



## EVALUATION OF THE FINANCIAL INCLUSION OF AGRICULTURAL COOPERATIVE SOCIETIES IN YEWA DIVISION, OF OGUN-STATE, NIGERIA

<sup>1</sup>Jimoh, B. O., <sup>2</sup>Nwankwo, F. O. and <sup>3</sup>Diya, K. E.

<sup>1</sup>Department of Cooperative Economics and Management,  
Federal Polytechnic Ekowe, Bayelsa State, Nigeria.

<sup>2</sup>Department of Cooperative Economics and Management,  
Nnamdi Azikwe University, Awka, Anambra State, Nigeria

<sup>3</sup>Department of Cooperative Economics and Management,  
Lagos State Cooperative College, Agege Lagos State, Nigeria

**Corresponding Author's Email:** shittuadesina81@gmail.com, **GSM:** 08068618319

### ABSTRACT

The research examined the evaluation of financial Inclusion of agricultural cooperative societies in Yewa Division of Ogun-State, Nigeria. Multi-stage sampling technique was utilized to select one hundred and fifty (150) cooperative societies for the study. Accessibility to credit from financial institutions (formal and informal) showed that the respondents were financially excluded from all the financial markets as the majority never had access to both financial institutions and non-institutions. The results revealed agricultural cooperative societies in the study area were financially insecure as they lacked external financing and their self- financing ability was pitiable due to a poor savings attitude. The determining factors of formal credit access by the farmers' cooperatives were distance to credit source, government interference, repayment period on credit, collateral, financial literacy, transaction costs, among others. Various identified constraints includes; sociological (inappropriate capital base, poor storage facilities and lack of trust), financial/economic (lack of patronage, lack of financial information and lack of access to formal credit) and organizational/ institutional (low member participation, inadequate education/training, irregular meetings and low attendance to meetings) to the optimal performance of agricultural cooperatives. The study therefore, recommended that there is need to encourage and enlighten members on good governance, members' participation (financially and advices) and government support to achieve their goals. Government and NGOs should provide credit facilities for cooperatives with friendly conditions, also all other identified problems should be properly addressed.

**Keywords:** Agricultural, Cooperatives, Financial, Evaluation, Credit, Institutions

### INTRODUCTION

Financial inclusion is described by the World Bank as the provision of useful, relevant, and affordable financial services such as payments, credit, and insurance to the financially excluded including individuals and SMEs. Financial inclusion is seen as the process of ensuring access to financial services, timely and adequate credit where needed by vulnerable groups, such as weaker sections and low-income groups at affordable cost Omar & Inaba, (2020). Financial Inclusion is achieved when individuals or organizations have easy access to a broad range of formal financial services that meet their needs and are provided at affordable cost. The definition of Financial Inclusion is based on four keys, which are: Ease of access to financial products and services, usage of a broad range of financial products and services, designed according to need (financial products must be designed to meet the needs of clients and should consider income levels and access to distribution channels), and at affordable cost (Jimoh, 2024). Agricultural finances are credits and loans provided to farmers for their farm activities such as production, storage, processing, and marketing of farm products. Such finance can be short, medium, or long term depending on its payback period. Credit institutions range from well-developed and large sized commercial banks to localized small cooperatives. It can also be formal or informal. McKillop *et. al.*, (2020) noted that an individual or organization is said to have access if he can borrow from a credit source (commercial banks, micro-finance banks, money lenders, etc). The extent of access to finance by farmers is measured by the maximum amount they can



borrow at a time from a given source. Agricultural finance is necessity and crucial for continued agricultural improvement to be achieved in any country in the world Okunlola & Ayetigbo, (2024). Rural finance is known to be an essential instrument in achieving poverty reduction and development especially in rural areas. Farmers are in more need of such instrument (finance), because of the seasonality and nature of agricultural activities and the uncertainties involved. Agricultural finance improves productivity and promotes living conditions by breaking vicious cycle of poverty for smallholder farmers. Availability and accessibility of agricultural finance by these disadvantaged rural people can make the difference between grinding poverty and economically secured life as well as improving agricultural productivity Shen *et al.*, (2023). 80% of Nigeria's population lives in rural areas and the majority are engaged in agricultural activities, there are no efforts to facilitate credit to farmers which is important in quick development of this dominant section of the population. Access to finance hinder agricultural productivity and growth and just a few farmers have access to rural finance Oladoyin *et. al.*, (2025). International Cooperative Alliance (ICA) defined cooperative societies as autonomous associations of persons unified voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. Farmers' cooperative societies emerged as self-help bodies to solve both economic and social needs and aspirations of their members (Ma *et. al.*, 2023).

Cooperative societies are an effective community development avenue by their nature of operation, they improve economic self-reliance of their members and civil society. The importance of cooperative societies extends to the larger society for the fact that they create local jobs, invest locally, emphasize on education and skills improve local management capacity, and reduce migration and concentration of capital. People come together in cooperative societies to pool their resources together so as to meet individual needs which they could not resolve by individual limited financial capacity (Jeeva, 2019). The objective of cooperatives is to produce goods and deliver services, and satisfy the common needs and aspirations of their members and also to promote cooperation, relations, participation and consequently to promote interpersonal relationships. Cooperative societies provide services that benefit their members and also handle the concerns of the local community where they operate. The way cooperatives helps to identify economic opportunities for their members; empower the disadvantaged and hopeless individuals to defend their interests; provide security to the poor by allowing them to convert individual benefits and risks into collective benefits and risks; and mediate member access to assets that they utilize to earn a living. For instance, while savings and credit cooperatives (SACCOs) facilitate their members' access to financial capital, agricultural cooperatives help farmers access the inputs required to grow crops and keep livestock, and help them process, transport and market their produce. Similarly, consumer cooperatives make it possible for 80.00000ir members and the society at large to access good quality household supplies like food, clothing, and other products at affordable prices. Such services help pull members out of poverty. With these cooperative societies' encourage members commitment and participation in savings (voluntary and mandatory savings), and organized applications for credit and loan, which ensures membership as well as increase economic benefits of joining cooperative.

