UMARU MUSA YAR'ADUA UNIVERSITY, KATSINA (UMYUK)
Journal of Economics and Development (UJED)

THE IMPACT OF AGRICULTURAL CREDIT ON RURAL POVERTY IN SOME SELECTED LOCAL GOVERNMENT AREAS OF KATSINA STATE, NIGERIA

[1] A. H. Danmusa *, [2] M. D. Muhammad, & [3] B. K. Gambo
[1 - 2] Department of Agricultural Economics Federal University Dutsin-ma, Dutsin-ma, Katsina – Nigeria
[3] Department of Agricultural Economics, Kaduna State University, Kaduna – Nigeria
***Corresponding authors' email**: hamisua398@gmail.com

Journal Info:
ISSN (e): 3026-8028
(p): 3027-0928
Vol: 01
Issue: 02
December 2024

Pages: 173 – 186

ABSTRACT

A study on the impact of agricultural credit in the alleviation of rural poverty in some selected Local Government Areas in Katsina state was undertaken through field surveys, conducted between June and December 2022. The primary data was collected from 100 respondents randomly selected from four purposively selected Local Government Areas. The data generated were subjected to descriptive and inferential statistical t-test. The majority (76%) of the credit-benefiting farmers were males while 24% were females. Most respondents (84%) acquired their land through inheritance. Sixty-six (66%) percent of the respondents benefited from the cash credit while 34% benefited from the credit in kind. The respondents received their credit from the Bank of Agriculture (BOA), Community Bank (CB), KTARDA/UNDP and Katsina State Development Fund (Gidauniya) The average land holding of respondents after benefiting from credit was (6.45 ha) compared to (4.81ha) before the credit program. The average income of the respondents after the credit was N155,945 as compared to N51,824 before benefiting from the credit. The respondent's average savings after benefiting from the credit was N86,000, as compared to N16,000.00 savings before borrowing. The yield of the benefiting farmers after the credit is significantly higher than before the credit. Lending agencies ought to refrain from imposing guarantees that disqualify most potential candidates. Alternative methods, such as solidarity groups and circles consisting of three to eight small business owners who share responsibility for loan repayment, effectively replace traditional guarantees. In the community, an individual's reputation holds greater significance than collateral.

Keywords:
Impact, Credit, Poverty, Katsina State.

1.0 Introduction

According to the National Human Development Report (NHDR, 2021), 70% of the Nigerian population is living below the poverty level. The document indicates that there is an increasing danger to the physical existence of the population (NHDR, 2021). According to the African Rural Policy Analysis Network (ARPAN), one out of three Nigerians is living below the poverty line and the situation is worse in Northern Nigeria where beggars are found in every nook and corner of the urban areas. The poverty level in Katsina State is increasingly disconnected from the actual conditions, even though the state has plenty of land and other resources (Adams, 2018).

Credit provision has been one of the most popular types of state intervention in agricultural sectors, as well as the largest agricultural sector recipient of aid funds from external donors. Despite all these,

farming which is the major occupation of the people in the study area is at a subsistence level and there is a high rate of poverty in the area. Kyiogwum (2020) observed that credit helps society to achieve the expressed goals of increasing the productive capacities of the agricultural sector and assisting the rural poor. It is also an important component of the development strategies for the agricultural sector of low-income countries.Adams (2018) viewed credit as an important instrument in promoting micro-enterprises, self-employment and income-generating activities among the poor. Shortage of agricultural credit was identified as a main obstacle to achieving an adequate increase in production and rural living standards. Skillfully used credit is often the key to modernizing farming. Inability or difficulty in having access to adequate finance was identified as the major problem confronting the rural poor in realizing their full productive capacity in Katsina State (Adam ,2018).

However, the Katsina state government has introduced different policies and programs (Such as the Katsina State Agricultural and Rural Development Project, Community Banks, and so on), all aimed at developing farmers' confidence and courage towards self-sufficiency in their farming business thereby alleviating the suffering of rural poor through provision of credit. With the current emphasis on agricultural credit as a tool for alleviating rural poverty in Katsina State, it is necessary to critically examine and evaluate the system to find out whether the provision of credit to the rural farmers in Katsina State is economically and financially justifiable and impact of credit in alleviating poverty in the study area which formed the basis of this research. The objectives of this study are: to determine the impact of credit on the total output of the respondents, to determine differences in respondent's income before and after benefiting from the credit and to determine differences in the respondent's savings before and after benefiting from Agricultural credit. The information gathered may be useful to the three tiers of government (local, state and federal), non-governmental organizations (NGOs), lending agencies, individuals and international organizations in evaluating policies related to agricultural credit.

