

Impact Of Cooperative Membership On Credit Utilisation Outcomes Among Arable Crop Farmers In Southwest Nigeria

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Abstract

This study investigated the impact of cooperative membership on credit utilisation outcomes among arable crop farmers in Southwest, Nigeria. The study had the main purpose of ascertaining whether membership of cooperative society has any influence on the credit utilisation outcomes of arable crop farmers in Southwest, Nigeria. The study focused on cooperative and non-cooperative arable crop farmers in Southwest, Nigeria. Data for the study were collected from six hundred and ninety-seven cooperative and non-cooperative arable crop farmers. Multistage and purposive sampling techniques were used to select respondents for the study. Descriptive statistics and inferential statistics of analysis of variance (ANOVA) were used to analyse the data. Results for cooperative membership showed a between-group sum of squares of 4.283 with 1 degree of freedom, while the within-group sum of squares was 297.692 with 479 degrees of freedom. The mean square between groups was 4.283, while the mean square within groups was 0.621. The analysis produced an F-value of 6.892 with a significant value (p-value) of 0.009. For credit utilisation outcomes, the ANOVA result showed a between-group sum of squares of 1.888 with 1 degree of freedom, while the within-group sum of squares was 234.706 with 479 degrees of freedom. The mean square between groups was 1.888, while the mean square within groups was 0.490. The computed F-value was 3.854 with a significant value of 0.05. This implies that cooperative membership significantly influences respondents' experiences, perceptions, or participation in cooperative-related activities. In other words, respondents who belong to cooperative societies differ meaningfully from non-members and the finding further indicates that cooperative members may experience relatively better credit utilisation outcomes due to factors such as improved access to financial support, cooperative monitoring systems, financial guidance, training opportunities, and collective economic activities provided through cooperative

societies. The study concludes that efficient use of credit allows farmers to make quality investment in farm inputs, initiate timely planting, engage effective pest control and adopt the use of latest agricultural practices, which will directly have a positive impact on the output and income of the farmers. It recommends the stimulation of cooperative membership as a planned approach to create more awareness about cooperative societies, in order to promote their economic benefits and success stories.

Keywords: Cooperative Membership, Credit Utilisation Outcomes, Arable Crop, Southwest Nigeria

1. INTRODUCTION

The Nigerian agricultural space is greatly dominated by small-holder farmers who produce a substantial proportion of the nation's food supply, particularly in the Southwest region. These small-holder farmers who are the backbone of the nation's agriculture producing over 90 percent of the available food in the country, have not received the needed financial attention that will enable them meet the food demands of the ever increasing population. There is no doubt, with the increase in human population; there is also the need to maintain food production in a sustainable manner, in order to ensure food security and guarantee food supply in a sustainable manner. Despite the importance of the agricultural sector a lot of small-holder arable crop farmers in the region are still weighed down with challenges in accessing and efficiently utilising credit, which is central to acquiring the needed farm inputs, adopting and use of modern technologies and expanding their farm productivity to a new horizon.

Cooperatives have emerged as significant social institutions that practically enhance farmer members' access to credit by combining resources, providing financial support, and facilitating better credit terms through aggregating people, resources and capital into economic units (Ogiamien et al 2023). Cooperative societies have gained global recognition not just only in improving the living standard of members, but also as an avenue for increasing farm productivity and enhancing the socio-economic status of farmers especially in the rural areas. Cooperatives, especially in the agricultural sector are known to have played an important role globally in providing market access, credit and information to agricultural producers (Aberji et al, 2025).

Cooperative organizations have the clear advantages of identifying economic opportunities for the poor; empowering the disadvantaged to defend their interest and to take part in decision-making process of the cooperative enterprise and also providing security to the poor by allowing them to convert individual risk into collective risks. Through these processes cooperative organizations mediate the access of their members to assets that they utilise to earn a living, thereby empowering their members economically (Akarara and Azebi, 2024).

The importance of credit is not just only in its availability, accessibility and affordability, but more so in its efficient and thorough allocation and utilisation for the intended purpose. This goes to underscore the fact that the bottom line of the challenges facing agricultural sector development in Nigeria is credit constraints which borders on; availability, accessibility and its efficient use (Olumba and Okpani, 2022).

