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Assessment of Credit Utilization Pattern among Farmers in Osun State, Nigeria

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Abstract
The need for empirical evidence to justify the level of credit utilization among Nigerian farmers and to provide future directions for managing credit informed this study. This study reported the pattern of credit utilization and the extent of credit acquisition among farmers in the study area. Primary data were elicited from 252 farmers sampled using structured interview schedule. Quantitative data collected were described using frequency and percentages, and analyzed using inferential statistics. Findings from the study revealed that majority (66.7%) of the farmers were male and Christianity (59.1%) was the prominent religious affiliation with majority (67.4%) within the age of 41 to 60 years with a mean age of 48.4±16.16 years. Credit was mainly utilized for payment for labor, purchase of agrochemicals and purchase of household needs. External orientation had a positive and significant relationship with the pattern of credit utilization ($r=0.202$, $P\leq0.01$). Results of independent t-test indicated a significant difference between the productive and unproductive credit utilization (t-value=5.280, df=250, P=0.000). The study concluded that farmers' priorities of credit utilization were payment of workers, purchase of agrochemicals and purchase of household needs.
Key words: Credit, utilization pattern, farmers, assessment.

Introduction
Agriculture has continuously played a fundamental role in the history of Nigerian economic development through the provision of employment, food security attainment, foreign exchange earnings and reduction in poverty through livelihood support. It employs over 80 percent of the adult working population and earns about 60 percent of the Gross Domestic Product (GDP) of Nigerian economy in what year? (Odetola and Etumnu, 2013). Despite these huge contributions to the Nigerian economy over the years, agricultural sector has glided into a systemic decline. This happens especially, in the past three decades since the sector has been replaced by the petroleum industry as the main earner of government revenue and foreign exchange earnings (Olomola and Nwafor, 2018). This unwarranted decline in the agricultural sector's contribution to government revenue and foreign exchange earnings might not be unconnected with unavailability of credit facilities to farmers for agricultural production. Over the years, agricultural credit has been identified as key input in the development of the agricultural sector. In fact, the lack of adequate, accessible and affordable credit to farmers is among major factors responsible for the systemic decline in the contribution of agriculture to Nigerian economy (Ayeomoni and Aladejana, 2016).

Important characteristics of agricultural sector is the dominance of peasant farmers, smallholding farm families and rural households with low level of farm income, low saving capacity and whose growth and productivity are hindered by limited access to credit facilities (Odoemenem and Obinne,

2010). These categories of farmers contribute significantly to the nation's economy; as though they cultivate few hectares of land individually, their contributive efforts drive the economy of the nation forward. Majority of these subsistence farmers do not use sufficient fertilization, high quality seeds and improved farm implement due to inadequate finances available to them. Therefore, agricultural productivity enhancement depends on the availability of finance and credit facilities available to the farmers in their respective locations (Ahmad, 2007). In order to lift agriculture from its traditional and stagnant nature, it requires the extension of sufficient credit. Credit facilities entail both credit in cash or in kind and subsidies (Ekong, 2010). In modern farming business, provision of agricultural credit is not just enough but efficient use of such credit has become an important factor for an increasing productivity. Even though, credit serves as an incentive to boosting agricultural productivity among Nigerian farmers, unfortunately, it is faced with constraints such as consumption versus investment preference. Despite the importance of credit facilities in agricultural production, its acquisition, management and repayment are militated by myriads of problems. The sustainability of most public agricultural credit schemes in Nigeria have been threatened by high rate of default arising mainly from poor management procedures, poor loan utilization and reluctance to repay loans (Nwafor, Agu, Anigbogu and Umebali, 2018).

The usefulness of any agricultural credit scheme does not only depend on its availability, affordability and accessibility, but also on its proper and efficient allocation and utilization for the intended uses by beneficiaries (Oboh, 2008). The importance of credit facilities to farmers cannot be underestimated as it is fundamental factor of production that is necessary for other factors of production to be put to use. Nevertheless, availability, accessibility and utilization have generated a lot of arguments among farmers in literature. Diversion of credit for consumptive purpose has been an issue of controversy by some scholars. Institutional lenders usually insist that traditionally targeted production credit should be disbursed strictly for income-generating productive assets (such as fertilizer, seed or machinery). Any other use of farm credit for non-farm activities in this context is regarded as loan diversion (Ayeomoni and Aladejana, 2018). In spite of these arguments in favor of the use of farm credit for farm and non-farm; productive and unproductive activities, there is however dearth of empirical evidences to justify and effectively investigate the credit utilization pattern in order to make beneficiaries meet up with repayment schedules. Moreover, the poor performance of most public agricultural credit institutions, the indispensable nature of credit as a factor of production and its utilization among farmers in Osun State suggest the need for a detailed investigation into the credit utilization pattern among farmers. Hence, this study was conducted to describe the socio-economic characteristic of the farmers in the study area, determine the extent of credit acquisition and access the pattern of credit utilization among farmers in Osun State. In line with the above objectives the following hypothesis was tested in the null form:

