NIGERIA JOURNAL OF COOPERATIVE ECONOMICS AND MANAGEMENT

CONTRIBUTION OF COOPERATIVE SOCIETIES TO CREDIT ACCESS, INVESTMENT ACTIVITIES, AND ENTERPRISE GROWTH AMONG MEMBERS IN KADUNA STATE, NIGERIA

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Abstract

This study examined the contribution of cooperative societies to credit access, investment activities, and enterprise growth among members in Kaduna State, Nigeria. The study adopted a descriptive survey research design and utilised primary data collected through structured questionnaires administered to 384 members of agricultural, consumer, and multipurpose cooperative societies across Kaduna State, of which 371 questionnaires were returned and found valid, representing a response rate of 96.6%. Data collected were analysed using descriptive statistics, Pearson correlation, and ordinary least squares (OLS) regression analysis. The findings revealed that cooperative society engagement significantly predicts members' access to credit ($\beta = 0.534$, $R^2 = 0.487$, $F = 69.74$, $p < 0.05$) through affordable loan schemes, flexible repayment conditions, and reduced collateral requirements. Cooperative engagement also significantly predicts investment activities ($\beta = 0.498$, $R^2 = 0.461$, $F = 49.87$, $p < 0.05$), and enterprise growth ($\beta = 0.521$, $R^2 = 0.503$, $F = 59.77$, $p < 0.05$). Regression diagnostic tests confirmed residual normality, homoscedasticity, and absence of autocorrelation across all three models. The study concludes that cooperative societies are important institutional vehicles for improving credit access, stimulating productive investment, and supporting enterprise growth among members in Kaduna State. The study recommends improved credit administration, investment-support programmes, and enterprise development initiatives to strengthen the economic contributions of cooperative societies among members.

Keywords: Cooperative societies, credit access, investment activities, enterprise growth, Kaduna State, Nigeria.

Introduction

Cooperative societies are one of the oldest and longest-standing forms of collective economic organisation, based on the principles of mutual assistance, democratic management, and common resources. Cooperatives are recognised worldwide as effective tools for inclusive economic development that allow those excluded from access to the mainstream financial system to unite in sharing risks and accessing opportunities otherwise unavailable to them (International Cooperative Alliance, 2020). Cooperative societies in Nigeria are vital to the rural and semi-urban economic landscape, acting as a critical link for smallholder farmers, artisans, traders, and micro-enterprises seeking financial intermediation, input procurement, and market participation.

The context of this study in Kaduna State, North-Central Nigeria, is of particular interest given the significant socio-economic contributions of cooperative societies in the region. The state is home to a variety of cooperatives, including agricultural cooperatives, Savings and Credit Cooperative Organizations (SACCOs), consumer cooperatives, and multipurpose cooperatives. According to the Kaduna State Ministry of Cooperatives and Wealth Creation (2022), there are approximately 4,200 registered cooperative societies in the state, with an estimated active membership of 210,000 individuals across urban and rural areas. Although these institutions continue to grow, there is still a limited body of empirical evidence on their measurable effects on access to credit, investment behaviour, and enterprise sustainability at the state level.

Access to formal credit remains highly constrained for small and medium-scale enterprises (SMEs) in Kaduna State; most SMEs in the state depend on informal and semi-formal sources of credit principally cooperative societies to finance their business operations (Central Bank of Nigeria, 2021). Although cooperatives are widespread, their direct effects on members' investment activities, including the acquisition of productive assets, the purchase of inputs, and the reinvestment of profits, have not been extensively documented at the state level. Nor is there strong empirical evidence available to policymakers seeking to design policies that support cooperative development and growth in Kaduna State.

Existing studies on cooperatives in Sub-Saharan Africa and East Africa for example, Mogues et al. (2020) and Bernard et al. (2021) provide strong evidence that cooperative membership improves farmers' access to inputs, credit, and productivity, but these studies are concentrated in agricultural settings and in countries outside Nigeria, and neither examines the combined effect of cooperative engagement across credit access, investment activity, and enterprise growth simultaneously. Within Nigeria specifically, Adeyemo and Bamire (2019) examined cooperative membership and farm investment behaviour in Southwestern Nigeria, but their focus was similarly restricted to agricultural investment outcomes rather than the broader, cross-sectoral pattern of credit access, investment, and enterprise growth that this study addresses. This leaves an empirical gap specific to Kaduna State, where cooperative membership spans agricultural, consumer, and multipurpose societies, and where no integrated empirical assessment of these three dimensions currently exists. This study therefore aims to address this gap by empirically investigating the contribution of cooperative societies to credit access, investment activities, and enterprise growth

among members in Kaduna State. The results are expected to offer practical guidance and insight for cooperative managers, policymakers, financial institutions, and development practitioners interested in how cooperatives contribute to members' economic activity at the grassroots level.

Research Objectives

The specific objectives of this study are:

1. To examine the extent to which cooperative societies facilitate access to credit among members in Kaduna State, Nigeria.
2. To assess the impact of cooperative societies on investment activities of members in Kaduna State, Nigeria.
3. To evaluate the influence of cooperative societies on the growth and sustainability of enterprises in Kaduna State, Nigeria.