The important role of credit is not just in the development of the economy but as a catalyst for economic transformation. Credit accessed and utilised plays an important role in increasing farm productivity and income; its timely access enables farmers to purchase the required inputs and machinery for carrying out their farming activities. It acts as a catalyst in the modernization and commercialization of agriculture especially in the rural economies. Credit does not only eliminate financial constraints, it provides the farmers with the needed incentives to adopt new technologies that would otherwise have been slowly accepted (Kipkoge et al 2025). Though the importance of credit in the farm productivity of arable crop

farmers cannot be overemphasized; Adesanya and Ajala (2019) observed that effective credit utilisation is a precursor to the development of agriculture and productivity of arable crop farmers, as it will not only enable farmers to move away from the traditional and crude method of agricultural production to the adoption of a more developed and improved technology, but it will ensure productive farm yield and income in a sustainable manner.

Arable crop farmers in the Southwest region of Nigeria are farmers who cultivate crops such as maize, cassava, yam, rice, legumes and vegetables. They represent a critical segment of the agricultural economy of the Southwest region. They contribute in no small measure to food security, rural livelihood and the supply of raw material for the agro-based industries in the region. A lot of this category of farmers lack access to convenient and affordable credit to propel their farming business to the next level, even those that have access to credit are encumbered by the challenges of limited financial literacy, lack of awareness, lack of monitoring and technical support and misdirection of credit from the intended purpose. These challenges will not only retard the production of arable crops in the region, but will exacerbate the dwindling income of the farmers, heighten the poor level of this group of persons in the region and the nation at large.

Membership of cooperative societies have claim to positively influence credit utilisation outcomes through improved crop yield, reduced transaction costs, engender trust among members and financial institutions, expand farm operations, provide technical support services and trainings (Muriqi et al 2021; Osundare et al 2020 and (Ajah 2015). However, the extent to which membership of a cooperative affects credit utilisation of outcome of members and the resultant economic benefits in the study area remains underexplored, especially in comparison among cooperative members and non-cooperative farmers. This study becomes important as it will help to investigate the impact of cooperative membership on the credit utilisation outcomes of cooperative and non-cooperative arable crop farmers in Southwest, Nigeria.

2. REVIEW OF RELATED LITERATURE

Membership of cooperative society plays a critical role in influencing the utilisation of credit for farm productivity. It creates the avenue for farmers to pool resources, share risk, access and utilise credit, markets and collectively have access to inputs needed for their farming business. It also provides arrangements for a credit system that help members to access credit at cheaper rates of interest than other informal sources. Cooperative farmers are known to enjoy better access to formal credit as a result of the collective guarantee system, which is lacking among non-cooperatives who are prone to informal sources of credit. Cooperative farmers tend to utilise credit more efficiently for productive purposes, especially as intended, for the procurement of high quality inputs, use of improved technologies and expanding of farm business. The technical knowledge and extension services received by cooperative farmers help them to utilise credit more efficiently than non-cooperative farmers (Muriqi et al, 2021).

Cooperative membership has greatly acted as a motivation for effect credit utilisation with desirable outcomes, among cooperative farmers. Availability of buyers for their produce, access to better market information, better prices and better service have made cooperative farmers to utilise credit for farm resources as planned for. This is not so for non-cooperative farmers who may divert farm credit to non-farm resources and in most cases for consumption, due to poor market price for produce, lack of sure market among others. The work of Osundare et al, (2020) observed that cooperative membership acts as great determinants of access to agricultural credit access and utilisation, as credit accessed through cooperatives for members are supervised through the provision of technical and extension services on how to manage the same through training on financial management.

Credit utilisation represents the amount of revolving credit a borrower is using as against how much he

could be using at any particular time (Akinwale et al, 2021). Lenders use credit utilisation ratio to help determine how well a borrower is managing his/her current debt. It is an important factor in maintaining a healthy credit score. Even when farmers do gain access to credit, production efficiency remains low, particularly when there is a significant disparity between the amount of credit requested and the amount actually received (Ukwuaba et al 2021). Given the profound advantages of credit to agriculture, it is crucial to study how farmers utilise agricultural credit. As argued by Akinwale et al, (2012) credit is a moving factor that propels other factors of production and makes hidden potentials and underutilized capacities functional thereby acting as a force that drives the engine of growth, by providing several attractive features one of which is that it offer fast relief for complex situations and difficult challenges confronting farmers.