2.0 Literature review

According to Agbada (2015), poverty has been and continues to be one of the most prominent and important issues impacting many economies worldwide. While wealthier nations strive to lessen this threat, certain poor nations participate in its hegemony with impunity. Poverty, which has been connected to several well-known obstacles to its eradication, including governmental failures, deprivation, inflation, and illnesses, has been found to be more prevalent in rural areas.

In order to evaluate the effectiveness of microfinance institutions in alleviating poverty within Ogbomoso Metropolis, Oyo State, Nigeria, this study was undertaken. The quality of life of the respondents was analyzed, along with the accessibility of microloans for the expansion of small and medium-sized enterprises. Surveys were administered to clients of the microfinance institutions to evaluate their programs. The primary data was analyzed using Analysis of Variance (ANOVA), Pearson correlation, and chi-square tests. The findings revealed a significant positive correlation ($p < 0.05$ and $r = 0.212$) between the living standards of respondents and the influence of microfinance banks on their households, as noted by Mulubrhan and Nathaniel (2017).

The United nation (UN)2000 Midterm-review on World Summit for Social Development emphasized the necessity of enhancing credit access for small producers, both rural and urban, landless farmers, and individuals with little or no income, particularly focusing on the requirements of women and marginalized or vulnerable populations. Governments were urged to assess and modify national legal, regulatory, and institutional frameworks that hinder

access to credit for those in poverty, especially women, on fair terms; to establish realistic objectives for affordable credit access while providing incentives to improve access and bolster the capabilities of organized credit systems to offer credit and related services to individuals in poverty and at-risk groups.

The research carried out by Bruno (2022) indicates that dependable credit sources enhance the productivity and income of farmers. He additionally claimed that the absence of credit hindered farmers from expanding their landholdings because they lacked the funds necessary to hire labor for land clearing. The report from CBN (2023) highlights that credit accessibility is a key element in development strategies aimed at empowering the poor. Adams (2018) recognized credit as a crucial tool for advancing micro-enterprises, fostering self-employment, and generating income for the impoverished. Baker and Shargau (2014), analyzed the influence of borrowing using a linear programming model and found that reliable credit sources significantly boost output and income. Takes (2018), conducted a pioneering study on the effects of credit on agricultural production in the Okegwu division of what was then Eastern Nigeria. His findings revealed that the lack of agricultural credit prevented farmers from expanding their landholdings due to insufficient funds to hire labor for clearing additional land. He stressed the importance of providing and properly utilizing agricultural credit, as its absence severely hampers productivity. Singh (2017) contributed to the discussion by arguing that supplying credit to farmers is fundamental due to the agricultural sector's vulnerability to various risks and uncertainties. He believed that agricultural assistance should also encompass crop marketing. He argued that creating more credit institutions would not resolve the multitude of agricultural challenges unless they ensured a steady supply of agricultural credit to support small-scale rural farmers, facilitating the expansion of the agricultural sector. Babatunde (2021), attributed the agricultural sector's underdevelopment primarily to the lack of incentives provided by the government to rural farmers, who contribute nearly 80% of the nation's agricultural output. He argued that the government has not done enough in terms of providing soft loans and other resources to farmers and advocated for a more accessible system for rural farmers to obtain loans through the establishment of Agricultural Banks.

Ademisi (2017), examined the experiences derived from supervised agricultural credit programs aimed at small-scale farmers in Chile and suggested that if these programs are supported by a well-coordinated initiative involving public works, education, research, and technical support, they could serve as a foundation for moving away from traditional agriculture in Nigeria. The achievements noted in Chile were linked to comprehensive oversight of investment strategies, the use of a packaged approach that includes both financial and technical backing, the centralization of operations, the implementation of a group lending model, and reliance on relevant historical data. He pointed out that in Nigeria, the shortcomings were due to the disconnect between agricultural credit schemes and inadequate marketing services, a shortage of trained personnel, insufficient expertise, and a lack of provision of social services. Ilebami (2019), conducted a research study analyzing the effects of credit on small-scale farmers in Ondo State. He utilized cross-sectional data comparing borrowers and non-borrowers. The findings revealed that (a) borrowers operated larger farms than non-borrowers and (b) their operating expenses and investments per hectare were significantly greater. Dieter (2021), highlighted the challenges faced by farmers in securing loans. He identified the scarcity of credit facilities from commercial banks as a significant barrier to agricultural development in Nigeria's rural areas, contributing to the ongoing decline in agriculture. Consequently, he advocated for the establishment of agricultural banks that

