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FACTORS INFLUENCING ACCESSIBILITY TO CREDIT FOR SMALL-SCALE FARMERS IN OSUN STATE, NIGERIA

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Abstract

This study investigates the factors influencing accessibility to credit for small-scale farmers in Osun State, Nigeria, with a specific focus on identifying the most critical barriers to credit using Principal Component Analysis (PCA). Findings from the result of PCA revealed that three major components—collateral requirements, loan application procedures, and loan disbursement timing account for 74.66% of the total variance in access to credit. Collateral requirements emerged as the most influential factor, contributing 36.64% to the total variance. This reflects the systemic difficulty faced by small-scale farmers lacking formal assets to meet traditional collateral demands. Loan application procedures (22.95%) were the second most influential factor, highlighting procedural complexities and low literacy as barriers to participation. Timeliness of loan disbursement (15.08%) was also a key determinant, especially given the seasonal nature of agricultural inputs and activities.. The study concludes that targeted reforms in collateral policy, simplification of application processes, and better alignment of disbursement with planting seasons are essential to improving financial inclusion for smallholder farmers. Based on these insights, the study recommends that cooperatives and financial institutions simplify loan processes, develop

Keyword:
Accessibility to Credit, Small-Scale Farmers Collateral Requirements, Loan Application Procedures, and Loan Disbursement Timing

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alternative collateral options such as group guarantees or movable asset pledges, and align credit disbursement with seasonal agricultural cycles. These interventions are expected to enhance small-scale farmers' access to productive credit and improve overall agricultural output in Osun State.

Introduction

Agriculture is a vital part of Nigeria's economy, providing jobs for a large segment of the population and making a significant contribution to the country's GDP (Tadele *et al,.*2022). Small-scale farmers are especially important in ensuring food security and supporting rural communities. However, these farmers often encounter obstacles like limited access to credit, poor infrastructure, and a lack of technological support, which can negatively impact their productivity and income levels (Osabohien *et al*., 2018). Access to credit is essential for small-scale farmers who want to invest in quality inputs, adopt modern farming practices, and grow their businesses. Agricultural cooperatives have become key players in helping these farmers gain access to credit. By pooling their resources and using their collective bargaining power, cooperatives can negotiate better terms with financial institutions and offer their members more favorable credit options (Adeosun *et al.,* 2022).

In Nigeria, agricultural cooperatives have played a significant role in improving the productivity of smallholder farmers. For example, a study by Adeosun *et al.,* (2022) found that cassava farmers who had access to cooperative credit facilities showed greater production efficiency than those who did not. This highlights the potential of cooperatives to close the credit gap and enhance agricultural output. Despite the benefits, the effectiveness of credit administration by agricultural cooperatives varies across states in Nigeria. Factors such as governance structures, financial management practices, and member participation influence the efficiency of credit distribution and utilization within cooperatives (Komolafe *et al.,* 2024). Understanding these dynamics is essential to optimize the impact of cooperatives on small-scale farming.

Osun State, situated in southwestern Nigeria, offers a fascinating backdrop for exploring the role of agricultural cooperatives. The state features a rich agricultural landscape, with major crops like cocoa, maize, and cassava. However, small-scale farmers in this area often face hurdles when it comes to accessing and utilizing credit, which makes it essential to evaluate how well cooperative credit administration works in this context. Recent research has shown a strong link between being a member of a cooperative and improved agricultural productivity. For instance, a study focusing on tomato farmers in Nigeria found that those who were part of cooperatives enjoyed significantly higher yields than their non-member counterparts, largely due to better access to credit and essential inputs

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(ScienceDirect, 2023). These findings indicate that well-run cooperatives can truly act as drivers of agricultural progress. This study therefore examined the factors influencing accessibility to credit for small-scale farmers in Osun State, Nigeria.

Statement of the Problem

Small-scale farmers in Osun State, Nigeria, play a crucial role in ensuring food security and sustaining rural livelihoods, yet they remain severely constrained by limited access to affordable credit (NBS, 2023). Despite the existence of agricultural cooperatives designed to facilitate credit access, many farmers still struggle to secure timely and adequate loans for crop production (Anthony & Tijani, 2022). Traditional financial institutions often perceive smallholder farmers as high-risk borrowers due to irregular income streams and lack of collateral, forcing many to resort to informal lenders who charge exorbitant interest rates (Falola *et al*., 2022). While agricultural cooperatives theoretically offer a viable alternative, inefficiencies in credit administration—such as bureaucratic delays, insufficient loan sizes, and poor repayment structures—hinder their effectiveness (Woleteyes, 2021).