Members' participation is crucial for the success of any cooperative business not considering the type of the cooperative as far as it helps in achieving the cooperative set goals. The concept of performance of farmers' cooperative organizations is the ability to meet the primary motive for its formation as outlined in cooperative objectives/principles. Performance is a widely used concept in many areas. Usually, performance is a measure of how well a mechanism/process achieves its purpose. Daliri *et. al.*, (2025) described Performance as a set of financial and non-financial indicators which offer information on the degree of achievement of objectives and results. Cooperative performance is a measure of the change in the financial state of a cooperative business or the financial and nonfinancial outcomes that results from management decisions and the execution of those decisions by members of the cooperative group. Farmers' cooperative societies in their uniqueness might be able to access credit for their members, especially on occasions when individuals might lack the capacity to do so (Komolafe *et. al.*, 2024). Bhattarai & Pandit, (2023) noted that most government, non-governmental organizations, and donor agencies had encouraged and promoted the creation of cooperative societies as a prerequisite



for obtaining agricultural support services by farmers. It is not surprising therefore that those farmers widely embrace cooperative societies in a bid to increase their productivity and well-being in Nigeria (Kehinde *et al.*, 2025). Although Agricultural cooperative societies have unique attributes of meeting both economic and social needs and aspirations of their members through a democratic process, they are faced with numerous challenging issues in sustainable development in their business activities, which affect their optimum role performance Moral & Uclés, (2022). Due to the sensitive and vulnerable nature of smallholder farming in the country, the factors constraining accessibility of Agricultural cooperative societies (which usually consist of smallholder farmers) to financial products and services there appear to be unique and mixed. It is against this backdrop that this study, therefore, set out to evaluate the financial inclusion of agricultural cooperative societies in the Yewa Division of Ogun state. It specifically; compared the level of credit access by Agricultural cooperative societies from formal and informal institutions; examined the determinants of credit and loan access from formal financial institutions as well as identified perceived constraints to the effective performance of agricultural cooperative societies.

## **METHODOLOGY**

### **The Study Area**

The study area was Yewa Division of Ogun State, Yewa Division account of five Local Government Areas. Yewa Local Government Area is one of the twenty Local Government Areas in Ogun-State, South-West, Nigeria. The population of Yewa Division in Ogun State was estimated to about 1.5 million (NBS, 2025). The five Local Government Areas in the division are: Ado-Odo Ota, Imeko-Afon, Ipokia, Yewa North and Yewa South. Yewa province is basically an agrarian area. The agricultural products of the division range from livestock to fisheries in the area of animal production and permanent to arable crops. Permanent crops cultivated includes: cocoa, kola-nut, oil palm, citrus etc. while arable crop produced comprises of maize and cassava among others. The northern part of Yewa Division has a short rainfall regime, thus its classification as a semi-savannah area.

### **Methods of Data Collection**

Both primary and secondary data were used. Secondary data was collected from internet sources, published journals, text books, dissertations, projects and other relevant publications. Primary data was obtained through a well-structured questionnaire administered to respondents with interviewed. Both descriptive and inferential statistics were employed for the analysis of the collated data. Descriptive statistics was used to analyzed level of credit access from formal and informal financial Institutions among the cooperative farmers. Inferential statistics such as binary logit mode and exploratory (principal component) factor. Binary logit mode was used to analyzed the determinants of credit access from formal financial and Informal financial Institutions while exploratory (principal component) factor analysis procedure was employed used analyzed the constrains faced the farmers' cooperatives optimum performance. Multi-stage sampling technique was utilized to select the respondents. In the first stage, Yewa Division was selected out of four divisions in Ogun State. In the second stage, two (2) Local Government Areas namely: Yewa South and Yewa North were purposively selected due to highest numbers of agricultural Cooperative Societies (ACSs) and Multipurpose Cooperative Societies (those that participate in agricultural business) in each LGAs selected for the study. In the third stage, eight (8) communities and seven (7) were chosen from each Yewa South and Yewa North Local Government Areas respectively. In the final stage, ten (10) cooperative societies were selected from each town making one hundred and fifty cooperative societies used for this study.