Agricultural credit that is well utilised can be used to increase both farm production and wealth. It should be noted that there are two broad groups of farmers; those that started with their own fund only to discover that internally generated funds cannot keep pace with the required expansion and development and those who need credit to start farming business. Hence in proper credit utilisation, the borrowed fund must increase earnings from the farmer's resources and this increase must exceed the full cost of borrowing to avert loan repayment default (Makeham and Malcolm, 2018).

Javed et al (2022) observed that the utilization of agricultural credit and easy access to credit for agriculture is an important avenue to enhance agricultural output and increase rural livelihoods. The main challenge faced in agricultural productivity is the lack of agricultural credit utilisation among smallholders, which is one of the major hindrances to accepting the most effective and advanced technology in the agricultural sector. Ideally after the harvest season for the upcoming growing period, farmers need money to deal with the lack shortage and not to pay for their latest crop. In addition, advanced agriculture depends on profitable output, quality seedling, fertilizers, and plant protection initiatives. Farmers buy gadgets and agricultural equipment in cash or from sellers on credit, resulting in increased ownership of farm inputs from credit markets. Farmer's livelihood is improved by an effective credit service with the possibility to satisfy prerequisites of utilisation and appropriate inputs (Khan et al (2022).

Abbeam et al (2016) observed that agricultural credit utilization is a challenge among smallholder farmers, due to the diversion of a proportion of borrowed funds from financial institutions to non-farming activities. Anyiro and Oriaku (2011) in their study reported that about 83% of smallholder farmers in Abia State, Nigeria divert their borrowed fund to other activities rather than the purpose of which it was obtained. In a similar vein, Henri-Ukoha et al., (2011) stated that only 12.15% diversion of credit into non-farm activities by smallholder farmers in Abia State of South Eastern, Nigeria. Nimoh et al (2011) observed a contrary situation of no diversion of credit to non-farming activities, on their investigations on the effect of formal credit on the performance of poultry farmers in Ghana.

However, the effect of credit on agricultural productivity is greatly influenced by its utilisation. Farmers often divert agricultural credit and therefore do not get its full impact on their productivity and for that matter on their farm income and livelihood. Akinagbe & Adonu, (2014) posited that farmers underutilise agricultural funds for investment purposes by diverting it to personal consumption. They observed that the tendency for farmers to divert agricultural credit from its intended purposes could be explained by socio-economics, farm specific and institutional factors. Several investigations in Ghana (Kyire et al, 2023 & Abbeam et al, 2016), Pakistan (Riaz et al; 2012 & Chaiya et al, 2023), Ethiopia (Abate, 2018), Kosovo (Muriqi et al, 2021) Nigeria (Danji et al, 2014; Ajah, 2015 & Isitor et al, 2014) and Bangladesh (Sultana et al, 2020) acknowledged the supremacy of cooperative membership in promoting farmer members' use of agricultural credit with proven results when compared to non-cooperative farmers.

3. METHODOLOGY

This study was carried out in the Southwest geo-political Zone of Nigeria; which is made up of six states namely Ekiti, Lagos, Ogun, Ondo, Osun and Oyo. It lies within Latitude 5.45N and 8.15N and Longitude 3E and 6E with a temperature range of 27C and 32C (CIRDDOC, 2016). The researcher focused on half of the States in the Southwest for the study, by selecting three out of the six States in the region, namely Ekiti, Ondo and Osun. These States were thus chosen as representative samples for the region due to their significant role and impact in both cooperative and non-cooperative arable crop farming activities, thereby creating an important perspective in understanding arable crop production by both categories of farmers in the region.