would provide loans to farmers. Malton (2018), noted that one of the barriers to agricultural advancement in Nigeria is the insufficiency of credit resources. He contended that the lack of credit facilities represents a crucial obstacle for farmers seeking to innovate. According to him, the innovations farmers wish to implement may not be achievable if access to financial resources is limited or absent. He stressed that for the anticipated improvements in the rural sector to occur, advancements in agricultural cultivation techniques, seed quality, storage, and marketing facilities are essential. To facilitate these improvements, he concluded that adequate financial resources through rural credit are necessary, as many rural farmers lack sufficient personal resources to acquire tools, equipment, or sufficient labor for their farms.

Aranjo (2020), examined the productivity of land, labor, and capital by comparing borrowers and non-borrowers among sample farmers in São Paulo, Brazil. His findings included: (i) Credit users were found among the high-income group; (ii) The use of credit by these farmers correlated with better than average economic performance. When analyzing the factors influencing credit demand, he did not find a significant effect from interest rates. However, outstanding debt, the level of new investment, and educational attainment were positively linked to credit demand. The demand for credit decreased as the size of internal funds grew.

David and Meyer (2022), utilized both time series and cross-sectional data to assess the effects of credit in three different countries: Colombia, Brazil, and Ghana. Their study's findings demonstrated inconsistencies in the regression coefficients between borrowers and non-borrowers in Colombia, leading to no conclusive results. For Ghana, time series aggregated data was employed, and the coefficients were attributed to aggregation and specification errors. The Brazilian study utilized cross-sectional data running a Cobb-Douglas production function, revealing that the coefficients for land, farming equipment, operating costs, and seed varieties were significant. From the data across the three countries, a muddled picture regarding the impact of loans emerged. The authors proposed several explanations for this ambiguity in results. First, they contended that short-term credit programs aim to promote the adoption of new seeds or fertilizers. However, there is no justification to expect that the adoption and consequent shift in the production function should depend solely on borrowing. Additionally, they argued that modern varieties frequently incur increased operating costs, given that farmers with varying financial capacities are positioned at different points along the same technological frontier. Conversely, the utilization of medium and long-term credit may align more effectively with changes in production relationships since these can be utilized for internal financing. For instance, mechanization could transform the land-labor dynamic (David and Meyer, 2022).

3.0 Materials and Method

3.1 Study Area

Katsina State is the study area, but because of the time and financial constraints, Dutsin-ma, Dan-musa, Safana, and Kurfi Local government areas were used as the case study for assessing the impact of agricultural credit on poverty alleviation in the state. The selection was based on accessibility. Notable programs designed to facilitate economic growth, development and poverty reduction in the state such as the Bank of Agriculture (BOA), and Community Bank are found in these areas.

Katsina state was created on 23rd September 1987. It is situated in the extreme northern part of the country (Nigeria). It is bordered to the south by Kaduna state, to the north by Niger Republic, to the west by Zamfara state and to the east by Jigawa and Kano states respectively.

The state lies between longitudes 110 151 and 130 251 East and between latitudes 60 and 80 North. It covers an area of about 23,983 square kilometers with a population of about 4,620 million people (NPC, 2022).

Weather in the Katsina state generally varies according to the season of the year. It is generally cold in the morning, hot in the afternoon and cold in the evening. The harmattan period (November-February) is usually cooler, windy and dust lands as a result of northeast trade wind . The major crops grown in the area include millet, sorghum, groundnut, beans, cotton, maize, rice, wheat, cassava, and potato which are mostly arable crops. Livestock reared are cattle, goats, sheep, camels and poultry which are usually kept under extensive systems (KTSG., 2022).

3.2 Sampling Techniques

Four Local Government areas (LGAs) namely, Dan-Musa, Dutsin-ma, Safana and Kurfi were purposively selected because development programs have been implemented in the areas. From each Local Government Area, five villages were purposively selected. The beneficiaries of credit were identified and a sampling frame of 400 was established with the help of credit officers of the L.G.A., Community Banks, NACRDB and KTARDA. That is 100 sampling frames from each Local government area. Using Yamane, T. (1967) formula, a total of hundred (100) respondents were selected. The sample size is chosen to make it possible for every category to be represented thus making the result viable for generalization. The following expression was used to determine the sample size:

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

Where;

n = Sample size determination

N = Total number of Upland rice farmers in all farming communities

e^2 = Confidence level (0.05)2

1 = Constant.