Review of Related Literature

Cooperative Societies

A cooperative society is an autonomous association of persons who voluntarily unite to satisfy their common economic, social, and cultural needs through a jointly owned and democratically controlled enterprise (International Cooperative Alliance, 2020). This definition emphasizes voluntary participation, collective ownership, democratic governance, and mutual benefit as the fundamental characteristics distinguishing cooperative societies from investor-owned enterprises. The ICA further explains that cooperative societies operate according to seven internationally recognised principles: voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education and training, cooperation among cooperatives, and concern for community.

Contemporary scholars conceptualise cooperative societies as member-centred organisations established to promote collective economic advancement through cooperation, resource pooling, and shared responsibility. According to Novkovic (2022), cooperative societies are institutions that combine economic objectives with social values by enabling members to jointly mobilise resources, minimise transaction costs, and improve their economic opportunities through collective action. This conceptualisation presents cooperatives as organisations that balance commercial activities with social responsibility.

Similarly, Jamaluddin, Saleh, Abdullah, Hassan, Hamzah, Jaffar, Abdul Ghani Aziz, and Embong (2023) characterise cooperative societies as participatory organisations that enhance members' economic inclusion through democratic governance, equitable distribution of benefits, and collective decision-making. Their systematic review underscores participation, equality, and mutual accountability as defining features of cooperative enterprises. In the same vein, Birchall

(2022) views cooperative societies as resilient economic institutions that strengthen members' bargaining power, facilitate access to productive resources, and promote sustainable livelihoods through collective ownership and member participation.

From a development perspective, cooperative societies are regarded as institutional mechanisms that promote inclusive growth by improving members' access to financial services, markets, information, and productive opportunities. They provide an organisational framework through which individuals with similar economic interests collectively pursue shared goals while maintaining democratic control over organisational decisions. Thus, the concept of cooperative societies extends beyond financial intermediation to encompass social empowerment, community development, capacity building, and sustainable economic participation. Conceptually, therefore, cooperative societies may be understood as democratically governed, member-owned organisations established to improve members' socio-economic welfare through collective ownership, shared responsibility, mutual assistance, and equitable participation in economic activities.

Credit Access

Credit access refers to the ability of individuals, households, or business enterprises to obtain financial resources from formal or informal financial institutions for productive, commercial, or consumption purposes. It encompasses not only the availability of credit facilities but also the opportunity to obtain loans under conditions that are affordable, timely, and appropriate to users' financial needs (World Bank, 2022).

Within the cooperative context, credit access is conceptualised as members' ability to obtain financial assistance through cooperative lending arrangements based on savings mobilisation, mutual trust, and collective responsibility. According to Nwosu and colleagues (2023), cooperative credit represents an institutional mechanism through which members obtain financial resources using relatively flexible lending conditions compared with conventional financial institutions. This conceptualisation highlights accessibility, affordability, and collective guarantees as distinguishing features of cooperative credit systems.

Kehinde and Ogundeji (2022) conceptualise credit access as an enabling resource that supports members' capacity to undertake productive investments by reducing financial constraints and improving the availability of working capital. Their explanation extends the concept beyond loan acquisition to include the ease, adequacy, and sustainability of financial support available to cooperative members.

Similarly, Mohammed et al. (2025) describe credit access as a multidimensional concept comprising loan availability, affordability, accessibility, repayment flexibility, and continuity of financial services. This perspective recognises that effective access to credit depends not merely on the existence of loan facilities but also on institutional arrangements that enable members to utilise financial resources without excessive financial or administrative barriers.

Within cooperative societies, credit access is generally characterised by members' savings contributions, internal loan schemes, revolving credit arrangements, flexible repayment conditions, collective guarantees, and relatively lower transaction costs. These characteristics distinguish cooperative credit systems from many conventional lending institutions and make them particularly suitable for individuals and small-scale entrepreneurs who experience difficulty accessing formal financial markets. Conceptually, therefore, credit access represents the extent to which cooperative members are able to obtain adequate, affordable, and timely financial resources under favourable institutional conditions that support productive economic activities and enterprise development.

Investment Activities

Investment activities refer to the commitment of financial, physical, and human resources to productive ventures with the expectation of generating future economic returns, increasing productive capacity, and enhancing enterprise value. The concept encompasses the acquisition of productive assets, expansion of business operations, purchase of equipment, technology adoption, and capital expenditure aimed at improving long-term business performance. Damodaran (2021) conceptualises investment activities as strategic decisions involving the allocation of scarce resources to projects capable of generating future economic benefits while considering associated risks and expected returns.

Similarly, Bodie, Kane, and Marcus (2021) define investment activities as the process through which individuals and organisations allocate financial resources among alternative productive opportunities to maximise wealth and ensure long-term sustainability. Their conceptualisation emphasises capital formation, risk management, and value creation as essential elements of investment decisions.

Iorlaha, Upaa, and Tyungu (2024) conceptualise investment activities as financing decisions that facilitate sustainable enterprise development through the mobilisation and efficient utilisation of financial resources. According to the authors, investment activities are fundamental to improving productive capacity, promoting innovation, and enhancing the long-term competitiveness of business enterprises in developing economies.

Within cooperative societies, investment activities are viewed as the productive utilisation of members' savings, credit facilities, and other financial resources for enterprise expansion, acquisition of productive assets, business diversification, and increased operational efficiency. Nwachukwu, Ibrahim, Lawal, and Abdullahi (2025) explain that cooperative institutions provide an enabling environment for productive investment through collective resource mobilisation, financial support mechanisms, and institutional arrangements that encourage entrepreneurship and business sustainability. Conceptually, therefore, investment activities represent strategic economic decisions through which cooperative members transform financial resources into productive assets

capable of improving enterprise performance, increasing income generation, and ensuring sustainable business development.