The target population for the study consisted of all selected cooperative and non-cooperative arable crops farmers in the study area. Cooperative farmers had a population of 59,442 and the non-cooperative farmer 36,181. Multi stage and purposive sampling were used to determine the sample size of the cooperative and non-cooperative arable crop farmers in the study area and the sampling technique used was Taro Yamane (1967) for finite population as cited in Anigbogu et al (2014). The actual sample size used for the study was 397 for cooperative farmers and 300 for non-cooperative farmers, bringing the entire population of the study to 697.

Table 3.1: Sampled Size Distribution of Cooperative and Non-Cooperative Farmers for the Study

S/N	Selected States in the Study Area	Sample Size of Cooperative Farmers	Sample Size of Non-Cooperative Farmers	Total Sampled Size
Ekiti State				
Zone 1				
	Emure LGA	50	17	
	Gbonyin LGA	37	13	
	Irepodun/Ifelodun LGA	23	18	
Zone 2				
	Efon LGA	10	15	
	Ijero LGA	28	19	
	Ikole LGA	27	21	
	Total	175	103	278
Ondo State				
Ondo Zone				
	Ile-Oluji/Okeigbo LGA	19	17	
	Odigbo LGA	24	21	

Ondo West LGA	30	25	
Okitipupa Zone			
Ese-Odo LGA	19	12	
Ilaje LGA	18	13	
Okitipupa LGA	23	16	
Total	133	104	237

Osun State

Ilesa Zone

Atakumose West LGA	12	10	
Ilesa East LGA	18	21	
Oriade LGA	10	12	

Ikirun Zone

Boripe LGA	13	17	
Ifelodun LGA	26	17	
Ila LGA	10	16	
Total	89	93	182

Grand Total	397	300	697
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Source: Field Survey, 2026

Data for this study was sourced from both Primary and secondary sources. The primary source of data was through the use of a structured questionnaire to gather data from both cooperative and non-cooperative arable crop farmers in the study area. The secondary sources of information were obtained from published academic journals, unpublished theses, research journal articles, books and official websites. A structured questionnaire was used for the collection of data for this study. It consisted of two parts (A and B), which covered the background of the respondents, and questions that relate to the broad objective of the study. The statistical package for the social science (SPSS 21.0.0) was used to analyse the data, descriptive statistics such as frequency counts, percentage, means and standard deviation were used to describe the demographic variables of the respondents. Inferential statistics of Analysis of Variance (ANOVA) was used to ascertain whether cooperative membership has any significant impact on the credit utilisation outcomes of arable crop farmers in the study area.

4. RESULTS AND DISCUSSION OF FINDINGS

4.1 Demographic Distribution of Respondents

A total of six hundred and ninety-seven (697) copies of questionnaire were administered to respondents, three hundred and ninety-seven (397) for cooperative arable crop farmers and three hundred (300) for

non-cooperative arable crop farmers, of which four hundred and eighty-one (481) were properly completed, returned, and found valid for the study. The returned questionnaire representing 69.01 percent of the total research instrument constituted the sample size used for the analysis in this study.

The demographic distribution of respondents based on gender revealed that 237 respondents, (138 and 99 for cooperative and non-cooperative) representing 49.1%, were male, while 244 respondents (142 and 102 for cooperative and non-cooperative), representing 50.9%, were female. This indicated that both male and female respondents have nearly equal representation in the study, with females slightly dominating the sample population. The mean scores for both groups is 1.51, indicating a balanced gender mix.

The age distribution of respondents showed that 133 (27.7%) were between 18 and 30 years, 113 (23.5%) were between 31 and 40 years, 67 (13.9%) were between 51 and 60 years, while 168 (34.9%) were 61 years and above. This implies that the majority of them were elderly farmers, suggesting that farming activities in the study area are predominantly undertaken by older individuals with substantial life and farming experience.

The educational qualification of respondents revealed that 32 (6.7%) had no formal education, 40 (8.3%) possessed primary education certificates, 141 (29.3%) had secondary school certificates, 212 (44.1%) attained tertiary education, while 56 (11.6%) were graduates of adult education programmes. This indicates that large proportions of them were literate and had acquired formal education, which may positively influence their understanding and utilisation of agricultural credit and modern farming practices.