3.3 Data Collection

Four Local Government areas (LGAs) namely, Dan-Musa, Dutsin-ma, Safana and Kurfi were purposively selected because development programs have been implemented in the areas. From each Local Government Area, five villages were purposively selected. The beneficiaries of credit were identified and a sampling frame of 400 was established with the help of credit officers of the L.G.A., Community Banks, NACRDB and KTARDA. That is 100 sampling frames from each Local government area. Using Yamane, T. (1967) formula, a total of hundred (100) respondents were selected. The sample size is chosen to make it possible for every category to be represented thus making the result viable for generalization. The following expression was used to determine the sample size:

The study was conducted using both primary and secondary data. The primary data were collected from the randomly selected rural farmers using questionnaires. The data were collected between June & December 2022 through a field survey conducted by the researcher and assisted by trained enumerators in two-visit interviews using a pre-tested structured questionnaire.

Data were collected on the socio-economic background of the respondents such as educational level, age, marital status, major and minor occupation, number of plots, size of the farm, type of credit, amount collected, use of credit, income before and after benefiting from agricultural credit saving before and after benefiting from credit and so on.

The secondary data were collected from documented materials such as journals, seminar papers, and other relevant literature on agricultural credit to rural poor and

through discussion with credit officers of the community, rural and commercial banks, NGOs and the extension agent in the study area. The secondary data were used to complement the data from the primary source.

3.4 Analytical Tools.

The analytical tools used in this study were descriptive statistics and inferential statistics. Descriptive statistics such as the arithmetic mean, tables and percentages was used to determine the socio-economic characteristic of the respondents while inferential statistics such as t-test was used.

The independent t-test was employed to evaluate the following hypotheses. HO: There are no significant differences in the size of holdings, income, and savings of the respondents before and after they benefited from the credit. H1: There are significant differences in the size of holdings, income, and savings of the respondents before and after they benefited from the credit. The t-test is expressed as:

$$t = \frac{\left(\bar{x}_1 + \bar{x}_2\right)}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}} \quad (2)$$

Where

X_1 = observed mean of 1st sample
X_2 = observed mean of 2nd sample
S_1 = standard deviation of 1st sample
S_2 = standard deviation of 2nd sample
n_1 = sample size of 1st sample
n_2 = sample size of 2nd sample

4.0 Results and Discussion

This section presents and interprets the results of the research conducted. The results are on the educational level, age, occupation, sex of the respondent, sources of credit, type of credits, income and savings of the respondent, size of holding and constraints to agricultural credit faced by the respondents in the study area. In the course of discussions, effort is made to relate findings from this study to previous findings as well as practical implications of the findings.

4.1 Personal Characteristics.

Age, Sex, educational status, marital status, occupation, and mode of land acquisition were some of the personal characteristics that were evaluated. The results of the study show that a greater percentage of Agricultural credit benefiting farmers were aged people. Table 1 shows that none of the respondents was below 26 years of age while 30% were 40 years. The average age of all the respondents was 41 years. This result is in agreement with that of Dieter, (2022) and Adam (2018) who reported the dominance of aged people in farming. The dominance of aged people in farming may be attributed to among other things, the Migration of young people to urban centers in search of white-collar jobs and better lives and to avoid the drudgery associated with farming.

The result shows that the greatest number of the respondents were male which constituted 76 percent with a few females (24 percent) participating in farming activities. This can be seen in Table 1. The lesser participation of females in farming activities can be attributed to the traditional norms and beliefs of the people in the study area, where females are only considered to be housewives taking care of the children and other household activities. As Tilakeratna (2019) noted women are constrained in engaging in production activity by several factors such as time-consuming domestic work or household chores. According to him, women spend long hours collecting water from distant sources, collecting firewood and processing and cooking food leaving little time for income-earning activity.

The results of this study show that 68% of the respondents were married while only 32% of the respondents were single. This was not

surprising considering the age of the respondents (Mean age of 41 years). **As** Ajakaiye and Adeleke **(**2021) noted, married farmers were expected to have more access to family labor through the engagement of their wives and children in farm work. Ademisi, (2017), noted that one of the most important factors conditioning the level of production and productivity in pennant farms is the composition and size of the family.

Table 1 further shows the level of education acquired by the respondents, it shows that 30% have acquired Qur'anic education. This high level of Qur'anic education can be attributed to the fact that the inhabitants of the study area are predominantly Muslims. While 22% of the respondents had acquired Adult Education and 6% had acquired post-secondary education level. This low level of Western education among farmers has been reported by several researchers Aranjo, (2020).