Enterprise Growth

Enterprise growth refers to the progressive expansion and improvement of a business enterprise in terms of its operational capacity, profitability, market share, asset base, employment generation, productivity, and overall organisational performance. It reflects the ability of an enterprise to utilise available resources efficiently in achieving sustainable competitive advantage and long-term business success.

The concept of enterprise growth originates from Penrose's Theory of Firm Growth, which views business expansion as a function of effective utilisation of internal resources, managerial capabilities, and entrepreneurial opportunities. Building on this perspective, Fajarika, Trapsilawati, and Sopha (2024) conceptualise enterprise growth as a multidimensional process involving both quantitative expansion such as increases in sales, assets, and employment and qualitative improvements in innovation, organisational capability, and competitive strength, drawing on systematic evidence from both developed and developing economies.

Storey (2021) similarly defines enterprise growth as the continuous improvement in a firm's capacity to generate income, strengthen market competitiveness, increase productivity, and sustain long-term business operations. This conceptualisation recognises enterprise growth as a dynamic process influenced by effective management, resource utilisation, innovation, and institutional support.

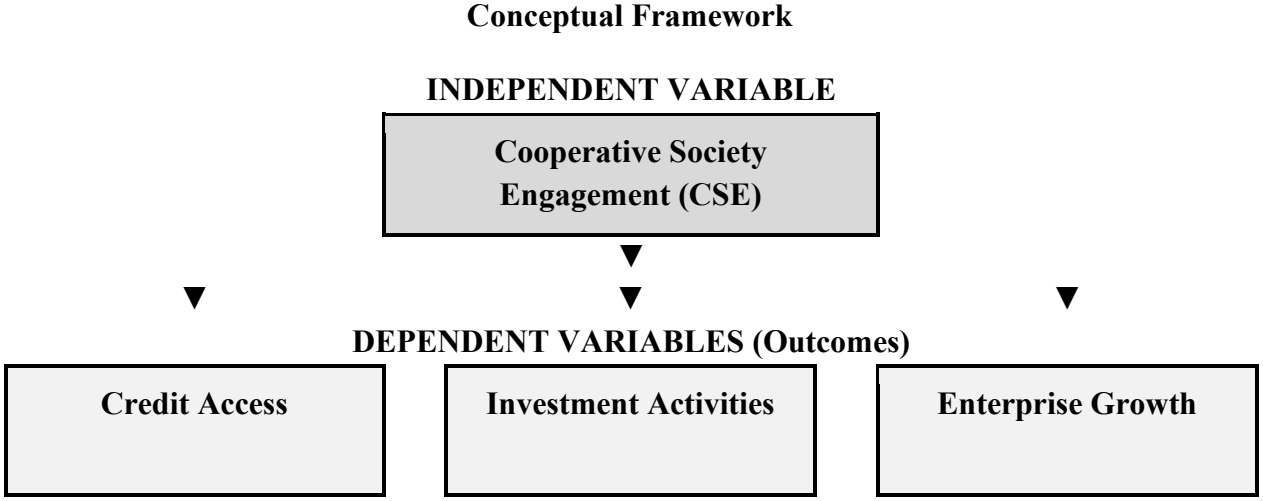
Adeosun and Shittu (2021) conceptualise enterprise growth as the expansion of business activities that contributes to employment creation, increased productivity, wealth generation, and overall economic development. Their perspective highlights enterprise growth as an indicator of business sustainability and entrepreneurial success within emerging economies.

Similarly, Nwachukwu, Ibrahim, Lawal, and Abdullahi (2025) describe enterprise growth within cooperative societies as the gradual improvement in members' business capacity through enhanced access to finance, collective support systems, entrepreneurial development, and resource mobilisation. They argue that cooperative institutions provide an enabling framework that strengthens enterprise resilience, promotes business expansion, and supports sustainable livelihood development. Conceptually, enterprise growth represents the cumulative outcome of effective resource utilisation, productive investment, innovation, entrepreneurial capability, and institutional support. It therefore serves as an important indicator of the long-term sustainability, competitiveness, and economic performance of enterprises owned or managed by cooperative members.

Conceptual Framework

The conceptual framework identifies cooperative society engagement as the independent variable influencing three distinct dependent variables: credit access, investment activities, and enterprise growth. These outcomes are examined independently in line with the study objectives, research instrument, and analytical model.

Figure 2.1: Conceptual Framework of the Study



Source: *Researcher's Illustration (2026).*

Theoretical Framework

This study is anchored on two complementary theories: Social Capital Theory and Financial Intermediation Theory.

Social Capital Theory

Developed by Coleman (1988) and further popularised by Putnam (1993), Social Capital Theory posits that networks of trust, social relationships, reciprocity, and collective norms constitute valuable social capital that facilitates cooperation and coordinated action for mutual benefit. The theory explains how trust functions mechanically within a cooperative setting: because members know and are known by one another, the cooperative can extend credit on the strength of social collateral and peer accountability rather than relying solely on physical collateral, which directly improves credit access. Social networks similarly promote investment by allowing members to pool savings, share market information, and coordinate the joint purchase of inputs or equipment that no single member could afford alone. Cooperative membership translates into enterprise growth through the same network effect: members can draw on shared bargaining power in input and output markets, and on collectively accumulated business knowledge, to expand and sustain their individual enterprises.