The gap between cooperative credit availability and actual farm productivity raises critical concerns. Studies indicate that while cooperative membership has increased in Osun State, the expected improvements in crop yields have not been consistently realized (Akinola *et al.,* 2023). Some farmers report that loans are either inaccessible due to stringent conditions or mismanaged due to weak oversight mechanisms (Ojo & Baiyegunhi, 2020). Additionally, gender disparities persist, with female farmers facing greater difficulties in obtaining loans compared to their male counterparts (**Oke, 2023**). Furthermore, loan diversion—where funds meant for agricultural inputs are used for other household needs—remains a significant challenge, undermining the intended productivity gains (Fasina *et al.,* 2022). This then make it imperative for an indepth study on the factors influencing accessibility to credit for small-scale farmers in Osun State, Nigeria.

Objective of the Study

The aim of the study is to examine the factors influencing accessibility to credit for small-scale farmers in Osun State, Nigeria.

Literature review

Review of Previous Studies

Recent studies have underscored the essential role of credit administration in making agricultural cooperatives effective. Adegboye & Oladipo (2022) looked into loan appraisal,

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disbursement, and recovery processes in Nigerian agricultural cooperatives and discovered that cooperatives with well-structured credit administration systems experienced significantly lower default rates and higher satisfaction among members. Their research pointed out that transparency and active member involvement in loan decisions led to better repayment performance and ensured ongoing credit availability.

In a similar vein, Musa *et al*,. (2023) explored the challenges of credit administration and found that insufficient monitoring and weak recovery strategies are major factors behind poor loan performance in cooperatives throughout rural Nigeria. These insights highlight just how crucial effective credit administration is for the sustainability of cooperatives and, ultimately, for boosting farmer productivity.

Access to credit is a major hurdle for small-scale farmers, making it tough for them to invest in better inputs and technologies. A study by Onyeagocha & Nwankwo (2023) looked into how social capital affects credit access in Nigerian agricultural cooperatives. They found that cooperatives that build strong social networks and trust can ease collateral requirements, which in turn boosts credit uptake among marginalized farmers. In a focused study in Osun State, Ibrahim & Lawal (2024) discovered that farmers who had timely access to cooperative credit were more inclined to adopt improved seeds and fertilizers, leading to better crop yields. The research highlighted a clear positive link between access to credit and agricultural productivity, reinforcing the idea that how effectively credit is managed plays a crucial role in farmer success.

When it comes to the impact of credit utilization on crop production, using the credit wisely is essential for enhancing yields. A panel study of smallholder farmers in southwestern Nigeria by Oladipo *et al.,* (2023) revealed that those who channeled cooperative credit into better inputs and farming technology saw a 20-30% boost in crop output compared to those who didn't. This finding supports the Agricultural Finance Nexus which connects the use of credit with greater input adoption and productivity (Sotonye,2020). Akinola & Adeoye (2023) pointed out that credit utilization does more than just boost input purchases; it also paves the way for better farm management practices, like timely planting and effective pest control, which ultimately leads to improved crop performance.

Ogunleye & Adeyemi (2023) explored principal-agent issues within Nigerian cooperatives and discovered that those with strong monitoring and incentive systems enjoyed better loan repayment rates and increased member productivity. This research underscored the importance of good governance and effective credit administration in enhancing both the sustainability of cooperatives and the livelihoods of farmers.

Additionally, research conducted by Chukwuemeka & Eze (2023) in southeastern Nigeria revealed that cooperatives with solid credit management frameworks played a significant

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role in boosting food security and income stability for small-scale farmers. The study findings indicate that the advantages of effective credit administration reach far beyond just production, contributing to overall rural development.

Methodology

The study employed descriptive survey research design. The targeted population of this research study consisted of consists of small scale farmers in all thirty (30) local government in Osun State of Nigeria as at 2024. A purposive sampling technique was adopted to select 244 farmers owners across the 30 local government in Osun State are sampled for the purpose of the study. Both descriptive statistics such table frequency and percentage count, while principal component analysis (PCA) was used to examine the factors influencing accessibility to credit for small-scale farmers in Osun State, Nigeria.

Results and Discussion

Factors influencing the accessibility of credit for small-scale farmers, in Osun State

The result in Table 1 reveals a nearly even split in opinion regarding the appropriateness of collateral requirements for small-scale farmers. About 40.5% of respondents agree that the collateral conditions are suitable, while 40.8% disagree. This indicates that collateral remains a major bottleneck in accessing credit for a substantial number of farmers. Many small-scale farmers often lack formal land titles, valuable fixed assets, or the documentation required by cooperatives and financial institutions. The inability to meet collateral conditions leads to exclusion from credit services, despite their active involvement in productive farming. Loan application speed was positively perceived, with a total of 64.2% of respondents agreeing that the process is completed promptly. This shows that many agricultural cooperatives or credit providers in Osun State are making progress in streamlining their procedures. Quick processing is particularly important in agriculture, where farmers operate on seasonal calendars. However, the presence of 17.1% undecided responses suggests some inconsistency in experience among farmers, possibly due to differences in location, cooperative efficiency, or individual literacy levels. Improving consistency and transparency in loan processing can enhance farmers' trust in the system.