The marital status distribution showed that 242 (50.3%) were single, 222 (46.2%) were married, 11 (2.3%) were divorced, while 6 (1.2%) were widowed. The result suggests that both single and married respondents with a mean score of 1.55 for both groups actively participated in farming activities within the study area.

The household size of respondents revealed that 25 (5.2%) had between 3 and 5 children, 138 (28.7%) had between 6 and 8 children, another 138 (28.7%) had between 9 and 11 children, 89 (18.5%) had between 12 and 14 children, while 91 (18.9%) had above 14 children. This finding indicates that a significant number of respondents had relatively large household sizes, which may provide family labour for farming activities.

The farm size distribution indicated that 71 respondents (14.8%) cultivated less than 3 hectares of farmland, 113 (23.3%) cultivated between 3 and 6 hectares, 160 (33.3%) cultivated between 11 and 14 hectares, while 68 (14.1%) cultivated 15 hectares and above. This suggests that a considerable proportion of the respondents operated medium-seize to large-scale farming activities.

The distribution of arable crops cultivated showed that 160 (33.3%) cultivated cassava, 158 (32.8%) cultivated maize, 157 (32.6%) cultivated yam and 6 (1.2%) cultivated rice. This indicates that cassava, maize, and yam were the dominant arable crops cultivated in the study area, whereas rice farming was relatively minimal with both groups having mean scores of 2.66.

The farming experience of respondents revealed that 158 (32.8%) had between 3 and 5 years of farming experience, 114 (23.7%) had between 9 and 11 years of experience, 92 (19.1%) had between 12 and 14 years of experience, while 3 (3.0%) had above 14 years of farming experience. This implies that many of the respondents possessed moderate farming experience, which could influence their productivity and effective utilisation of agricultural resources.

The annual farm income distribution revealed that 166 of the respondents, representing (34.5%) earned between ₦1,501,000 and ₦2,000,000 per annum, 158 (32.8%) earned between ₦500,000 and ₦1,000,000, 157 (32.6%) earned between ₦1,001,000 and ₦1,500,000, This finding suggests that a substantial proportion of the respondents generated relatively moderate income from farming activities, indicating the

economic importance of arable crop production in the study area.

The overall insight from the demographic distribution of both groups, indicates that the socio-economic profiles of cooperative and non-cooperative arable crop farmers are quite similar across all the measured variables. This supposes that cooperative status does not significantly differentiate both groups of farmers as it concerns age, education, farm size, farming experience among others.

Table 4.1: Descriptive Statistics of Cooperative Membership on Credit Utilisation Outcomes among Arable Crop Farmers

Descriptive Statistics		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Cooperative membership	Cooperative	280	4.17	.919	.055	4.06	4.28	1	5
	Non-Cooperative	201	3.98	.556	.039	3.90	4.06	3	5
	Total	481	4.09	.793	.036	4.02	4.16	1	5
Credit utilisation outcomes	Cooperative	280	4.11	.787	.047	4.01	4.20	1	5
	Non-Cooperative	201	3.98	.556	.039	3.90	4.06	3	5
	Total	481	4.05	.702	.032	3.99	4.12	1	5

Source: Field Survey, 2026

The descriptive statistics from table 4.1 presents the distribution of responses for cooperative membership and credit utilisation outcomes among cooperative and non-cooperative respondents. The table revealed that a total of 481 respondents participated in the study, comprising 280 cooperative members and 201 non-cooperative respondents.

The mean score for cooperative respondents was 4.17 with a standard deviation of 0.919, while non-cooperative respondents recorded a mean score of 3.98 with a standard deviation of 0.556. The higher mean score among cooperative respondents indicates that individuals who belong to cooperatives demonstrated stronger agreement or more positive responses regarding cooperative membership-related activities and benefits compared to non-cooperative respondents.

The total mean score of 4.09 suggests that, generally, respondents had a favourable perception of cooperative membership. Since the mean value is above the average benchmark on a five-point Likert scale, it implies that respondents largely agreed that cooperative membership positively influences better credit utilisations outcomes for the cooperative farmers, thereby enhancing their economic or financial wellbeing.