The distribution of the respondents according to their occupation is presented in Table 1which revealed that 50% of the respondents have farming as their major occupation. This is followed by the respondents who have other things such as trading, and middle man as their occupation but are equally involved in farming. However, from the same table, only 7% of the respondents are civil servants. This is not surprising considering the educational level of the respondents.

Table 1: Distribution of the respondents according to their socioeconomic characteristics

Variables	Frequency	Percentage
Age (Years)		
Below 26	0	0
26-30	7	7
31-35	17	17
36-40	30	30
41-45	22	22
46-50	21	21
51-55	3	3
Total	100	100
Sex		
Male	76	76
Female	24	24
Total	100	100
Marital Status		
Married	68	68
Single	32	32
Total	100	100
Level of Education		
No Education	0	0
Qur'anic only	30	30
Adult Education	22	22
Primary	27	27
Secondary	15	15
Post-Secondary	6	6
Total	100	100
Occupation		
Farming only	50	50
Trading/Farming	30	30
Civil Service/Farming	7	7
Middleman/Farming	13	13
Total	100	100

Source: Field survey 2022.

4.2 Resource acquisition.

This section examines the resources acquired and utilized by the farmers in the study area. This includes land, labour capital as well as management techniques broached in agricultural production. The land resource is the basic agricultural input without which farming could not take place. As such greater emphasis has been given by farmers to its acquisition and retention. In the research conducted, the type of ownership of land under cultivation by the respondents was found out. The findings revealed that the respondent usually acquired the land either through inheritance, purchase, Renting gifts or a combination of these. Table 2, revealed that the farmers who acquired their land through inheritance constituted the majority thus up to 43% followed by purchase/inheritance at 36%. However, 88% of the respondents had acquired the lands either wholly or partly by inheritance. The total land area cultivated by the respondents during the study period was 637 hectares. The size of holdings by individual respondents ranged from 1 to 12 hectares, with an average of 6.37 hectares. Fifty-three (53%) percent of the respondents had a land holding of between 4 - 6 hectares as shown in Table 2.

This research also examines the types of labour used by the respondents in all the study areas. The result from Table 2 shows that the majority of the respondents (67%) used both hired and family labour while only 4% used hired labour. This is not surprising going by the report of Bruno (2022), who stated that excessive use of hired labour leads to an increase in the cost of production.

Table 2: Distribution of the respondents according to their method of land Acquisition, Farm size & type of labour.

Variables	Frequency	Percentage
Land Acquisition Method		
Inheritance	43	43
Purchase	6	6
Gift	0	0
Inheritance/purchase	36	36
Purchase/gift	2	2
Gift/inheritance	4	4
Renting	0	0
Renting/inheritance	5	5
Others	4	4
Total	100	100
Farm size (ha)		
Less than 1	0	0
1-3	3	3
4-6	53	53
7-9	38	38
10-12	6	6
Total	100	100
Type of Labour		
Family	29	29
Hired	4	4
Both	67	67
Total	100	100

Source: Field survey 2022.

4.3 Capital inputs, Source and types of credit received.

Table 3 shows the respondent's sources of the inputs. It revealed that they received the inputs from various sources such as their own-source, market, friends and relatives. The highest sources came from the combination of market/own source with 48% while Government source was only 2%. This was confirmed by Ilebami, (2019), who found out that because of sophisticated bureaucracy in obtaining subsidized inputs from government Agencies, farmers usually engage the inputs from the market.

Aranjo (2020), discovered that a reliable source of credit increases output and income significantly. During the research, efforts were made to investigate respondents' sources of credit. It was revealed that the respondents received their credit from different sources such as the Government (KTARDA), community banks, BOA, Nongovernmental organization (NGO) example UNDP, Katsina State Development Fund (Gidauniya) and so on. From Table 3, 47% of respondents obtained the credit from Community Banks, BOA 26% and NGOs 25%. Only 2% obtained their credit from the Government.

However, one surprising thing is that none of the respondents from the study area has ever benefited or received credit from commercial banks. This may not be unconnected with the level of education of the respondents and also the nature of their rural areas as most of the commercial banks are found in the urban areas. This can be seen in Table 3 below.

The respondent benefited from two types of credit namely, cash credit and credit in kind. Cash credit refers to the cash amount of money loaned to the farmers by the lending agencies. While credit in kind refers to credit given to the farmers who are not in cash such as fertilizer, oxen, ploughs work bull and so on. The research further reveals that all the sources of credit gave both credits in cash and in kind. Table 3 shows the distribution of the respondents according to the types of credit they received. It revealed that 66% of the respondents benefited from the cash credit and 34% benefited from the credit in kind.