### **Method of Data Analysis**

The instrument elicited information on the financial performance of the cooperative society such as level of credit access by cooperative societies from formal and informal institutions, determinants of formal credit access of the cooperatives was realized with binary logit model because the variables explained in the model are dichotomous, taking a value of one when the farmers cooperatives have access to formal credit and the value of zero otherwise. In such case where Y is a dummy variable, binary choice models is to be applied. The main idea behind the model is to find the relationship between



the probability ( $P_i$ ) that  $Y$  will take a 1 value and the characteristics of considered individuals. The general form of binary choice model assumes:

$$P_i = P [Y_i = 1 / x_i] = \frac{\exp(\beta_1 + \beta_2 x_i)}{1 + \exp(\beta_1 + \beta_2 x_i)}$$

Where,  $P$  lies between 0 and 1 ( $0 < p_i < 1$ )

The  $p_i$  is the dependent binary variable (1 for access to formal credit and 0 otherwise) and  $X_i$  is the independent variable

Where:  $I = 1, 2, 3, \dots, 13$

$X_1$  = Distance to credit source (Kilometers)

$X_2$  = Government interference in cooperative activities (Dummy yes = 1, 0 otherwise)

$X_3$  = Interest rate (Naira)

$X_4$  = Repayment period on credit (period)

$X_5$  = Availability of required collateral for credit (have collateral = 1, 0 otherwise)

$X_6$  = Financial literacy or access to bank for credit availability (Dummy yes = 1, 0 otherwise)

$X_7$  = Incur transaction cost on credit (Dummy yes = 1, 0 otherwise)

$X_8$  = Incur hidden charges on credit (Dummy yes = 1, 0 otherwise)

$X_9$  = Amount of savings by the cooperative (Naira)

$X_{10}$  = Year of existence of the cooperatives (Years)

$X_{11}$  = Total Shareholdings of the cooperatives (Naira)

$X_{12}$  = Presence of account officer in the cooperative (Dummy yes = 1, 0 otherwise)

The perceived constraints to effective performance of cooperatives, were realized using principal component analysis with varimax rotation of point for factor loading was 0.40. Therefore, factors loading less than 0.40 or variables that load in more than one factor were discarded (Madukwe, 2017; Enete and Amusa, 2019). Model specification for factor analysis: Principal component factor analysis model was stated as follows:

$$Y_1 = a_{11}X_1 + a_{12}X_2 + a_{13}X_3 + \dots + a_{1n}X_n$$

$$Y_n = a_{n1}X_1 + a_{n2}X_2 + a_{n3}X_3 + \dots + a_{nn}X_n$$

where:

$Y_1, Y_2, Y_3, \dots, Y_n$  = observed factors/constraints to cooperative performance

$a_1 - a_n$  = factor loadings or correlation coefficients

$X_1, X_2, X_3, \dots, X_n$  = unobserved underlying constraints constraining farmers' cooperatives performance. Factors with Eigen values  $> 1$  were extracted, while variables with loadings  $\geq \pm 0.4$  was used in naming the factors.

## RESULTS AND DISCUSSIONS

### Distribution of Farmers' Cooperative Societies Based on their Level of Credit Access from Formal and Informal Financial Institutions

Table 1 showed the extent to which the farmer cooperative societies patronized either formal or informal financial institutions in accessing finance for their business activities. The difference in mean test with  $p$ -value = 0.48  $>$  0.05 showed that there is no significant difference between amounts sourced from formal and informal credit institutions. Majority (70.67%) of the respondents did not access credit from either formal or informal financial institutions during the period under review. These suggest limited ability of cooperative societies to access credits that could have been used to improve their agricultural production activities in the area. Among them, those that could access credit facilities, only 30 (20%) and 14 (9.33%) had their credit source as formal and informal sources of credit respectively. However, this result is contrary to a priori expectation that membership in cooperatives is an important factor in accessing formal credit by farmer members Babasanya *et. al.*, 2018. The result showed very low credit access generally, which does not suggest that the cooperatives under study could meet up with their financial expectation and needs of its members. Agricultural credit and loan accessibility has been seen as the surest way of breaking the vicious cycle of poverty in the rural areas even in the urban areas, Table 1 further showed the formal institutions the participants patronized to



include Microfinance Banks (8.67%), Government schemes and programmes (7.33%), Commercial banks (2.67%) and Bank of Agriculture (BOA) (1.33%). This corroborate with the study of Amurtiyya *et. al.*, (2018) on the list of formal institutions used by farmers. The informal institutions patronized were Thrift/Credit cooperatives (4%), money lenders (3.33%) and self-financing (2%). The average amount collected was ₦705620.45 and ₦21765.70 for formal and informal institutions respectively. The results suggest that the cooperatives in the area had little or no access to external financial resources in carrying out agricultural development activities.

**Table 1:** Distribution of Farmers Cooperative Societies Based on their Level of Credit Access from Formal and Informal Institutions

Variables	Frequency	Percentage	Cummulative frequency	Mean
<b>Access to credit</b>				
Accessed	44	29.33	29.33	
Not accessed	106	70.67	100.0	
<b>Credit source</b>				
Formal source	30	68.18	68.18	
Informal source	14	31.82	100.0	
<b>Formal institutions used</b>				
Non participant cooperatives	120	80.00	80.0	
Microfinance bank	13	8.67	88.67	
Commercial bank	4	2.67	91.34	
Bank of Agriculture	2	1.33	92.67	
Government schemes and programmes	11	7.33	100.0	
<b>Informal institutions used</b>				
Non participant cooperatives	136	90.67	90.67	
Moneylenders	5	3.33	94.00	
Thrift/credit cooperatives	6	4	98.00	
Self-financing from contributions etc	3	2	100.0	
<b>Total</b>	<b>150</b>	<b>100</b>		
Formal institutions amount				₦705620.45
Informal institutions amount				₦217657.70