Only 47.2% of respondents agreed that credit is disbursed at the beginning of the farming season, while 42% disagreed. This is a significant finding, as the timing of credit disbursement greatly influences its usefulness in agricultural production. If loans are delayed until after planting or during mid-season, farmers may be unable to purchase seeds, fertilizers, or hire labor when needed. This weakens the impact of credit on crop yield. The finding highlights the need for cooperatives and financial institutions to

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synchronize their disbursement schedules with the agricultural calendar to improve the effectiveness of credit interventions. A majority (59.2%) of respondents agreed that credit assessment procedures are time-efficient. This suggests a positive perception of the loan vetting and approval process, which could encourage more farmers to seek financial support. However, about 36.1% expressed dissatisfaction, indicating room for improvement. Delays in assessment may stem from manual processing, excessive bureaucracy, or insufficient staffing. Simplifying assessment frameworks and leveraging digital technology could shorten turnaround time and improve credit accessibility for small-scale farmers, particularly during critical farming periods.

Regarding interest rates, only 46.8% of respondents found the terms affordable, while 31.4% disagreed and 21.8% were undecided. This indicates that while some farmers find the interest rates manageable, a significant portion struggle with the cost of borrowing. For small-scale farmers with uncertain income and weather-dependent yields, high interest rates increase the risk of default and discourage credit uptake. This finding calls for the adoption of farmer-friendly lending models, such as interest subsidies, cooperative-backed loans, or soft loans tied to production capacity and seasonal repayment options. The majority (62.6%) of farmers agreed that repayment schedules are realistic and accommodate their cash flow. This is a commendable achievement for cooperatives and credit providers in the state. Flexible repayment terms—especially those aligned with harvest cycles—are crucial in agriculture, where income is seasonal. Such positive feedback suggests that repayment terms are improving and that farmers are more willing to engage with credit institutions that understand their financial realities. Nevertheless, about 21.8% still disagreed, pointing to the need for more personalized or sector-specific repayment models.

More than half (53.6%) of respondents agreed that documentation and paperwork for credit applications are simple, while 24.6% disagreed. While this is generally positive, the relatively high level of disagreement and undecided responses (21.8%) suggests that many farmers still encounter difficulties with paperwork—likely due to low literacy levels, lack of digital access, or unfamiliarity with formal procedures. Simplifying forms, offering application support through cooperative officers, and using local languages or visual aids may improve participation, especially among older or less-educated farmers. While there is some level of satisfaction among small-scale farmers regarding loan processing speed, repayment schedules, and credit assessment, significant barriers remain. Collateral requirements, disbursement timing, interest affordability, and documentation challenges still affect the accessibility of credit. These findings emphasize the importance of a farmer-centric credit system—one that reduces structural bottlenecks and adapts to the financial realities of rural farmers. Agricultural cooperatives, in collaboration with government and

microfinance institutions, must implement reforms that reduce risk for farmers while enhancing credit uptake and crop production outcomes.

Table 1: Factors influencing the accessibility of credit for small-scale farmers, in Osun State

	Variables	SE (%)	E (%)	UD (%)	I (%)	SI (%)
1.	Collateral requirements are appropriate for small-scale farmers.	120(37.4)	10 (3.1)	60(18.7)	50 (15.6)	81 (25.2)
2.	Loan application processes are completed promptly.	130 (40.5)	76(23.7)	55 (17.1)	20 (6.2)	40 (12.5)
3.	Financial institutions disburse loans at the beginning of the farming season.	100 (33.2)	45(14.0)	41 (12.1)	81 (25.2)	54 (16.8)
4.	Credit assessment procedures are time-efficient.	140 (43.6)	50(15.6)	15 (4.7)	70 (21.8)	46 (14.3)
5.	Interest rates make the credit adequate and affordable	126 (39.3)	24 (7.5)	70 (21.8)	46 (14.3)	55 (17.1)
6.	Repayment schedules are realistic and accommodate farmers' cash flow	81 (25.2)	120(37.4)	50 (15.6)	10 (3.1)	60 (18.7)
7.	Documentation and paperwork for credit application are simple.	126 (39.3)	46(14.3)	70 (21.8)	24 (7.5)	55 (17.1)

Source: Researchers computation using SPSS version 22, 2025

Principal Component Analysis on the factors influencing the accessibility of credit for small-scale farmers, in Osun State

The hypothesis tested in Table 2a and 2b that "There are no significant differences in the factors influencing the accessibility of credit for small-scale farmers in Osun State." This hypothesis seeks to determine whether all the considered factors (such as collateral requirements, loan application processes, disbursement timing, etc.) equally affect farmers' access to credit, or whether some stand out more significantly than others. To test this hypothesis, Principal Component Analysis (PCA) was used, a statistical method designed to reduce data complexity by identifying the most influential underlying components among a set of correlated variables. The Kaiser-Meyer-Olkin (KMO) value was found to be 0.626, which falls into the category of mediocre to moderate adequacy according to Kaiser's standard classification. A KMO value above 0.6 is generally considered acceptable for PCA. This suggests that the sample size and intercorrelations

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among the variables are adequate to conduct PCA. It confirms that the patterns in the data are strong enough to extract meaningful components, and that factor analysis is appropriate for this dataset.