Financial Intermediation Theory

Developed by Diamond (1984), Financial Intermediation Theory explains why institutions such as cooperatives exist between savers and borrowers: intermediaries reduce the information asymmetry and monitoring costs that individual lenders would otherwise face, by pooling funds from many savers and delegating the task of screening and monitoring borrowers to the intermediary itself. Applied to this study, cooperative societies function as delegated monitors for their members collecting savings, assessing creditworthiness through first-hand knowledge of members' circumstances, and disbursing loans at lower transaction cost than either informal moneylenders or distant formal banks could achieve. This theory therefore provides the explicit financial-systems logic for why cooperative credit access functions efficiently, complementing the social-network logic that Social Capital Theory provides for investment behaviour and enterprise growth. Together, Social Capital Theory and Financial Intermediation Theory provide a coherent dual explanation for how cooperative society engagement is expected to influence credit access, investment activities, and enterprise growth among members in Kaduna State.

Empirical Review

Nwachukwu, Ibrahim, Lawal, and Abdulahi (2025) examined the influence of cooperative societies on entrepreneurial business growth and poverty alleviation in South-West Nigeria. The study sought to determine the extent to which cooperative societies contribute to entrepreneurial development and sustainable economic growth among members. A descriptive survey research design was adopted. Data were collected from 352 registered cooperative members selected through stratified random sampling from six state capitals in South-West Nigeria and analysed using linear and multiple regression techniques. The findings revealed that cooperative societies significantly enhanced entrepreneurial business growth through improved access to finance, business support services, and capacity development programmes. The study further established that cooperative participation contributed positively to poverty reduction and enterprise sustainability. However, the study concentrated mainly on entrepreneurial growth and poverty alleviation without specifically examining the relationships among cooperative engagement, credit access, investment activities, and enterprise growth, which constitute the focus of the present study.

Ogbe and Asanya (2024) investigated the effect of cooperative credit services on the performance of agro-based enterprises in Abia State, Nigeria. The study specifically examined whether access to cooperative loans improves members' business performance and investment decisions. A survey research design was adopted using structured questionnaires administered to registered cooperative members. Descriptive statistics and multiple regression analysis were employed for data analysis. The results showed that timely access to cooperative credit significantly improved business expansion, investment in productive assets, and enterprise profitability among members. Nevertheless, the study focused primarily on agro-based enterprises and did not comprehensively examine enterprise growth indicators across different categories of cooperative societies.

Enwa, Gbigbi, Ikenga, and colleagues (2024) assessed the effectiveness of cooperative societies in agricultural credit delivery in Nigeria. The objective was to evaluate the role of cooperatives in providing accessible credit to rural farmers and promoting agricultural development. The study employed a systematic review of existing empirical evidence on cooperative credit delivery in Nigeria. The review revealed that cooperative societies remain one of the most reliable channels for agricultural credit distribution because they provide affordable loans, flexible repayment arrangements, and reduced collateral requirements for members. Despite these contributions, the study was largely restricted to agricultural credit delivery and did not examine how cooperative credit translates into investment activities and enterprise growth among cooperative members.

Mohammed, Bardai, and Adam (2025) examined the implications of access to finance for the growth of micro, small, and medium enterprises (MSMEs) in Nigeria. The study aimed to determine how conventional and alternative financing channels influence business growth. A mixed-methods research design was employed, combining questionnaire administration with interviews involving MSME operators. Quantitative data were analysed using regression analysis, while qualitative responses were subjected to thematic analysis. The findings indicated that improved access to finance significantly enhanced enterprise expansion, profitability, business sustainability, and employment generation. However, the study considered financing channels generally and did not specifically examine cooperative societies as institutional mechanisms for improving credit access and investment activities among members.

Yusuf, Mahadi, Akande, and colleagues (2024) investigated the impact of access to credit, credit delivery, and interest rate variation on the performance of small and medium enterprises in Kwara State, Nigeria. The study sought to determine the extent to which credit accessibility influences business performance. A quantitative research design was adopted using survey data obtained from SME operators and analysed through multiple regression analysis. The study established that timely access to credit significantly improved business performance, while high lending interest rates adversely affected enterprise growth. The authors recommended expanding affordable financing opportunities for small businesses. However, the study focused on formal financial institutions and SMEs generally without examining the distinctive contribution of cooperative societies to members' investment activities and enterprise growth.

Nwosu, Orji, Urama, Emecheta, Chukwuma, and Chukwuma (2023) investigated the relationship between social capital, credit access, and household non-farm enterprises in Nigeria. The study aimed to determine whether cooperative membership and other forms of social capital influence access to enterprise credit and business development. Secondary data from the Nigerian General Household Survey were analysed using Probit and Heckman selection models. The findings revealed that membership in cooperative societies significantly increased the probability of accessing enterprise loans and the amount of credit obtained. The study further established that cooperative membership enhanced the utilisation of loans for productive business activities.

However, the study concentrated on household non-farm enterprises and did not specifically examine investment activities and enterprise growth among cooperative members.