**Source:** field survey, 2023

### Determinants of Credit Access from Formal Financial Institutions

The results in Table 2 showed that most of the explanatory variables affected the cooperative society's access to formal credit. The explanatory power of the factors as reflected by the pseudo R<sup>2</sup> of 67% was high. Also, the overall goodness of the fit as reflected by the prob > Chi<sup>2</sup> (0.009) was good. This suggests that the model has a strong explanatory power. It rejects the null hypothesis that all coefficients are zero. Table 2 showed the marginal effect of the factors that determine the cooperative society's access to credit from formal financial institutions in Yewa Division of Ogun State, Nigeria. The model showed that out of the examined explanatory variables, some factors like; distance to credit source, government interference, repayment period, collateral, financial literacy, transaction cost, hidden charges, average savings, year of existence, average shareholdings and presence of account officer were statistically significant at 1%, 1%, 5%, 1%, 5%, 5%, 1%, 1%, 5%, 1% and 1% respectively farmers' access to formal credit. Variables that positively and significantly influenced ACS access to formal financing were, .financial literacy, year of existence, repayment period and presence of account officer while distance to credit source, government interference, .collateral, transaction cost, hidden charges, average savings, and average shareholdings .was negatively and statistically significant consistent with a *priori expectation*, the coefficient of distance to access point was negative and significant at p < 0.01 with marginal effect (-0.0720458). This implies that an increase in the distance



to formal credit institutions will reduce the probability of accessing credit by  $-0.0720658$ . It also indicates that respondents who live in remote areas may have fewer chances to access credit and loan from formal financial institutions compared to their counterparts that areas closer to formal financial institutions. This result could be attributed to the fact that farmers who are mostly in rural areas, find it stressful, time-consuming and costly to cover a long distance to have access to formal credit and loan facilities which are mostly sited in urban areas. The World Bank (2020) affirmed that the main reasons banks are sited in urban areas in Nigeria are because of the high risk associated with operating in rural areas, shortage of adequate infrastructures like roads, and electricity, and poor returns on banking investment in rural areas. Long-distance credit access points discourage farmers' interest in accessing available credits that could be used to increase their production capacity.

This result corroborates with the findings of Amurtiya *et al.*, (2018) and Anyiro and Oriaku (2017) who reported a significant negative relationship between distance and formal credit access among farmers in Adamawa and Abia states respectively. The coefficient of government interference was negative which implies that an increase in government interference in the business operations of farmers' cooperatives, will reduce the probability of accessing formal credit by  $(-1.26e-07)$  and statistically significant at  $p < 0.05$ . This result could be a result of the cooperative principle of autonomy and independence. The result also agreed with the findings by Prashanth (2019) that cooperatives these days are dancing to the tune of government. He noted that government interference discourages harmony and leads to discrimination among members within cooperative associations. A positive and significant ( $p < 0.05$ ) effect on access to formal credit by farmers was noticed for the repayment period with a marginal effect coefficient of  $0.0094318$ . This means that a unit increase in the repayment period on credit will have a marginal effect of increasing the probability of accessing formal credit by  $0.0094318$ . This result showed that if the cooperative societies were given a longer period to pay back borrowed loans, it will result to increase in the use of formal credit sources for accessing loans. This is because a long time given to farmers to remit their loan would help them meet up with their harvest/cropping and sale period of their produce; this will make them recover what they have invested on their farms over the production period. This finding agrees with Filli *et al.*, (2019) who reported that borrowers usually prefer longer term debt contract due to the insurance effects they provide. A negative and significant ( $p < 0.01$ ) effect on access to formal credit by farmers' cooperatives was noticed for collateral requirement with marginal effect coefficient of  $-0.0672161$ .

This implies that a unit increase in collateral requirement by formal institutions will have a marginal effect of reducing the probability of accessing formal credit by  $-0.0672161$ . This was because most of the cooperatives do not have required assets or other capital security to offer. This result may be due to the fact that most of the agricultural cooperatives have low savings capacity and may also not have been in existence long enough to acquire reasonable assets or collateral which guarantees credit access. Nathan *et al.*, (2019), observed that formal banks rarely give loans to the rural people because they lack collateral that they could present as security for loans. This result also agrees with those of Filli *et al.*, (2019) who reported a negative relationship between collateral and credit accessibility. The coefficient of financial literacy possessed expected positive sign and was significant ( $p < 0.05$ ) with marginal effect coefficient of  $0.0230398$ . This means that a unit increase in financial literacy will increase the opportunity of accessing formal credit and loan by  $0.0230$ . This study was an indication that loan accessibility rate is enhanced by increasing financial literacy among the cooperative farmers. A large number of adults in developing countries like Nigeria lack access to formal financial services due to inadequate financial knowledge going around them. Cooperatives need to have face-to-face money advice. Information is crucial and important factor in agricultural development programmes. Public enlightenment campaigns are required for rural farmers and low-income earners, emphasizing the benefits of financial inclusion to everybody using different languages, rather than just the middle class and the elite as it is currently done. Financial literacy can be carried out through financial literacy training, seminars, campaigns, individual counseling, collective meetings etc. The Financial Inclusion initiatives go a long way in not only financially empowering the farmers but also as an avenue of providing excellent business opportunities for the financial market participants. It also allows people to participate more effectively in the economic and social process. A negative significant ( $p < 0.05$ ) effect



on access to formal credit by farmers cooperatives was noticed for transaction cost with a marginal effect coefficient of (-0.1586209). It shows that transaction cost has a significant effect on access to formal finance among rural farmers. This implies that an increase in transaction cost for obtaining formal credit will have a marginal effect of reducing the probability of accessing formal credit by -0.1586209. Transaction cost is the total cost of fulfilling the requirements for obtaining a loan. The 1975 World Bank report dealing with agricultural credit stated that Transaction Costs (TCs) were unduly significant for many transactions involving credits in developing countries. This finding concurs with that of Babasanya *et al.*, (2018) and Saifullahi *et al.*, (2017) and is also in line with a priori expectation.

