0.414	0.69
F-value	125.112**	135.644**	128.76***

Source: Computed from Field Survey Data, 2014

Note: Figures in parentheses are t-values. * and ** denote 5 and 1 percent level of significance respectively

Table 6. Distribution of respondents according to factors affecting the use of informal credit in the study area

Constraints	VS (4)	S (3)	NS (2)	NC (1)	Total	Total sum of score	Mean score	Rank
High interest rate	67	48	05	0	120	422	3.57	1
Low level of lending	59	53	08	0	120	411	3.42	2
Inadequate number of financial agents	57	36	22	05	120	385	3.21	3
Diversion of funds by financial agents	45	57	13	05	120	382	3.18	4
Poor management	36	25	41	18	120	319	2.66	5
Mode repayment	12	59	25	24	120	299	2.50	6
Lack of proper record keeping	04	53	11	52	120	249	2.10	7
High level of collateral demanded	0	06	28	86	120	160	1.33	8
Rigid borrowing terms	01	03	15	101	120	144	1.20	9
Lack of collateral security	0	01	11	108	120	133	1.11	10
Lack of guarantor	0	0	08	112	120	128	1.07	11

VS = Very Serious, S = Serious, NS = Not Serious, NC = Not a Constraint

Source: Computed from Field Survey, 2014

4. CONCLUSION AND RECOMMENDATIONS

The study assessed informal credit in mobilizing funds for agricultural production in Ijumu local government area of Kogi State, Nigeria. Results of the study revealed that "Esusu" was the major source of informal source of credit available to farmers in the area. Also, farmers in the area have the desire to obtain credit to boost agricultural production. However, their requirements are not always met by the informal financial institutions. Based on the findings, the following recommendations are made:

1. Financial institutions should look into the high interest rate condition of obtaining loans and reduce it to enable farmers have access to loan at low interest rate.
2. Microfinance services should work with the informal credit institutions/sources to serve the interest of the farmers. They should work with farmers as a group rather than individuals.

3. Rural farmers should be granted sufficient loan to cater for both their agricultural production and consumption needs. This will increase the percentage of credit obtained that may be spent by farmers on agricultural investment.
4. Operators of informal credit scheme should adopt effective monitoring and evaluation services in order to discourage diversion of loan to unproductive ventures and non-agricultural use.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Nagarajan G, Meyer RL, Hushak LJ. Demand for agricultural loans: A theoretical and econometric analysis of the Philippine credit market. *Savings and Development*. 1998;22:349-363.

2. Rosenzweig M. Credit market constraint to consumption smoothing and the accumulation of durable production assets in low – income countries. *Journal of Political Economy*. 2001;101(2).
3. Adebosin WG, Adebayo AA, Ashagidigbi WM, Ayanwole AA. Determinants of farmers' demand for micro finance: The case of a rural community in Nigeria. *Journal of Economics and Sustainable Development*. 2013;4(5):24-30.
4. Ekong EE. Rural sociology: An introduction. Uyo: Dove; 2010.
5. Ogujuba KJ and Stiegler N. Challenges of micro finance access in Nigeria: Implications for entrepreneurship development. *Mediterranean Journal of Social Sciences*. 2013;4(6):611-618.
6. Nelson EE, Nelson IE. Micro-credit programmes and poverty alleviation in rural Nigeria: A case of Akwa Ibom State. *International Journal of Economic Development Research and Investment*. 2010;1(2&3):168-180.
7. Nweze NJ. The role of women's traditional savings and credit cooperative in small-farm development. Winrock International Institute for Agricultural Development. 2011;234-253.
8. Nweze NJ. Poverty, Microfinance and Cooperative promotion in Nigeria. *Nigerian Journal of Cooperative Studies*. Nigerian Association for Cooperative Education. 2001;1(1):73-79.
9. Mehrteab HT. Adverse selection and moral hazard in group- based lending: Evidence from Eritrea. Unpublished PhD Thesis, Faculty of Economics, University of Groningen, The Netherlands. Nigeria Economic Empowerment and Development Strategy- NEEDS (2004). Executive Summary on Nigeria Agricultural Policy Support Facility (A-PSF). An Agricultural Policy, Research and Knowledge Program to Support Nigeria's NEEDS.
10. Afolabi JA. Analysis of loan repayment among small scale farmers in Oyo State, Nigeria. *Journal of Social Science*. 2010; 22 (2):115-119
11. Adebayo OO, Adeola RG. Sources and uses of agricultural credit by small scale farmers in Surulere Local Government Area of Oyo State, Nigeria. *Anthropologist*. 2008;10(4):313-314.
12. National Population Commission (NPC) (2006): Nigeria Population Figures. Available:http://www.population.gov.ng/index.php?option=com_content&view=article&id=89
13. Onyenucheya F, Ukoha OO. Loan repayment and credit worthiness of farmers under the Nigerian Agricultural Cooperative Rural Dev. Bank NACRDB. *Agric. Journal*. 2007;2(2):265-270.
14. Nwaru JC, Onyenweaku CE, Nwagbo EC, Nwosu AC. Determinants of Rural Farm Loan Repayment: Implications for Rural Credit Markets Development in Imo State, Nigeria. *Journal of Agriculture and Food Sciences*. 2004;2(1):48–58.
15. Ibitoye SJ, Orebiyi JS, Shaibu UM. Economic effect of inorganic pesticide use on *Fadama II* rice farming in Ibaji Local Government Area, Kogi State, Nigeria. *International Journal of Agriculture and Rural Development*. 2012;15(2):1063–1070.
16. Agwu AE, Anyanwu AC. Socio cultural and environmental constraints in implementing the NALDA Programme in South eastern Nigeria: A case study of Abia and Enugu States. *Journal of Agriculture Technology and Education*. 1996;1(2):68-72.
17. Ibitoye SJ. Survey of the performance of agricultural cooperative societies in Kogi State, Nigeria. *European Scientific Journal*. 2012;8(24):98-114.

© 2015 Ibitoye et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<http://www.sciencedomain.org/review-history.php?iid=1164&id=25&aid=9669>