H_{01}: there is no significant relationship between the socio-economic characteristics of farmers and their pattern of credit utilization,

Methodology

This study was conducted in Osun State, Nigeria. Multi-stage sampling procedure was used to select 252 farmers for this study. At the first stage, 20% of the LGAs in each of the three agricultural zones was sampled to have 2 LGAs in each of the zones. Thus, six (6) LGAs were selected in all. The second stage involved random selection of three communities from each of the LGAs resulting to the selection of 18 communities while the third stage 14 farmers were purposively selected based on the fact that they have either used or are still using credit for intended purposes to give a total of 252 farmers. Quantitative data were collected with pre-tested and validated structured interview schedule. Frequency counts, percentages, mean and standard deviation were used to describe data; chi-square, correlation and t-test were used to make inferences for the hypotheses stated for this study.

Results and Discussion

Socio-economic characteristics of the farmers

Results in Table 1 reveal that about 66.7 per cent of the farmers were male and 59.1 per cent were Christians. Majority (67.4%) were within the age of 41-60 years with a mean age of 48.4±16.16 years. This implies that farmers in the study area are in their active age and innovative stages of life which can assist them to make meaningful impact in agricultural production. This finding is in tandem with Obisesan, Ojewumi, and Obisesan (2019) assertion that majority (61.2%) of farmers utilizing microcredits are within the age of 41-60 in Osun State. The mean household size was 7.04±1.90 with a greater percentage (86.1%) of the farmers having a household size between 6 and 9. This indicates that farmers with large household sizes might benefit from the large size as family labor to adequately utilize the credit facilities available to them. This contradicts Obisesan *et* al. (2019) assertion that majority (79.1%) of farmers utilizing microcredits have household sizes of 4-7 in Osun State. About 61 per cent of the farmers earned between ₦400,000 and ₦700,000 and the mean annual income was ₦536,870±156,961. This annual income of farmers is a function of total farm size, major and minor occupations and the pattern of credit utilization. The mean farm size was 2.36±0.63 hectares and the mean farming experience was 35.92 years. Farming experience is an important factor in determining both the productivity and the production level in farming The table further shows that all (100%) of the farmers traveled out of their residential communities with just few (3.2%) had travelled out of the country.

Extent of Acquisition of Credit in Cash by the Farmers

Results in Table 2 reveal the weighted mean scores and rank of the extent of acquisition of cash credit from various sources: *Esusu* (Rotational Savings and Credit Associations) has a weighted mean score of 1.39 and was ranked first, followed by cash credit from produce buyers with a weighted mean score of 1.28. High rank of both credit sources was attributed to convenience in repayment of loans and zero interest attached to the credit. Cash credit from SEAP and Cooperative Societies were ranked third and fourth with weighted mean scores of 1.10 and 1.07 respectively. Daily savings (*Ajo*) was the fifth with a weighted mean score of 1.07. Cash credit from LAPO (Live Above Poverty Organization), money lenders, friends and microfinance banks indicated low mean scores and were ranked

low in the order. The findings indicate that different sources available to farmers in accessing agricultural credits in cash are at varying degrees. This is in conformity with Obisesan *et al*. (2019) report that the various sources of credits are cooperative banks, monthly contributions, plough back, profit, ministry, banks, grants, bank deposits and savings respectively in Osun State.

Extent of Acquisition of Credit in Kind by the Farmers

Results in Table 3 show that three items indicated high weighted mean scores; agrochemicals (0.48), seedlings (0.39) and farm implements (0.24). These items were ranked first, second and third respectively which implied that agricultural chemicals, seedlings and farm implements were indispensable in agricultural production. Sprayers (0.10), farm boots (0.08), motorcycles (0.05) and grinders (0.02) indicated fourth, fifth, sixth and seventh in the rank while hand-gloves, cars and land had the least mean scores and least in the rank. The findings indicate that different sources available to farmers in accessing agricultural credits in kind are at varying degrees.