The coefficient of hidden charges was negative and statistically significant at  $p < 0.01$ . This implies that, an increase in hidden charges on accessing formal credit, will reduce the probability of accessing formal credit by -0.0736269. It is evident that incidence of unseen charges by credit institutions had been one of the major reasons discouraging farmers' credit accessibility in Nigeria. There were some hidden administrative charges that farmers do not know about in the course of accessing loans but were made to pay by the financial institution. The coefficient of savings was negative and statistically significant ( $p < 0.01$ ) for accessing formal credit with marginal effect (-1.78e-07). This implies that an increase in the level of savings by the cooperatives will decrease the probability of accessing formal credit by -1.78e-07. This finding showed that farmers or cooperatives with high level of capital base have less probability of accessing credit from formal financial institutions. In other words, poor farmers with low savings attitudes have a higher need of accessing formal credit. This is because they were financially insolvent to finance business operations. The plausible reason may be that savings from farm activities enhance farmers' confidence not to borrow and also gives them the capacity to finance their spending by themselves, hence cooperatives should increase their savings increase to reduces their borrowing issues. This result also agrees with the laid down rule in cooperatives that business operation of the cooperatives should be primarily financed by members' contributions as the cooperative is a member-based organization. The coefficient of years of existence was positive and significant at  $p < 0.05$  for accessing formal credit with marginal effect (0.0231495). This result is an indication that cooperatives with longer years of existence have higher probability of accessing formal credit. The reason may be because experience comes with age and therefore, a positive relationship is expected between age and performance of farmers' cooperatives. Farmers' cooperatives that are older by age are more responsible and secure than their younger counterparts. Ani and Robert (2018) in a related study reported that beginning farmers are more likely to experience financial stress across all their examined financial measures. They also suggested that lenders are being more conservative when giving credit to beginning farmers because they are less likely to own land and other tangible properties that are usually required by financial institutions as collateral for loans. A long existed cooperative societies always have more committed members in financial contributions to its cooperative which goes a long way to increasing their financial base. Nwankwo *et al.*, (2016) in a related study reported that cooperative age profiles had a significant influence on their gross margin. Also, with long years of existence, the cooperative would be able to diversify and consolidate its economic and social activities. The coefficient of shareholding was negative and significant at  $p < 0.01$  for accessing formal credit with marginal effect (-8.02e-08). This implies that an increase in the amount of shareholding of the cooperative, it will have a marginal effect of decreasing the probability of accessing formal credit by -8.02e-08.

The finding shows that Agricultural cooperatives with high shareholdings have less probability of accessing credit from formal financial institutions. In cooperatives, shareholding is made up of the cooperatives' share capital and share contributions and reserves, such as undistributed surpluses, as well as entrance fees and grants (Adegeye & Ditttoh, 2019). This result may be connected to the fact that cooperatives are required by its operating principle to depend on their capital resources because it has been proven by many as the most stable form of finance and they usually offer the most liberal terms to their members. Reserve is known to be a stable capital source to cooperative business organizations and also known to increase security for lenders to cooperative organizations. The result also depicts that many of the cooperatives had not been in existence for a long time; this is because to a large extent,

reserves and shares capital increase as cooperative societies get older. The relationship between cooperative age and the volume of cooperative societies' capital share was reported a leveraging level by (Adegeye & Dittoh, 2019). A positive and significant ( $p < 0.01$ ) effect on access to formal credit by farmers' cooperatives was noticed for a cooperative that has account officer with marginal effect coefficient of (0.0890337). It shows that the presence of account officers in cooperatives has a significant effect on access to formal finance among cooperative farmers. Presence of account officer is very important to any business organization like cooperative. This ensures prompt financial statement presentation and accountability. There are needs to have up-to-date financial statements by cooperative societies to maintain trust among members, during decision making and also to make such important documents available to lending institutions when needed. Prompt preparation and presentation of account statement to financial institutions or government shows high level of accountability which is associated with high performance.

**Table 2:** Determinants of Credit Access from Formal Financial Institutions

Variable	Marginal effect	Standard error	Z – Value
Distance to credit source	-0.0720458	0.098925	-3.38***
Government interference	-1.26e-07	2.29e-06	-2.59***
Interest rate	-0.016755	0.0368475	-1.82
Repayment period	0.0094318	0.0189771	2.45**
Collateral (+)	-0.0672161	0.095295	3.19***
Financial literacy	0.0230398	.2494488	2.42 **
Transaction cost (+)	-0.1586209	0.07539	2.13 **
Hidden charges (+)	-0.0746269	0.3947272	-3.89***
Savings	-1.78e-07	2.44e-07	-3.58***
Year of existence	0.0250495	0.01229	2.23 **
Shareholdings	-8.02e-08	1.08e-07	-3.56 ***
Account officer (+)	0.0890337	0.13111	3.18 ***
President's education level	0.0033476	0.008951	-1.73
LR Chi <sup>2</sup> (13)	135.87		
Prob > Chi <sup>2</sup>	0.0009		
Pseudo R <sup>2</sup>	0.67		