The standard deviation for cooperative members (0.919) is relatively higher than that of non-cooperative respondents (0.556), indicating that cooperative members showed slightly greater variability in their responses. This suggests that while many cooperative respondents strongly agreed on the benefits of cooperative membership, their opinions were somewhat more dispersed compared to non-cooperative respondents, whose responses were more closely clustered around the mean.

The standard error values of 0.055 for cooperative respondents and 0.039 for non-cooperative respondents are relatively small, indicating that the sample means are reliable estimates of the population means. Similarly, the total standard error of 0.036 further confirms the precision and stability of the overall mean score.

The 95% confidence interval for cooperative respondents ranged from 4.06 to 4.28, while that of non-cooperative respondents ranged from 3.90 to 4.06. This implies that the researcher is 95% confident that the true population mean lies within these intervals. The confidence interval for cooperative respondents is noticeably higher, further supporting the conclusion that cooperative members demonstrated more positive perceptions on credit utilisation outcomes for cooperative farmer..

The minimum and maximum scores also provide additional insight into the response pattern. Cooperative respondents recorded scores ranging from 1 to 5, indicating that opinions varied from strong disagreement to strong agreement. In contrast, non-cooperative respondents recorded scores between 3 and 5, showing that their responses were generally concentrated around agreement and strong agreement.

The result for credit utilisation outcomes also involved 481 respondents, consisting of 280 cooperative respondents and 201 non-cooperative respondents. The mean score for cooperative respondents was 4.11 with a standard deviation of 0.787, while non-cooperative respondents had a mean score of 3.98 with a standard deviation of 0.556. The higher mean score among cooperative respondents suggests that cooperative members experienced better credit utilisation outcomes compared to non-cooperative respondents.

The overall mean score of 4.05 indicates that respondents generally agreed that the utilisation of credit produced positive outcomes. This suggests that access to and utilisation of credit may have contributed to improvements in respondents' economic activities, productivity, or income generation.

The standard deviation of 0.787 among cooperative respondents indicates moderate variability in responses, whereas the lower standard deviation of 0.556 among non-cooperative respondents reflects greater consistency in their opinions. This means that cooperative respondents expressed more varied experiences regarding credit utilisation outcomes, while non-cooperative respondents' views were relatively more uniform.

The standard error values of 0.047 for cooperative respondents and 0.039 for non-cooperative respondents are relatively low, indicating high reliability of the sample means. The total standard error of 0.032 also demonstrates precision in the estimation of the population mean.

Furthermore, the 95% confidence interval for cooperative respondents ranged from 4.01 to 4.20, while the interval for non-cooperative respondents ranged from 3.90 to 4.06. These intervals indicate that the true population means are expected to fall within these ranges with 95% confidence. The higher interval observed among cooperative respondents further confirms that cooperative members reported more favourable credit utilisation outcomes.

The minimum and maximum values revealed that cooperative respondents recorded scores between 1 and 5, while non-cooperative respondents recorded scores between 3 and 5. This indicates that cooperative

respondents expressed a wider range of experiences, whereas non-cooperative respondents' opinions were relatively more concentrated toward positive responses.

Table: 4. 2 Analysis of Variance (ANOVA) for Cooperative Membership on Credit Utilisation Outcomes among Arable Crop Farmers

		ANOVA				
		Sum of Squares	Df	Mean Square	F	Sig.
Cooperative Membership	Between Groups	4.283	1	4.283	6.892	.009
	Within Groups	297.692	479	.621		
	Total	301.975	480			
Credit Utilisation Outcomes	Between Groups	1.888	1	1.888	3.854	.050
	Within Groups	234.706	479	.490		
	Total	236.595	480			

Source: Field Survey 2026

The Analysis of Variance (ANOVA) as shown in table 4.2 was conducted to determine whether significant differences exist between cooperative and non-cooperative respondents with respect to cooperative membership and credit utilisation outcomes. ANOVA compares the variation between groups with the variation within groups in order to establish whether the observed differences in mean scores are statistically significant.