Pattern of Utilization of Credit

The pattern of utilization of credit identified was categorized into productive and unproductive basis.

Productive Utilization of Credit

The weighted mean scores (WMS) and extent of utilization were presented in Table 4 as follows; payment of workers (WMS=2.15) and purchase of agrochemicals (WMS=2.06) recorded high extent of utilization (HEU); purchase of new inputs or implements (WMS=1.30) recorded moderate extent of utilization (MEU) while facing crises (WMS=0.83), investment in other businesses (WMS=0.63), purchase of seedlings or suckers (WMS=0.43), purchase of improved seeds (WMS=0.27), purchase of new set of livestock (WMS=0.15), buying more pieces of lands (WMS=0.13), construction of animal houses (WMS=0.08), construction of farm buildings (WMS=0.08), repairing agricultural machinery (WMS=0.03), and training or workshop purposes (WMS=0.00) recorded low extent of utilization (LEU). This implies that the highest preference on credit utilization for productive purposes was placed on the purpose of payment of workers and purchase of agrochemical; since both workers (labor) and agrochemicals can bring about increased efficiency and productivity if both are effectively utilized. Similarly, this indicates that agricultural production is still labor intensive in the study area. This is in tandem with Isitor, Babalola and Obaniyi (2014) assertion that majority (83%) of farmers utilized the loan given to expand their existing farm businesses. Isitor*et.*al, (2014) further stated that the results also showed that all the beneficiaries of agricultural credit utilized the loan given for agricultural purposes in Kwara State, Nigeria. Therefore, with more funding commercialization will be encouraged among the farmers.

Unproductive Utilization of Credit

Results in Table 5 reveal that household needs (WMS=2.06) had high extent of utilization among the unproductive form of credit utilization, payment of children's school fees (WMS=1.73) recorded moderate extent of utilization (MEU) while supplementing household income (WMS=1.00), ceremonial activities (WMS=0.51), other purposes such as vehicle repair and reconstruction of personal buildings (WMS=0.42), payment of old

debts (WMS=0.35), construction of personal houses (WMS=0.31), medical treatment for the family (WMS=0.18) and purchase of cars or motorcycles (WMS=0.16) recorded low extent of utilization (LEU). This finding indicates that household needs were highly essential for survival and the reason for being highly ranked among unproductive utilization of credits by farmers. This finding further indicates that farm household demands led to unproductive utilization of credit due to necessity. This is consistent with Isitor *et* al. (2014) report that increasing household sizes result in unproductive utilization of credit as a result of diversion in meeting members' needs.

Hypothesis Testing

Ho1: Relationship between selected socio-economic variables and pattern of utilization of credit

Results of correlation analysis in Table 7 show that degree of external orientation of the farmers ($r=0.202$; $p \leq 0.01$) had positive and significant relationship with the pattern of utilization of credit. This implies that the more farmers travelled out of their residential communities, the more their exposure and the more they utilized credit for purposes seen by their exposure. This finding contradicts Aladejebi *et.al,* (2018) assertion that household size, farming experience and farm size had positive significant relationship with credit acquisition and utilization, while age had a negative significant relationship with credit acquisition and utilization among household farmers in Ekiti State, Nigeria.

Patterns of Utilization of Credit

Results in Table 7 show the results of the independent-samples T-test that established whether significant difference exists between the productive and unproductive utilization of credit; the results indicate that there was a significant difference between the productive and unproductive utilization of credit at 0.01 level of significance. Productive utilization of credit had a significant higher mean value (8.14 ± 4.13) as compared with the unproductive utilization of credit (6.40 ± 3.69). Thus, the t-value (DF=250) was 5.280 at p=0.000. This implies that there was a significant difference between productive and unproductive utilization of credit in the study area.