Source: field survey, 2023, \*\*, \*\*\* indicates significant at 5% and 1% respectively

### **Perceived Constraints to Effective Performance of Farmers' Cooperative Societies.**

Table 3 showed the Varimax-rotated Principal Factor Analysis of the key variables constraining the optimum performance of farmers' cooperative societies. Three factors Components were extracted based on the responses of the respondents. The Kaiser criterion was employed for selecting the number of underlying factors of Principal Components. The number was obtained by leaving out components/loadings with corresponding Eigen values of less than 0.40. Only variables with factor loadings of  $\geq 0.40$  were used in naming the factor/Principal Components. Variables that have factor loadings of  $< 0.40$  were not used while variables that loaded in more than one constraint were also discarded as reported by Otitoju, (2017) and Okezie, (2019) in a related study. Three factors were extracted from the original variables constraining farmers' cooperative performance in the study area. Factors 1, 2 and 3 were named sociological, financial/economic and organizational/institutional factors respectively.

#### **Factor 1 (sociological)**

The loadings/Eigen values under sociological factors include inappropriate capital base (0.656), poor storage facilities (0.685) and lack of trust on cooperative by members (0.587). The findings corroborate with the report by Onah, (2018), that inadequate capital base and storage facilities were serious constraints to effective performance of multipurpose cooperative societies. This equally agrees with the study of Ibitoye (2018) that there was low capital accumulated by cooperative members and subsequent small amount of loan disbursed to members. Cooperatives need adequate capital to start or



diversify to any meaningful agricultural production. The result of this finding could be due to poor saving habit of the cooperative members, high cost of living and low access to external financing, which could help in having sustainable financial base. Lack of trust of members could be due to dishonesty among cooperative leaders, lack of transparency, undemocratic process in governance etc. The existence of trust among cooperative members and between members and the cooperative managers is an indicator of group cohesion which is a sign of members' desire to remain in the cooperative and be committed. When the members trust the board of directors and the management, they become satisfied and committed to the objective of the organization (Hansen *et al.*, 2020). But, Members' trust on their cooperative depends largely on the cooperative's ability to act competently and dependably. Borgen (2021) argued that trust is an essential means for coordination and control in cooperatives.

### **Factor 2 (Financial/economic)**

The loadings/Eigen values under financial/economic factors include lack of patronage (0.759), lack of financial information (0.735) and lack of access to formal credit (0.763). This result lends credence to the submission of (Amurtiya *et.al.*, 2018), that low financial literacy and lack of access to formal credit were among the constraints among farmers in Yola South Local Government Area of Adamawa State. The results also in line with the findings by Onah, (2018) who revealed that inadequate commitment by members militated against the optimum performance of farmers' cooperative in Enugu North Agricultural Zones in Enugu State.

This is due to the fact that financial institutions regard these poor farmers as risky borrowers on account of their inability to provide acceptable/suitable collateral (Aigbokhan & Asemota, 2021). It is known that poor access to credit is one of the factors responsible for the poor performance of the agricultural sector in Nigeria.

### **Factor 3 (Organizational/institutional)**

The organizational/institutional factors include; low member participation (0.556), inadequate education/training (0.724), irregular meetings (0.461) and low attendance to meetings (0.513). This research confirms with the findings by Ugochukwu and Ugwuoke (2023), that cooperative members were constrained with inadequate training in Nigeria. Membership of cooperative groups often comprises persons who are either less privileged or less informed or had misconceptions of the true concept of cooperative; its principles and values. Member economic participation and commitment is very important to cooperative viability as it gives room for them to express their ideas during meetings. Members are meant to attend and make contribution at the meetings, elect board of directors, and participate in the decision-making process. The involvement of members is vital for the long-term expansion, survival and growth of cooperative organization. Borgen, (2021) noted that if members are actively involve decision making, they will be more committed to the implementation of such the decisions. This implies that the involvement of members in passing decisions is important for developing a sense of belonging and inclusiveness of members' ideas in the decision-making process would have positive results in commitment of members to the cooperative organization. After rotation, the first factor (sociological) accounted for 15.41% of the variance of the factors militating the performance realization of cooperative societies, the second factor(economical), accounted for 15.3% of the variances, the third factor (organizational/institutional), accounted for 14.72% of the variance militating the optimum performance of agricultural cooperative societies in the study area. The three factors explained 45.43% of the variances militating against farmers' cooperative performance.



**Table 3:** Varimax Rotated Factors/Variables Constraining Farmers’ Cooperatives Optimum Performance Based on the Responses of the Respondents

Constraints	Factor 1 Sociological factor	Factor 2 Financial/ Economic factor	Factor 3 Organizational/ Institutional factor
Inappropriate capital base for operation	0.656		
Poor Storage facilities	0.685		
Distrust on cooperative by Members	0.587		
Lack of patronage by members		0.759	
Limited Financial Information		0.735	
Lack of access to formal credit		0.763	
Low member participation			0.556
Inadequate education /training			0.724
Irregular Meetings			0.461
Low Attendance to Meetings			0.513
Percentage (%) of total variance	15.41	15.3	14.72

**Source:** Field survey, 2023

Extraction Method: Principal Components Analysis, Rotation method: Varimax with Kaiser Eigen Value  $\geq 0.40$  (Major/Significant Principal Constraint) Blanks represent absence of loadings  $< 4$