The ANOVA result for cooperative membership revealed a between-group sum of squares of 4.283 with 1 degree of freedom, while the within-group sum of squares was 297.692 with 479 degrees of freedom. The mean square between groups was 4.283, whereas the mean square within groups was 0.621. The analysis produced an F-value of 6.892 with a significance value (p-value) of 0.009. Since the significance value of 0.009 is less than the 0.05 level of significance. This result indicates that there is a statistically significant difference between cooperative and non-cooperative respondents regarding cooperative membership on credit utilisation outcomes. The finding implies that cooperative membership significantly influences respondents' experiences, perceptions, or participation in cooperative-related activities. In other words,

respondents who belong to cooperative societies differ meaningfully from non-members in terms of the benefits, opportunities, or outcomes associated with cooperative participation. The significant F-value further suggests that the variation observed between the cooperative and non-cooperative groups is greater than the variation within the groups, confirming that group membership contributes significantly to the differences observed among respondents.

For credit utilisation outcomes, the ANOVA result showed a between-group sum of squares of 1.888 with 1 degree of freedom, while the within-group sum of squares was 234.706 with 479 degrees of freedom. The mean square between groups was 1.888, while the mean square within groups was 0.490. The computed F-value was 3.854 with a significance value of 0.05, since the significance value is equal to the conventional alpha level of 0.05, the result is considered marginally statistically significant. This implies that there is a slight but statistically meaningful difference between cooperative and non-cooperative respondents regarding credit utilisation outcomes. The result suggests that cooperative membership may influence how respondents utilise credit facilities and the extent to which they derive benefits from such utilisation. The finding further indicates that cooperative members may experience relatively better credit utilisation outcomes due to factors such as improved access to financial support, cooperative monitoring systems, financial guidance, training opportunities, and collective economic activities provided through cooperative societies.

Generally, the ANOVA results revealed that cooperative membership has a statistically significant influence on respondents' experiences and outcomes. At the 0.05 level of significance, cooperative membership showed a significant effect on cooperative-related outcomes ($p = 0.009$) and a marginally significant effect on credit utilisation outcomes ($p = 0.050$). Therefore, the findings suggest that belonging to a cooperative society contributes positively to respondents' economic and financial experiences, particularly in relation to the utilisation of credit facilities and cooperative participation outcomes for enhanced farm yield.

4.3 Discussion of Findings

The findings revealed that cooperative membership significantly impacts credit utilisation outcomes among arable crop farmers. The ANOVA results (Table 4.2) showed a statistically significant difference between cooperative and non-cooperative arable crop farmers regarding cooperative membership and a marginally significant difference in credit utilisation outcomes at the 0.05 significance level. The result directly support the work of Khan et al. (2022) who investigated whether cooperative support and adoption of improved technologies can help increase agricultural income, findings showed that growers who benefited from cooperative support and technology adoption increased agricultural revenue by 2.78% and 2.35%, respectively, compared to non-membership and non-adopters. Growers who joined cooperatives and used better agricultural technology saw increases in their agricultural income of 5.45% and 4.51%, respectively. These findings, among others, highlight the promising role cooperative assistance and technology adoption could have in increasing farm yield and the income of farmers. The study's conclusions demonstrated that cooperative support, technology adoption, enhanced crop yield and agricultural revenue were strongly connected with education, age, skill, training, and gender. Thereby, lending credence to Muriqi et al (2021) that cooperative farmers have agricultural education compare to non-cooperative farmers.

Anigbogu et al. (2015), examined factors affecting cooperative farmer's access to agricultural credit from microfinance banks in Awka North L.G.A of Anambra State, Nigeria. The study observed a notable discrepancy between the loan amount requested and the amount given to cooperative farmers. The explanatory variable in the model accounts for 96.1% of the variations in the factors influencing

cooperative farmers' access to agricultural credit from microfinance banks. They concluded that cooperative managers needed capacity building training and recommended that the amount of agricultural credit provided by microfinance banks be increased in order to enable the farmers to have adequate farm credit for agricultural production. The findings of Muhammad et al. (2014) showed that credit had a favourable effect on rice output. The elasticity of rice production in relation to agricultural credit was 0.85, meaning that a 10% increase in credit would result in a 0.85% rise in rice production.