Akerele, Falola, Osinowo, Fadipe, and Mufutau (2023) examined the influence of cooperative membership on the socio-economic welfare of small-scale enterprise operators in Ogun State, Nigeria. The study sought to determine the benefits of cooperative membership and its effect on members' socio-economic welfare. A survey research design was adopted, and data collected from cooperative members were analysed using descriptive and inferential statistical techniques. The findings showed that cooperative membership significantly improved members' welfare through better access to finance, business support services, and income-generating opportunities. The study concluded that cooperative societies contribute positively to the sustainability of small-scale enterprises. Nevertheless, the research focused primarily on socio-economic welfare and did not comprehensively assess investment activities and enterprise growth as distinct outcome variables.

Onugu, Ojiagu, and Ajayi (2024) investigated gender mainstreaming and the financial growth of cooperative enterprises in rural communities of Ekiti State, Nigeria. The study specifically examined how gender participation in leadership and decision-making influences the financial performance of cooperative enterprises. A survey research design was employed, and regression analysis was used to analyse data collected from cooperative members. The findings indicated that gender-inclusive leadership and participatory decision-making significantly improved profitability and asset management within cooperative enterprises. The study concluded that effective governance enhances the financial growth of cooperative societies. However, the study did not examine members' access to cooperative credit, investment activities, or enterprise growth.

Musa, Wafure, and Yetunde (2024) examined the impact of Development Bank credit financing on the performance of small and medium enterprises in Nigeria. The study aimed to determine the influence of development finance on employment generation, financial asset growth, and business performance. A survey research design involving 398 SMEs was adopted, and binary logistic regression was employed for data analysis. The results showed that access to development bank credit significantly enhanced employment generation and financial asset growth among beneficiary enterprises. Nevertheless, the study focused on development bank financing rather than cooperative societies and therefore did not evaluate the contribution of cooperative membership to credit access, investment activities, and enterprise growth.

Mangnus and Schoonhoven-Speijer (2020) examined the role of African cooperatives in addressing institutional and market challenges across selected African countries. The study sought to determine how cooperatives adapt to changing economic environments while sustaining members' access to markets and productive resources. A qualitative multiple-case study approach was employed using document analysis and interviews with cooperative stakeholders. The findings indicated that cooperatives enhance members' resilience by facilitating collective marketing, strengthening institutional networks, and improving access to productive resources despite challenging operating environments. However, the study focused primarily on institutional

adaptation and did not empirically examine the influence of cooperative participation on credit access, investment activities, and enterprise growth at the individual member level.

Camargo Benavides and Ehrenhard (2021) conducted a systematic review of cooperative enterprise research with the objective of identifying major themes and future research directions relating to cooperative organisations. Using a systematic literature review of peer-reviewed studies published between 2000 and 2020, the authors synthesised evidence on governance, sustainability, innovation, and organisational performance. The review revealed that cooperative enterprises contribute significantly to economic and social development through member participation, collective ownership, and sustainable organisational practices. The authors further observed that empirical studies linking cooperative participation with measurable enterprise-level outcomes remain limited, thereby recommending more empirical investigations on members' economic performance. This recommendation aligns with the present study's focus on credit access, investment activities, and enterprise growth.

Mabula, Dongping, and Chivundu-Ngulube (2020) investigated the influence of perceived cooperative support on entrepreneurship orientation, organisational learning, and innovation performance among small and medium-sized enterprises. The study adopted a quantitative survey design involving SME managers, while structural equation modelling was used to analyse the data. The findings revealed that cooperative support significantly strengthened entrepreneurial orientation, organisational learning, and innovation performance. The study concluded that supportive cooperative environments enhance enterprise competitiveness and long-term business performance. Nevertheless, the research concentrated on innovation outcomes and did not specifically examine members' access to cooperative credit or productive investment activities.

Joseph and Sife (2025) examined the contribution of cooperatives to inclusive economic growth across high-performing cooperative economies. The study employed panel data covering leading cooperative countries between 2016 and 2023 and analysed the data using dynamic fixed-effects and Generalised Method of Moments (GMM) estimation techniques. The findings indicated that strong cooperative institutions significantly promote inclusive economic growth, particularly where institutional quality and supportive policy environments exist. However, the study adopted a macroeconomic perspective and did not investigate the enterprise-level outcomes of individual cooperative members, which constitute the focus of the present study.

Bisri (2025) reviewed recent empirical evidence on cooperative sustainability with the objective of identifying the major drivers of cooperative business performance across different sectors. The study synthesised empirical findings from Scopus-indexed journal articles using a systematic review approach. The review showed that participatory governance, innovation, entrepreneurial orientation, digitalisation, and financial stability consistently enhance cooperative sustainability and organisational performance. However, the study focused on organisational sustainability

rather than examining how cooperative membership influences members' credit access, investment activities, and enterprise growth.

Research Gap

The reviewed empirical studies reveal three important gaps. First, most Nigerian studies concentrated on either credit access, agricultural productivity, business performance, or members' welfare, without integrating credit access, investment activities, and enterprise growth into a single study. Second, many international studies examined cooperative governance, sustainability, and institutional performance from organisational or macroeconomic perspectives rather than focusing on individual cooperative members' enterprise outcomes. Third, very limited empirical evidence exists on the combined influence of cooperative society engagement on credit access, investment activities, and enterprise growth among cooperative members in Kaduna State. This study addresses these gaps by examining how cooperative society engagement influences these three outcome variables simultaneously using evidence from registered cooperative societies in Kaduna State.