### CONCLUSION AND RECOMENDATIONS

Accessibility to credit from financial institutions (formal and informal) showed that the respondents were financially excluded from all the financial markets as the majority never had access to the financial institutions. It is evident that the Agricultural cooperative societies in the area were financially insecure as they lacked external financing and their self- financing ability was pitiable due to a poor savings attitude. The determining factors of formal credit access by the farmers’ cooperatives were distance to credit source, government interference, repayment period on credit, collateral, financial literacy, transaction costs, hidden charges, savings, year of existence, shareholdings and presence of account officers. The constraints faced effective performance of farmers’ cooperative Societies, includes: sociological (inappropriate capital base, poor storage facilities and lack of trust), financial/economic (lack of patronage, lack of financial information and lack of access to formal credit) and organizational/ institutional (low member participation, inadequate education/training, irregular meetings and low attendance to meetings) to the optimal performance of agricultural cooperatives. Cooperative is still a vital platform for poverty alleviation among poor farmers; hence the study therefore recommends that there is need to encourage and enlighten the members on good governance, members’ commitment/participation (financially and advices) and government support to achieve their objectives. Government at all levels should invest in rural development and improve rural infrastructures such as; good access road, financial institutions, storage facilities, in the rural areas to boost economic activities that will help the cooperatives in meeting up with its members’ needs to improve performance and sustainability. Government and NGOs should assist by providing credit facilities for any cooperatives that needs them with friendly conditions.

### REFERENCES

- Adegeye, A.J & Dittoh, J. S. (2019). *Essential of Agricultural Economics* (New e.d). Ibadan: Impact Publishers Nig. Ltd.
- Amurtiya, R. A. (2018). An input assessment of Cameroun Gats by Trust Micro-Credit scheme in the ile four District, Cameroun: Report of International project management for NGO’s, participants learning, December 2004, Sweden.
- Aigbokhan, B. E. & Asemota, A. E. (2021). An assessment of microfinance as a tool for poverty reduction and Social Capital Formation: Evidence on Nigeria. *Global Journal of Finance and Banking Issues*, 5(5): 38–48.



- Ani, S. G. (2018). The “People” Factor in Cooperatives: An Analysis of Members' Attitudes and Behaviour. *Canadian Journal of Agricultural Economics/Review canadienne d'agroeconomie*, **55**(3): 275-298.
- Anyiro, C. O. & Oriaku, B. N. (2017). Access to and Investment of Formal Micro Credit by Small Holder Farmers in Abia state, Nigeria. A case study of ABSU Microfinance Bank, Uturu. *The Journal of Agricultural Sciences*, **6**(2): 69–76.
- Babasanya B., Bolagun O., Zungum A, & Olowohunwa, J. (2018). Rural development: an approach to poverty alleviation in Nigeria. *International. Journal of Economic Development*. University of Consortia. **2**(1): 28-41.
- Bhattarai, R., & Pandit, M. (2023). Cooperatives as Pillar of Economy to Improve Agriculture Production and Marketing. *Nepal Public Policy Review*, **3**(1): 221–238. <https://doi.org/10.59552/nppr.v3i1.61>
- Bhuyan, S. 2007. The “People” Factor in Cooperatives: An Analysis of Members' Attitudes and Behaviour. *Canadian Journal of Agricultural Economics/Review canadienne d'agroeconomie*, **55**(3): 275-298.
- Borgen, S. (2021). Identification as a trust generating mechanism in cooperatives. *Annals of Public and Cooperative Economics* **72**(2), 209-228 EFLnA (Enhancing Financial Innovation and Access), (2021). Access to financial services in Nigeria.
- Daliri, H., Ramezani, A., Nasl Mosavi, S. H., & Modanlo Joibary, A. (2025). Examining the Impact of Financial and Non-Financial Criteria Divergence on Bank Profitability Indicators. *Business, Marketing, and Finance Open*, **2**(2): 156–165. <https://doi.org/10.61838/bmopen>.
- Enete, A. A & Amusa, T. A. (2019). Determinants of women’s contribution to farming decisions in Cocoa based agroforestry households of Ekiti State, Nigeria. *The Journal of Field Actions Field Actions Science Report*. **4**(1). [www.factsreports.org](http://www.factsreports.org).
- Filli, F. B., Onu, J. I., Adebayo, E. F., & Tizhe, I. (2019) *Journal of Agricultural Economics, Environment and Social Sciences*, **1**(1): 46–55
- Hansen, M. H., J. Morrow J.R, & Batista J. C. (2020). The impact of trust on cooperative membership retention, performance, and satisfaction: An exploratory study. *The International Food and Agribusiness Management Review*, **5**(1): 41-59.
- Ibitoye, S. J. (2018). Survey of the performance of the agricultural cooperative societies in Kogi State, Nigeria. *European Scientific Journal*, **8**(24) 98-114.
- Jeeva Rekha, B. (2019). Membership Positions and Problems Faced by Housing Cooperative Societies. *Shanlax International Journal of Management*, **7**(2): 70–76. <https://doi.org/10.34293/management.v7i2.720>.
- Jimoh B. O. (2024). A Review on the Impacts of Cooperatives on Financial Inclusion in Nigeria. *ASUPFE Journal of Multidisciplinary Research and Innovation*, **2**: 524-530.
- Ksha, M. W. Manh, U. S., & Ehie, A. E. (2024). Rural Communities and Cooperative Societies: A Community-based Alternative for Sustainable Socio Economic Development in Nigeria. *African Journal of Economics and Sustainable Development*, **7**(3): 57–70. <https://doi.org/10.52589/AJESD-RSHWM3CL>
- Kehinde, A. D., Adesiyani, T. F., Hassan, S. O., & Familusi, I. G. (2025). Leveraging on membership in agricultural cooperatives to alleviate abject poverty among smallholder farming households in Nigeria. *Sustainable Futures*, **9**: 100399. <https://doi.org/10.1016/j.sftr/2024100399>
- Komolafe, O., Obot, A., Ikotun, D. O., & Obiajulu, I. S. (2024). Determinants of Credit Constraint among Smallholder Farmers’ Co-Operators in Oyo State, Nigeria. *Black Sea Journal of Agriculture*, **7**(6): 613–621. <https://doi.org/10.47115/bsagriculture.1504327>.
- Ma, W., Marini, M. A., & Rahut, D. B. (2023). Farmers’ organizations and sustainable development: An introduction. *Annals of Public and Cooperative Economics*, **94**(3): 683-700. <https://doi.org/10.1111/apce.12449>
- Madukwe, M.C. (2017). Multivariate Analysis for Agricultural Extension Research. In *Research Methods in Agricultural Extension*, Olowu, T.A. (Ed.). Agricultural Extension Society of