Table 3: Distribution of the respondents according to Input & Credit source, Types of credit and Interest charged.

Variables	Frequency	Percentage
Input Source(s)		
Government	2	2
Own	13	13
Market	9	9
Friend & Relatives	5	5
Government/Market	6	6

Market/Own Source	48	48
Friend//Own Source	12	12
Others	5	5
Total	100	100
Source of Credit		
Community Bank	47	47
nk of Agriculture	26	26
Governments	2	2
Cooperatives	25	25
Commercial Bank	0	0
Total	100	100
Type of credit		
Credit in cash	66	66
Credit in Kind	34	34
Others	0	0
Total	100	100

Source: Field survey 2022.

3.4 Interest Charged

The interest rate charged on loans is an important factor in the long-term sustainability of a credit program (Tilakaratna, 2019). But for the rural poor the rate should be heavily subsidized. He further reported that the poor are willing to pay the interest rates even at a market level provided the credit will be given to them. The various sources of credit differ on the condition and rate of interest charged and even the repayment period. Table 4 shows that community Banks charged 25% interest for cash credit and 35% for credit in kind and the repayment period was six months. NACRDB charges 8% for both cash and kind credit with a repayment period of one year. Katsina State Development Fund (Gidauniya) a non-governmental Organization charges no interest but the beneficiaries would deposit the sum of N7,000.00 before receiving credit and the repayment period is two years.

Table 4: Repayment period and interest charged by various sources of credit

Source of credit	**TYPES OF CREDIT**			
	CASH		***KIND***	
	Repayment period (months)	**Interest %**	**Repayment period (months)**	**Interest %**
Community Bank	6	25	6	35
Bank of Agriculture	12.	8	12	8
Gidauniya (NGO)	24	0	24	0
KTARDA/UNDP	24	0	24	0

Source: Field Survey 2022.

4.5 Crop production and yield obtained

Research revealed that none of the respondents cultivated or produced only one crop. This can be seen in Table 5 below. However, the most common crops grown by the respondents are maize, millet, sorghum, and cowpea. Dieter (2021), viewed the provision of credit as an effective instrument for raising the production and income of the rural poor.

Table 5: Distribution of Respondent According to the Types of Crops Produced.

Crops	**Frequency**	**Percentage**
COWPEA	48	15.6
Maize	92	29.9
Millet	72	23.4
Sorghum	96	31.2
Total	**308***	**100**

Source: Field Survey 2022.

*Greater than sample size because all the respondents produced more than one crops.

The research further investigated the total yields obtained for each crop by the respondents before and after benefiting from the credit. Table 6 shows that the average yield of crops grown was higher after benefiting from the credit than before. This is not surprising going by the findings of Malton 2018, who found that reliable sources of credit increase output and income significantly. Ilebami (2019) also found borrowers had larger farms than non-borrowers. Dieter (2021), also found that

loan borrowers had bigger hectarage and net farm income than non-borrowers. This also confirmed the result of Kyiogwom (2020) who reported that credit increases the productive capacities of the rural poor.

Table 6: Shows the average yield of crops (Kg/ha) Produced by the respondents before and after benefiting from credit.

Types of crops	Average yield before credit (kg/ha)	Average yield after credit (kg/ha)	Differences (kg/ha)	*T-VALUE*
Maize	4,000	6,900	2,900	7.23**
Millet	400	950	250	6.42**
Sorghum	1600	4,260	2,660	8.43**
Cowpea	400	650	150	6.61**

SOURCE: FIELD SURVEY 2022.

**** SIGNIFICANT AT 5% LEVEL OF SIGNIFICANCE.**

4.6 Size Of Holding, Income and Saving

Bruno (2022) asserted that lack of credit prevented farmers from expanding their land holding because they had no money to hire labour to clear more land. The results obtained from the test shown in Table 7, reveals that, the independent t-test yielded a value of 6.50 while the corresponding critical value at 5% is 1.96 and 2.577 at 1% level of significance respectively. This shows that the calculated t-value is greater than the critical value leading to the conclusion that respondents show significant increase in their land holding after benefiting from the credit.

A poor person is poor because he is poor and may remain poor unless the persons income level increases significantly enough to pull the person in question out of the poverty trap (Ajakaiye 2021). Adams (2018), reported that credit is an important instrument in promoting micro-enterprises, self-employment and income generating activities among the poor.