Conclusion and Recommendations

The assessment of credit utilization pattern among farmers has revealed that farmers acquired credit from diverse sources and they utilized this credit mainly for activities that are unavoidable to ensure maximum farm productivity and better welfare in their households. Hence, farmers' priorities of credit utilization were payment of workers, purchase of agrochemicals and purchase of household needs. There was a significant difference between the productive and unproductive credit utilization by farmers. As such, farmers should be motivated with credit from sources that charge minimal or no interest rates to ease better repayment of loans by the farmers. It is therefore, recommended that farmers should be encouraged by extension professionals to mobilize and organize themselves into formidable groups so as to derive maximum benefits of group savings. Also, policy makers and government agencies should intensify efforts through sensitization programs for farmers so they can have access to more agricultural credit facilities as rolled out by government over time.

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Table 1: Socio-economic characteristics of respondents

Variables	Frequency	Percentage	Mean	SD
Sex				
Male	168	66.7		
Female	84	33.3		
Religion				
Christianity	149	59.1		
Islam	98	38.9		
Traditional	5	2.0		
Age			48.4	16.16
<20	1	0.4		
20-40	34	13.4		
41-60	170	67.4		
61-80	45	17.9		
>80	2	0.8		
Household size			7.04	1.90
<5	27	10.7		
6-9	189	75.0		
10-13	27	10.7		
14-17	4	1.6		
>18	4	1.6		
Annual income (₦)			536,870	156,961
< 400,000	63	25.0		
400,000 - 700,000	153	60.7		
700,000 - 1,000,000	35	13.9		
1,000,000	1	0.4		
Farm size (Ha)			2.36	0.63
< 2 hectares	121	48.0		
2-4 Hectares	126	50.0		
> 4 hectares	5	2.0		
Farming experience				
< 20 years	38	15.1		
21-40 years	127	50.4		
41-60 years	80	31.7		

61-80 years	7	2.8
External Orientation		
Within their LGA	252	100.0
Outside their LGA	252	100.0
Within Osun State	252	100.0
Outside Osun State	252	100.0
Outside the country	8	3.2

Source: Field survey, 2015.

Table 2: Farmers by the extent of acquisition of cash credit (CC)

Source of CC.	Frequently Freq. (%)	Occasionally Freq. (%)	Rarely Freq.(%)	Never Freq.(%)	WMS	Rank
Esusu	172(68.3)	1(0.4)	1(0.4)	78(31.0)	1.39	1st
Produce buyers	58(23.0)	28(11.1)	17(6.7)	149(59.1)	1.28	2nd
SEAP	32(12.7)	26(10.3)	14(5.6)	180(71.4)	1.10	3rd
Cooperatives	25(9.9)	44(17.5)	24(9.5)	159(63.1)	1.07	4th
Ajo	37(14.7)	1(0.4)	1(0.4)	213(84.5)	1.07	5th
LAPO	1(0.4)	7(2.8)	8(3.2)	236(93.7)	0.41	6th
Money lenders	1(0.4)	0(0.0)	17(6.7)	234(92.9)	0.31	7th
Friends	0(0.0)	11(4.4)	1(0.4)	240(95.2)	0.24	8th
Microfinance banks	0(0.0)	0(0.0)	8(3.2)	244(96.8)	0.18	9th
Farmers' group	0(0.0)	1(0.4)	2(0.8)	249(98.8)	0.15	10th

Source: Field survey, 2015. **WMS** = Weighted Mean Score

Table 3: Farmers by the extent of acquisition of credit in kind (n=252)

Kind credit	Frequently Freq. (%)	OccasionallyFreq. (%)	Rarely Freq. (%)	Never Freq. (%)	WMS	Rank
Agrochemical	14(5.6)	28(1.11)	24 (9.5)	186(73.8)	0.48	1st
Seedlings	2(0.8)	5(2.0)	83(32.5)	162(64.3)	0.39	2nd
Farm	7(2.8)	12(4.8)	16(6.3)	217(86.1)	0.24	3rd

implements						
Sprayers	0(0.0)	0(0.0)	24(9.5)	228(90.5)	0.10	4th
Farm boots	0(0.0)	0(0.0)	21(8.3)	231(91.7)	0.08	5th
Motorcycles	0(0.0)	0(0.0)	13(5.2)	239(94.8)	0.05	6th
Grinders	0(0.0)	0(0.0)	5(2.0)	247(98.0)	0.02	7th
Hand gloves	0(0.0)	0(0.0)	3(1.2)	249(98.8)	0.01	8th
Cars	0(0.0)	0(0.0)	1(0.4)	251(99.6)	0.00	9th
Others (land)	0(0.0)	0(0.0)	1(0.4)	251(99.6)	0.00	9th