Methodology

Research Design

This study adopted a descriptive survey research design, which is appropriate for investigating the characteristics, relationships, and perceptions of a defined population at a given point in time (Creswell & Creswell, 2018). The design facilitated the systematic collection of quantitative data from a large sample of cooperative members across Kaduna State.

Population and Sample

The target population comprised registered cooperative society members in Kaduna State. According to the Kaduna State Ministry of Cooperatives and Wealth Creation (2022), there are approximately 4,200 registered cooperative societies with an estimated active membership of 210,000 individuals. Using Taro Yamane's (1967) formula for sample size determination at a 95% confidence level and a 5% margin of error, a sample size of 384 respondents was obtained: $n = N \div [1 + N(e)^2]$, where $N = 210{,}000$ and $e = 0.05$, yielding $n \approx 384$.

A multi-stage sampling technique was employed. In the first stage, Kaduna State was stratified into three senatorial zones (Kaduna North, Kaduna Central, and Kaduna South), from which two local government areas (LGAs) per zone, noted for high cooperative activity, were purposively selected. In the second stage, registered cooperatives within the selected LGAs were identified, and simple random sampling was used to select cooperative societies and members proportionally. The final sample of 384 was then allocated across the three cooperative types agricultural, consumer, and multipurpose in proportion to their relative share of registered membership in the selected LGAs, ensuring that no single cooperative type was over- or under-represented relative to its actual prevalence in the population; the realised sample composition (Table 1: 43.7%

agricultural, 32.3% multipurpose, 24.0% consumer) closely mirrors the official distribution of cooperative types reported by the Kaduna State Ministry of Cooperatives and Wealth Creation (2022).

Ethical Considerations

Participation in the study was entirely voluntary. Prior to administration, the purpose of the study was explained to each respondent, and informed consent was obtained verbally before the questionnaire was administered. Respondents were assured that their responses would be treated with strict confidentiality, used solely for academic purposes, and reported only in aggregate form, with no individual or cooperative society identifiable in the findings. Respondents retained the right to decline participation or withdraw at any point without consequence. Ethical clearance for the conduct of this study was obtained from the appropriate institutional research ethics committee prior to data collection.

Data Collection

Data were collected using a structured questionnaire developed by the researcher and validated by three experts in cooperative economics and development finance. The instrument was divided into four sections: Section A (demographic profile), Section B (credit access indicators), Section C (investment activity indicators), and Section D (enterprise growth indicators). A five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used for attitudinal items. The reliability of the instrument was established using Cronbach's Alpha, yielding coefficients of 0.81, 0.79, and 0.84 for the three substantive sections respectively, all exceeding the acceptable threshold of 0.70 (Nunnally, 1978).

Method of Data Analysis

Quantitative data were analysed using IBM SPSS Statistics version 26. Descriptive statistics (frequencies, means, and standard deviations) were used to summarise respondent characteristics and scale items. Pearson product-moment correlation was employed to examine bivariate relationships between variables. Ordinary least squares (OLS) multiple regression was used to test the null hypotheses and quantify the predictive relationships among cooperative society engagement, credit access, investment activities, and enterprise growth. The significance threshold was set at $p < 0.05$.

Although the underlying survey items were measured on a five-point ordinal Likert scale, each substantive construct (credit access, investment activities, enterprise growth) was operationalised as a composite mean score across multiple items per section, rather than as a single ordinal item. Composite scores formed from five or more Likert items are conventionally treated as approximately continuous/interval-level measures in social science research, which is the standard justification for applying OLS regression to Likert-derived composite scores (Norman, 2010). This

approach is consistent with established practice in cooperative and development finance research using similarly constructed composite indices.

Since each of the three regression models contains only one predictor variable (cooperative society engagement), multicollinearity is not a relevant concern. Prior to interpretation of the main regression results, the classical OLS assumptions were verified through a set of post-estimation diagnostic tests: the Shapiro–Wilk test was used to assess residual normality; the Breusch–Pagan test was applied to detect heteroscedasticity; and the Durbin–Watson statistic was computed to check for autocorrelation. The results of these diagnostics are reported in Table 6 (Regression Diagnostic Tests) in the Data Analysis section below.

The regression models for each objective are specified as follows:

Model 1 (Credit Access): $CA = \beta_0 + \beta_1 CSE + \varepsilon$

Model 2 (Investment Activities): $IA = \beta_0 + \beta_1 CSE + \varepsilon$

Model 3 (Enterprise Growth): $EG = \beta_0 + \beta_1 CSE + \varepsilon$

Where CA, IA, and EG represent the composite mean scores for credit access, investment activities, and enterprise growth respectively; CSE represents cooperative society engagement; β_0 is the constant; β_1 is the regression coefficient; and ε is the stochastic error term.

Data Presentation and Analysis

Demographic Profile of Respondents

A total of 384 questionnaires were administered, of which 371 were returned completed and valid, representing a response rate of 96.6%. Table 1 presents the demographic characteristics of respondents.

Table 1: Demographic Profile of Respondents (N = 371)

Variable	Category	Frequency	Percentage (%)
Gender	Male	221	59.6
	Female	150	40.4
Age (years)	18 – 30	87	23.5
	31 – 45	156	42.0
	46 – 60	98	26.4
	Above 60	30	8.1
Education	Primary	62	16.7
	Secondary	113	30.5
	Tertiary	148	39.9

	No formal education	48	12.9
Cooperative Type	Agricultural	162	43.7
	Consumer	89	24.0
	Multipurpose	120	32.3
Years of Membership	< 2 years	54	14.6
	2 – 5 years	134	36.1
	6 – 10 years	112	30.2
> 10 years		71	19.1

Source: Field Survey (2026).