The result obtained from the application of the independent t-test are summarized and presented in Table 7. The average income of the respondent before benefiting from credit was N51, 824.00 which is less than the income after benefiting from credit with an average of N155, 945.00. The results also revealed that a t-value of 6.95 was obtained, which is highly significant at both 1 and 5 percent levels. This shows that there is a significant difference in respondent income before and after benefiting from the credit. In other words respondents income is significantly higher after benefiting from credit. This also confirmed the findings of Aranjo (2020) and Ajakaiye (2021) .

The study further indicates that the average savings of the respondent before benefiting of credit was N16, 000 while after benefiting from the credit was N86, 000. Table 7, shows the average savings of the respondent and the result of independent T-test. From the said table, the independent T-test yielded a value of 8.82 with correspondent critical value of 1.960 and 2.576 at 5 and 1 percent respectively. This shows that the calculated t-value (8.82) is greater than the tabular or critical t-value at 5% and 1% level of significant. Therefore the respondent savings after credit is significantly higher than the savings before benefiting from credit.

Table 7: Independent t-test results for respondent land size income and savings before and after benefiting from credit.

Variable	Before benefiting	After benefiting	T-value
Land size (ha)	4.81	6.45	6.50**
Income (₦)	51,824	155,945	6.95**
Saving (₦)	16,000	86,000	8.25**

Source:Field survey 2022.

****Significant at five percent level of significant**

4.7 Constraints faced by farmers

Myriad of problems were faced by the respondents which prevented them from exploiting their land holdings (Table 8). The result shows that the overwhelming majority (100%) of the respondents complained of the inadequacy of funds to fully finance their farm operations. The seriousness of this problem can be appreciated when one considers that farming requires higher investment costs in input and is labour intensive. Compounding the matter were problems associated with marketing which resulted in the respondents obtaining low prices for produce.

Table 8: Distribution of respondents according to constraints experienced in obtaining Agricultural credit.

Types of constraints	Frequency	Percentage
Inadequate fund	100	100
Requirement of producing grantors	40	40
Slow service by the lending agencies	80	80
Lengthy and complicated loan application procedure	70	70
Short-repayment period	100	100
Lack of good roads	85	85
In effective marketing system	100	100
Lack of good storage and processing facilities	90	90

Source: Field study. 2022

5.0 Conclusion and Recommendation.

5.1 Conclusion

This study measure the impact of Agricultural credit on output, income, saving and labour utilization of the rural poor. The studies typically use the "before-after" comparison method which is a comparison of borrower activities before and after they received the Agricultural credit. The finding of this study shows that Agricultural credit had significantly increased the productivity of the rural poor in the study area. The finding also revealed that the income and savings of the credit-benefiting farmers have also increased. Another aspect of the findings of the study is that the beneficiaries have higher land holdings after the credit than before. However, as income, savings, and land holdings of the credit-benefiting farmers show significant increases after credit which leads to an increase in their productivity, one can conclude that the standard of living of the respondent has also improved after the credit and hence the poverty of the respondent has also been reduced.

5.2 Recommendations

However, based on the findings of the research, the following suggestions are made:

1. The lending agencies should simplify their application procedures to a minimum level so that the rural poor can effectively benefit. The lending agencies should also avoid requiring guarantees that eliminate most of the potential candidates. Alternative mechanisms such as solidarity groups and circles where three to Eight tiny businesses are mutually responsible for the pay-back of loans, substitute effectively for conventional guarantees. The

individual reputation in the community is more important than collateral.

2. Disbursing credit promptly: Loan seekers may feel disheartened if they must wait for an extended period before obtaining assistance. It is preferable to provide credit in under a month, and preferably within a week. Adequate funding should be allocated to rural farmers at the appropriate time, with repayment options in regular installments.
3. The provision of agricultural credit to the rural poor should also have mechanisms through which to disseminate valuable information on ways to improve the health, legal rights, sanitation and other relevant concerns of the poor.
4. The agricultural credit program should give more attention to the most vulnerable groups in society (women) who live in households that own little or no assets. These will significantly increase women's security, autonomy, self-confidence and status within the households.
5. .The three ties of governments should jointly improve the infrastructure facilities in the rural area, including housing, access roads, rural health centers, schools, water and electricity supply. There is a need for more public investment in these similar areas. Such investment could lead to a higher standard of living in rural areas and hence reduced poverty. They should also come up with a policy for generating rural employment, such as improving small farmers' incomes, expanding small-scale rural industries, adoption of labour intensive production techniques in agricultural and rural industries, improving the quality of rural schools to provide adequate facilities for vocational training and the introduction of specialized adult education schemes of rural areas.
6. The marketing system of the rural areas should be improved. The rural inhabitants should as a matter of urgency organize themselves into effective political posts with capable rural leadership to exert influence on government policy decisions as they affect rural areas. These will reduce the risks of the default.