The Bartlett's Test of Sphericity resulted in a chi-square value of 972.801, with 21 degrees of freedom and a significance level of 0.000. This highly significant p-value ($p < 0.05$) allows us to reject the null hypothesis that the correlation matrix is an identity matrix. In other words, it confirms that the observed variables are sufficiently correlated and suitable for data reduction using PCA. This provides statistical justification to proceed with extracting the most important factors affecting credit access. The PCA output reveals that the first three components have eigenvalues greater than 1, which indicates that they are statistically significant under Kaiser's criterion. The first component (collateral requirements) accounts for 36.64% of the total variance, showing it is the most dominant factor influencing credit accessibility. The second component (loan application processes) explains 22.95%, while the third (loan disbursement timing) contributes 15.08%. Together, these three components explain 74.66% of the total variance in the data, suggesting that they carry the most weight in determining farmers' access to credit.

The first and most influential component is collateral requirements, with an eigenvalue of 2.565, accounting for 36.64% of total variance. This underscores how crucial collateral provisions are in determining whether small-scale farmers can access credit. Many rural farmers lack formal documentation for land or property, making it difficult to meet traditional collateral demands. Therefore, rethinking collateral policy or adopting alternative security measures (like group guarantees) could significantly improve access.

The second component, loan application procedures, has an eigenvalue of 1.606, explaining 22.95% of the variance. This indicates that procedural simplicity or complexity significantly influences farmers' willingness and ability to apply for credit. Farmers with lower literacy levels or limited experience dealing with paperwork are especially vulnerable to exclusion due to complex processes. Therefore, simplifying application steps and using local languages or intermediaries could remove a major barrier.

The third significant component, loan disbursement timing, explains 15.08% of the variance. This finding aligns with the reality of seasonal farming cycles, where inputs must be acquired at specific times. If credit is delayed until after planting season, it loses its productive value. Hence, cooperatives and financial institutions must ensure that credit disbursement aligns with agricultural calendars to maximize productivity and minimize fund diversion. The remaining variables—credit assessment procedures, interest rates, repayment schedules, and documentation requirements—all have eigenvalues below 1, meaning they did not load significantly as independent components in the analysis. While these may still influence credit access to some extent, they are statistically less critical

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compared to the top three. This doesn't render them unimportant, but it suggests they should be considered as supporting rather than primary factors in credit design and reform.

Based on the KMO measure, Bartlett's test, and the total variance explained by the top three components, the study finds significant differences in how each factor affects access to credit. Therefore, the null hypothesis (H_{01}) is rejected. This means that cooperatives and policymakers should not treat all access factors equally but should focus more on improving collateral frameworks, simplifying loan procedures, and ensuring timely disbursement. This targeted approach is likely to yield better credit participation and enhance the productivity of small-scale farmers in Osun State.

Table 2a: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.626
Bartlett's Test of Sphericity	Approx. Chi-Square	972.801
	df	21
	Sig.	.000

Source: Researchers computation using SPSS version 22, 2025

Table 2b: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Collateral requirements	2.565	36.638	36.638	2.565	36.638	36.638
Loan application processes	1.606	22.947	59.584	1.606	22.947	59.584
Disburse loans	1.055	15.078	74.662	1.055	15.078	74.662
Credit assessment procedures	.905	12.936	87.598			
Interest rates	.439	6.274	93.872			
Repayment schedules	.287	4.096	97.968			
Documentation and paperwork	.142	2.032	100.000			

Extraction Method: Principal Component Analysis.

Source: Researchers computation using SPSS version 22, 2025

Conclusion

Based on the findings of the study, it was concluded that there is a significant differences in the factors influencing the accessibility of credit for small-scale farmers, in Osun Stat**e.**

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Also, small-scale farmers fficiently leverage cooperative credit for their crop production activities. Furthermore, credit administration by agricultural cooperatives has significant effect on the crop production results of small-scale farmers.

Recommendations

Based on the findings and conclusions drawn from the study the following recommendations are proposed:

1. Cooperatives and financial institutions should streamline loan application processes by reducing paperwork, eliminating bureaucratic delays, and offering mobile/digital platforms for credit applications to improve access.
2. Develop alternative collateral frameworks such as group guarantees or movable asset pledging, especially for farmers without land titles or formal property ownership.

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