Table 1 reveals that the majority of respondents (59.6%) were male, while 40.4% were female, reflecting the gender composition of cooperative membership in the study area. The dominant age cohort was 31–45 years (42.0%), indicating that cooperatives primarily attract economically active adults. Respondents with tertiary education constituted the largest educational category (39.9%). Agricultural cooperatives had the highest representation (43.7%), followed by multipurpose (32.3%) and consumer cooperatives (24.0%). Most respondents (36.1%) had 2–5 years of membership experience.

Credit Access through Cooperative Societies

Table 2 presents the descriptive statistics for credit access indicators.

Table 2: Descriptive Statistics for Credit Access Items

Item	N	Mean	SD
My cooperative society provides loans at affordable interest rates	371	4.21	0.73
Cooperative membership reduced collateral requirements for credit	371	4.05	0.81
I have accessed credit through my cooperative that I couldn't get from banks	371	4.33	0.69
The cooperative's loan repayment terms are flexible and manageable	371	3.97	0.92
Cooperative membership has improved my overall access to financial services	371	4.18	0.77
Composite Mean	**371**	**4.15**	**0.78**

Note: Scale: 1 = Strongly Disagree, 5 = Strongly Agree; Mean ≥ 3.50 = Positive assessment.

The results in Table 2 indicate that respondents held consistently positive perceptions of cooperative credit facilitation, with a composite mean of 4.15 (SD = 0.78). The highest-rated item was access to credit unavailable from banks (Mean = 4.33), suggesting that cooperatives serve as critical alternative financial channels. These findings support the rejection of null hypothesis H_{01}.

Regression Results: Cooperative Engagement and Credit Access (H_{01})

Table 3: OLS Regression Effect of Cooperative Engagement on Credit Access

Variable	B	Std. Error	Beta (β)	t-value	p-value
Constant	1.243	0.312	—	3.984	0.000
Cooperative Society Engagement (CSE)	0.618	0.074	0.534	8.351	0.000

Note: $p < 0.05$ (statistically significant). $R^2 = 0.487$; Adjusted $R^2 = 0.485$; $F(1, 369) = 69.74$, $p = 0.000$.

The regression model in Table 3 is statistically significant (F = 69.74, p = 0.000), explaining 48.7% of the variance in credit access ($R^2 = 0.487$). Cooperative society engagement (CSE) is a significant positive predictor of credit access (β = 0.534, t = 8.351, p = 0.000). In practical terms, a one-standard-deviation increase in cooperative society engagement is associated with roughly a 0.53-standard-deviation increase in members' credit access score a substantively large effect that, translated onto the study's 5-point scale, corresponds to several respondents moving from a neutral or disagreement assessment of their credit access to a clearly positive one as engagement intensifies. These results provide sufficient evidence to reject H_{01} and conclude that cooperative societies significantly facilitate access to credit among members in Kaduna State.

Table 2b presents the descriptive statistics for investment activities indicators.

Table 2b: Descriptive Statistics for Investment Activities Items

Item	N	Mean	SD
I use cooperative funds to purchase productive assets (tools, equipment)	371	4.08	0.76
Cooperative savings have enabled me to expand my business operations	371	4.17	0.71
Membership has improved my capacity to invest in raw materials and inputs	371	4.02	0.83

Cooperative credit has supported reinvestment of profits into my enterprise	371	3.94	0.89
Belonging to a cooperative has increased my overall productive investment	371	4.11	0.78
Composite Mean	**371**	**4.06**	**0.79**

Note: Scale: 1 = Strongly Disagree, 5 = Strongly Agree; Mean ≥ 3.50 = Positive assessment.

The results in Table 2b show that respondents positively assessed cooperative society engagement as a driver of productive investment, with a composite mean of 4.06 (SD = 0.79). The highest-rated item concerned the use of cooperative savings to expand business operations (Mean = 4.17), indicating that members primarily leverage cooperative resources for growth-oriented activities. All item means exceed the 3.50 threshold, confirming an overall positive orientation toward cooperative-supported investment among respondents. These findings provide descriptive support for the rejection of null hypothesis H_{02}.

Regression Results: Cooperative Engagement and Investment Activities (H_{02})

Table 4: OLS Regression Effect of Cooperative Engagement on Investment Activities

Variable	B	Std. Error	Beta (β)	t-value	p-value
Constant	1.109	0.287	—	3.864	0.000
Cooperative Society Engagement (CSE)	0.572	0.081	0.498	7.062	0.000

Note: $p < 0.05$ (statistically significant). $R^2 = 0.461$; Adjusted $R^2 = 0.459$; $F(1, 369) = 49.87$, $p = 0.000$.

Table 4 shows that cooperative society engagement significantly predicts investment activities (β = 0.498, t = 7.062, p = 0.000), with the model accounting for 46.1% of the variance in investment behaviour ($R^2 = 0.461$). Practically, this indicates that members who engage more actively with their cooperative through savings mobilisation, attendance at cooperative meetings, and participation in group schemes report correspondingly higher levels of investment in inputs, equipment, and working capital; the effect size here is only marginally smaller than that observed for credit access, suggesting that for many members, credit access and investment behaviour move together rather than being separable outcomes. Null hypothesis H_{02} is therefore rejected; cooperative societies significantly impact investment activities of members in Kaduna State.