REFERENCES

Adams, D. W. (2018). "Lending to rural poor through informal groups. A promising financial market innovation." Saving and Development: 2(2):85-94.

Ademisi, A. A. (2017). Small - Holder Agricultural credit in Nigeria, some lessons, on Agricultural credit and farmers in Nigeria, problems and prospect. A paper presented at Seminar on Agricultural financing in Nigeria, organized by C.B.N. April 27 - 30th at University of Ibadan Nigeria.

Agbada, J. K. (2015). Agriculture and poverty reduction: literature review and outstanding issues. International workshop on the role of agriculture in poverty reduction. Centre for strategic economic studies Victoria University, Melbourne. Journal of Developmental Studies, 4(4): 2-18.

Ajakaiye D.O. and V.A. Adeyeye (2021). The nature of poverty in Nigeria Technical report, NISER, Ibadan.

Aranjo, P.F. (2020). An Economic study of factors Affecting the Demand for Agricultural credit at farm level. Journal of Development Studies 15(2) Pp 165 - 176.

Babatunde B. (2021). Social Economic factors Hindering the Development of Effective Agricultural credit Programme in Nigeria; Symposium on Rural Development.

Baker, C. B. and V. K. Shargau (2014). Financing small farm Development in India. Australian Journal of Agricultural Economics Vol. 18 Pp.110 - 118.

Bruno, M. (2022). "Equity and Growth in Developing Countries Old and New Perspectives." Policy Research Working Paper 1563: World Bank Washington DC.

CBN, (2023). Nigerian Agricultural Credit System: Analysis of Operation and Performance. Report of the National Agricultural Credit Study Team. Vol. I. Macroeconomic Analysis and Recommendations.

David, C. C. and R. L. Meyer (2022). "Measuring the farm level impact of Agricultural loan, on borrowers and lenders." In Howell, J. (Ed), Rural Financial Markets and Institutions in Developing Countries. New York: Overseas Department Institute.

Dieter, F. (2021). "The Performance and Future of Mandatory Allocation of Credit to selected Sectors in the Nigerian Economy." CBN Economics and Financial Review 34(3):60-84. Presented at a seminar on agricultural credit and finance in Nigeria: Problems and prospects, Ibadan, April 27-30.

Federal Office of Statistics (2021): Rural economic survey of Nigeria; Consolidated results of crop estimation survey.

Ilebami, I. (2019). The Role of credit Institution and the Agricultural Guarantee Scheme Fund, ARMTI Pp 91.

Katsina State Government (KTG) (2022). Official Website.

Kyiogwom, U. B. (2020). "The Role of Rural Financial Markets in Agricultural Development in Developing Countries: A review." Nigerian Journal of Rural Sociology. 2(1): 127-133.

Malton, P. J. (2018). Income Distribution and Patterns of Expenditure Saving and Credit Among Farmers in the Northern Nigeria Occasional Paper No.96 Ahmadu Bello University, Zaria.

Mulubrhan, Q. B., and Nathaniel, K. C. (2017). Approach of poverty and poverty reduction strategies in Nigeria. Central bank of Nigeria. Economic and Financial Review, 9(4): l17.

Singh, J. (2017). The Role of Credit in Agricultural Development; A case study of Back word Indian District Surendranyer Sar petel institute of Economic and Social Research, Ahmabad, Gurat, India.

Takes, G. A. (2018). Socio Economic factor Affecting Productivity of Agriculture in okigwe Division, Eastern Nigeria preliminary Report Nigeria Institute. For Social and Economic Research, Ibadan Nigeria.

Tilakaratna, S. (2019). "The Methodology of Animation Facilitation." The Animator in Participatory Rural Development. Concept and Practice: ILO; Geneva: 83-97.

U.N.D.P. (2020). Draft Policy guidelines for support to Micro-credit in poverty reduction programme in Nigeria.

UN. ECA (2000) . Experts of the Ministerial Follow-up Committee of the Conference of Ministers responsible for Economic and Social Development and Planning Meeting (2nd: 2000, May 1 - 3 Abuja, Nigeria)

Yamane, T. (1967). Statistic: An introductory, 2nd Edition, New York: Harper & Row.