- Nigeria. (AESON), (pp: 206-236). Agricultural and Rural Management Training Institute (ARMTI), Ilorin, Nigeria.
- McKillop, D., French, D., Quinn, B., Sobiech, A. L., & Wilson, J. O. S. (2020). Cooperative financial institutions: A review of the literature. *International Review of Financial Analysis*, **71**: 101520. <https://doi.org/10.1016/j.irfa.2020.101520>
- Moral, A. M., & Uclés, D. F. (2022). The Agricultural Cooperative in the Face of the Challenges of Globalization, Sustainability and Digitalization. *Agriculture*, **12**(3): 424. <https://doi.org/10.3390/agriculture12030424>
- Nathan, F. O, Margaret, B. and Ashie, M. (2019) Microfinance and poverty reduction in Uganda: Achievements and Challenges. Economic Policy Research Centre, Research Series No.41
- Nwankwo, F. Ogbodo. O. C. & Ewuim, N. (2016). Effect of Cooperative type and age on profit performance: A Study of Cooperative Societies in Awka North LGA in Anambra State, Nigeria. *An International Multi-Disciplinary Journal, Ethiopia*, **10**(5): 187-203.
- Okezie, C. R. (2019). Determinants of Farm Households Participation in Informal Financial Markets in Southeast, Nigeria. PhD thesis submitted to the Dept. of Agricultural Economics, University of Nigeria, Nsukka.
- Okompu, A. D., Ofiaju, A. J., Dennis, A., & Otunaru, E. P. (2025). Credit Access among Arable Crop Farmers in Ondo State, Nigeria. Implication for Agricultural Productivity Enhancement. *Journal of Economics and Trade*, **10**(1): 1–9. <https://doi.org/10.56557/jet/2025/v10i19046>
- Okunlola, O. C., & Ayetigbo, O. A. (2024). Impact of Agricultural Financing on Agricultural Growth Sustainability in Nigeria. *The Journal of Developing Areas*, **58**(3): 171–203. <https://doi.org/10.1353/jda.2024.a929946>
- Omar, M. A., & Inaba, K. (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. *Journal of Economic Structures*, **9**(1): 37. <https://doi.org/10.1186/s40008-020-00214-4>
- Onah, O. G. (2018). Performance of Farmers' Multipurpose Cooperative Societies in Enugu North Agricultural Zone of Enugu State, Nigeria. MSc. thesis submitted to the Department of Agricultural Economics, University of Nigeria, Nsukka.
- Otitoju, M. A. (2017). The effects of climate change adaptation strategies on food crop production efficiency in southwestern Nigeria. PhD thesis submitted to the Dept. of Agricultural Economics, University of Nigeria, Nsukka
- Peter Oladoyin, O., Omotola Ajayi, O., Ibrahim, A. T., & Borokini, E. A. (2025). Determinants and Impact of Credit Utilization among Rural Cocoa Farmers: Evidence from Ondo State, Nigeria. *International Journal of Research and Innovation in Social Science*, **9**(4), 2651–2663. <http://doi.org/10.47772/IJRISS.2025.90400197>
- Prashanth, R. (2019). What are the advantages and disadvantages of cooperative Society? <http://www.preservearticles.com/cooperative-society.html>
- Saifullahi S., & Haruna M. (2017). An analysis of farmers' access to formal credit in the rural areas of Nigeria. *African Journal of Agricultural Research*. **7**(7): 6249-6253. Available online at <http://www.academicjournals.org/AJAR> DOI: 10.5897/AJAR11.788.
- Shen, Y., Guo, X., & Zhang, X. (2023). Digital Financial Inclusion, Land Transfer, and Agricultural Green Total Factor Productivity. *Sustainability*, **15**(8): 6436-6443. <https://doi.org/10.3390/su15086436>.
- Ugochukwu, E.C. & Ugwuoke A.I. (2023). Performance evaluation of women Farmer Cooperative Societies in Owerri Agricultural Zone of Imo State, Nigeria. *Journal of Agricultural Sciences*, **3**(2), 126-142.
- Umehali, E. (2004) Rural resources farm business management and rural development, Lagos, Computer Edge Publisher.