Source: Field survey, 2015. **WMS** = Weighted Mean Score

Table 4: Farmers by the extent of productive utilization of credit (n=252)

Productive utilization of credit	Frequently Freq. (%)	Occasionally Freq. (%)	Rarely Freq. (%)	Never Freq. (%)	WMS	Extent
Payment of workers	150(59.5)	42(16.7)	8(3.2)	52(20.6)	2.15	HEU
Purchase of agrochemicals	140(55.6)	46(18.3)	7(2.8)	59(23.4)	2.06	HEU
Purchase of new inputs/ implements	69(27.4)	54(21.4)	13(5.2)	116(46.0)	1.30	MEU
Facing crises	5(2.0)	72(28.6)	51(20.2)	124(49.2)	0.83	LEU
Investment in other businesses	26(10.3)	25(9.9)	30(11.9)	171(67.9)	0.63	LEU
Purchase of seedlings/ suckers	7(2.8)	8(3.2)	71(28.2)	166(65.9)	0.43	LEU
Purchase of improved seeds	11(4.4)	10(4.0)	15(6.0)	216(85.7)	0.27	LEU
Purchase of new set of livestock	5(2.0)	11(4.4)	1(0.4)	235(93.3)	0.15	LEU
Buying more piece of land	1(0.4)	5(2.0)	21(8.3)	225(89.3)	0.13	LEU
Construction of animal house	1(0.4)	1(0.4)	14(5.6)	236(93.7)	0.08	LEU
Construction of farm buildings	0(0.0)	4(1.6)	12(4.8)	236(93.7)	0.08	LEU

Repairing agricultural machinery	0(0.0)	2(0.8)	3(1.2)	247(98.0)	0.03	LEU
Training/ workshop	0(0.0)	0(0.0)	1(0.4)	251(99.6)	0.00	LEU

Source: Field survey, 2015. **WMS** = Weighted Mean Score

Table 5: Farmers by the extent of unproductive utilization of credit (n=252)

Unproductive utilization of credit	Frequently Freq. (%)	Occasionally Freq. (%)	Rarely Freq.(%)	Never Freq.(%)	WMS	Extent
Purchase of household needs	132(52.4)	52(20.6)	18(7.1)	50(19.8)	2.06	HEU
Payment of children school fees	107(42.5)	46(18.3)	24(9.5)	75(29.8)	1.73	MEU
Supplement household income	26(10.3)	76(30.2)	23(9.1)	127(50.4)	1.00	LEU
Ceremonial activities/festivals	3(1.2)	38(15.1)	43(17.1)	168(66.7)	0.51	LEU
Other purposes	0(0.0)	0(0.0)	7(2.8)	245(97.2)	0.42	LEU
Payment of old debts	0(0.0)	26(10.3)	37(14.7)	189(75.0)	0.35	LEU
Construction of personal houses	0(0.0)	0(0.0)	77(30.6)	175(69.4)	0.31	LEU
Medical treatment for the family	0(0.0)	0(0.0)	46(18.3)	206(81.7)	0.18	LEU
Purchase of car/motorcycle	0(0.0)	1(0.4)	38(15.1)	213(84.5)	0.16	LEU

Source: Field survey, 2015.

Table 6: Results of correlation analysis establishing relationship between selected variables and pattern of utilization of credit

Variable	r-value	p-value	Decision
Age	0.018	0.778	NS
Household size	0.039	0.535	NS
Literacy	0.014	0.823	NS
Educational level	0.050	0.434	NS
Years in school	0.030	0.635	NS
Income	-0.101	0.109	NS
Farming experience	0.051	0.423	NS
Farm size	-0.032	0.613	NS
Length of stay	-0.005	0.940	NS
Number of extension visit	0.019	0.764	NS
Cosmopoliteness	0.202**	0.001	S

Association membership	0.050	0.434	NS

Source: Field survey, 2015.
** implies correlation is significant at 0.01 level (2- tailed).

Table 7: Results of t-test establishing difference between the patterns of utilization of credit

Variable	Mean diff.	t-value	Sig. value	Decision
Pattern of credit utilization	1.841	5.280	0.000	S

Source: Field survey, 2015.
Level of significance = 0.01 (P<0.01)