Zilli et al. (2015) in their study on the effects of rural credit in Brazilian agriculture concluded that there was a decrease in access to credit agreements and a significant increase in the real and nominal value of credit influencing productivity. They found that the average rural credit effect accounted for a significant portion of the amounts accessed as credit, influencing the positive results observed in soybean yield in the State. As a result, the productivity effect was higher than the contract effect but lower than the average value of the impacts of agricultural loans designed to producers. The study confirms the function of efficient use of credit in agricultural production by demonstrating that an increase in rural credit led to a considerable rise in rural farmers' soybean yield.

Omorokunwa and Obadiaru's (2016) on their study on credit constraint and agricultural output in Nigeria, discovered that agricultural loans had a positive but significant impact on agricultural output, while other factors had both positive and significant effects. The study suggests, among other things, that the government, through its relevant authorities, should create favourable monetary policies that will allow commercial banks to make credit more accessible to the agricultural sector in order to promote its growth, and that sufficient budgetary provisions and timely releases should be made to fund policy initiatives in Nigeria's agricultural sector. The study emphasised how agricultural loans directly affect agricultural productivity.

Iftikhar and Mahmood (2017) in their study on ranking and relationship of agricultural credit with food security discovered that while non-institutional agricultural credit produces surprising outcomes, institutional agricultural credit considerably aids in the fight against food insecurity. This study demonstrates how important credit is to the agricultural sector's financing, guaranteeing food availability and, most importantly, food security and income for farmers. This study is also in support of Haluk et al. (2015) that microcredit is a financial tool that enables low-income individuals, especially in the agricultural sector to launch their own businesses and engage in revenue-generating activities. The study discovered that Microcredit programs help to lower unemployment, poverty, and income inequality, particularly among women, who are too poor to obtain credit from commercial banks, to engage in profitable agricultural and economic ventures.

Waqar et al. (2013), investigated whether agricultural credit affects production efficiency. The study shows that availability of credit gives prompt access to agricultural inputs. This highlights the significance of extension service officials in increasing the value of credit given to the agricultural industry by using it more creatively. The study further noted that even when farmers received credit on time and saw an increase in yield as a result, some of them continued to misallocate credit at the level of farm input use. This aligns with the findings of this study on the importance cooperative membership in credit utilisation for better crop output.

5. SUMMARY AND CONCLUSION

This study examined the impact of cooperative membership on credit utilisation outcomes among arable crop farmers in Southwest, Nigeria. The study used inferential statistics of Analysis of Variance (ANOVA) to ascertain whether a significant relationship exists between the variables of the study. Empirical evidence from the study reveals that there is a positive significant influence of cooperative membership on credit

utilisation outcomes of arable crop farmers (cooperative and non-cooperative farmers) in the study area. (F-value of 6.892, $P = 0.009 < 0.05$). The study concludes that Credit efficiently utilised by arable crop farmers, will inevitably lead to increased crop yields and better farm productivity. Efficient use of credit permits farmers to make quality investment in farm inputs, initiate timely planting, engage effective pest control and adopt the use of latest agricultural practices, which will directly have a positive impact on the output and income of the farmers. On the contrary, misuse of credit, through diversion from farm and agricultural activities can result in crop failure, loans repay defaults, and eventually aggravate the level of poverty and contribute to food insecurity.

Membership of Cooperative society has proven to enhance arable crop farmers' capacity to have access to credit and make use of the same effectively for the purpose for which it was disbursed in an efficient manner. This is so, as cooperative societies usually offer financial literacy and capacity building programmes, coupled with extension services and monitoring mechanisms that support accountable and effective credit use. This helps reduce the risk of credit misuse, which also has the essence of peer support among members.

Recommendation

Cooperative Federation of Nigeria and other levels of cooperative structure should emphasize more on cooperative education; especially through institutions of learning to stimulate the membership of cooperative societies, as a planned approach to create awareness about cooperative societies, in order to publicize the economic benefits and success stories of cooperatives. This could be achieved by implementing training programmes for members and non-members especially on financial management practices; efficient credit use and repayment with the purpose of making the most of the benefit of credit and also, promote partnership between cooperative and formal credit institutions to expand affordable and reliable credit, with the aim of decreasing the dependence on the unconventional sources of credit.

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