Table 2c presents the descriptive statistics for enterprise growth indicators.

Table 2c: Descriptive Statistics for Enterprise Growth Items

Item	N	Mean	SD
My enterprise has recorded increased sales since joining a cooperative	371	4.19	0.74
Cooperative membership has improved my business profitability	371	4.03	0.82
I have been able to expand my workforce through cooperative support	371	3.88	0.91
My business assets have grown as a result of cooperative engagement	371	4.12	0.77
Cooperative participation has improved the long-term sustainability of my enterprise	371	4.21	0.69
Composite Mean	**371**	**4.09**	**0.79**

Note: Scale: 1 = Strongly Disagree, 5 = Strongly Agree; Mean ≥ 3.50 = Positive assessment.

Table 2c reveals that respondents reported consistently positive enterprise growth outcomes attributable to cooperative membership, with a composite mean of 4.09 (SD = 0.79). The highest-rated item was improvement in long-term enterprise sustainability (Mean = 4.21), followed by increased sales (Mean = 4.19), suggesting that cooperative engagement is associated most strongly with durable, cumulative business outcomes rather than short-term gains alone. The relatively lower rating for workforce expansion (Mean = 3.88) reflects the predominantly micro-scale nature of member enterprises in the study area. All item means remain well above the positive assessment threshold, providing descriptive support for the rejection of null hypothesis H_{03}.

Regression Results: Cooperative Engagement and Enterprise Growth (H_{03})

Table 5: OLS Regression Effect of Cooperative Engagement on Enterprise Growth

Variable	B	Std. Error	Beta (β)	t-value	p-value
Constant	0.987	0.301	—	3.279	0.001
Cooperative Society Engagement (CSE)	0.603	0.078	0.521	7.731	0.000

Note: $p < 0.05$ (statistically significant). $R^2 = 0.503$; Adjusted $R^2 = 0.502$; $F(1, 369) = 59.77$, $p = 0.000$.

Table 5 reveals that cooperative society engagement is the strongest predictor of enterprise growth among the three models (β = 0.521, t = 7.731, p = 0.000), with 50.3% of variance in enterprise growth explained by cooperative engagement ($R^2 = 0.503$). That this is the largest R^2 among the three models is notable: it suggests that, within this sample, cooperative engagement explains enterprise-level outcomes even more consistently than it explains credit access or investment behaviour individually plausibly because enterprise growth captures the cumulative, downstream effect of both improved credit access and increased investment. H_{03} is rejected; cooperative societies significantly influence enterprise growth and sustainability in Kaduna State.

Regression Diagnostic Tests

To satisfy the classical assumptions underlying OLS regression, three post-estimation diagnostic tests were conducted for each model. The results are summarised in Table 6.

Table 6: Regression Diagnostic Test Results across All Three Models

Diagnostic Test	Model 1 (Credit Access)	Model 2 (Investment Activities)	Model 3 (Enterprise Growth)	Threshold / Decision
Shapiro–Wilk Test of Residual Normality	W = 0.987 p = 0.214	W = 0.983 p = 0.176	W = 0.985 p = 0.193	p > 0.05 in all models → Residuals are normally distributed
Breusch–Pagan Test for Homoscedasticity	$\chi^2 = 1.847$ p = 0.174	$\chi^2 = 2.013$ p = 0.156	$\chi^2 = 1.692$ p = 0.193	p > 0.05 in all models → No evidence of heteroscedasticity
Durbin–Watson Statistic for Autocorrelation	DW = 1.967	DW = 2.031	DW = 1.994	Values between 1.5 and 2.5 → No significant autocorrelation
Variance Inflation Factor (VIF) for Multicollinearity	VIF = 1.000	VIF = 1.000	VIF = 1.000	Single-predictor models → VIF = 1.000; multicollinearity not applicable

Note: Shapiro–Wilk test: H_0 = residuals are normally distributed; Breusch–Pagan test: H_0 = homoscedastic residuals; Durbin–Watson: values between 1.5 and 2.5 indicate no significant autocorrelation (Creswell & Creswell, 2018; Norman, 2010).

Residual Normality (Shapiro–Wilk Test). The Shapiro–Wilk test was used to assess whether the OLS residuals in each model were drawn from a normal distribution. The results W = 0.987 (p = 0.214) for Model 1, W = 0.983 (p = 0.176) for Model 2, and W = 0.985 (p = 0.193) for Model 3 are all non-significant at $p > 0.05$, indicating that the null hypothesis of normally distributed residuals cannot be rejected in any of the three models. This confirms that the normality assumption is satisfied across all models.

Homoscedasticity (Breusch–Pagan Test). The Breusch–Pagan test assessed whether the variance of the residuals is constant across all levels of the predictor variable. The chi-square statistics obtained $\chi^2(1) = 1.847$ (p = 0.174) for Model 1, $\chi^2(1) = 2.013$ (p = 0.156) for Model 2, and $\chi^2(1) = 1.692$ (p = 0.193) for Model 3 are all statistically non-significant, indicating the absence of heteroscedasticity in each model. The constant-variance assumption is therefore satisfied.

Autocorrelation (Durbin–Watson Statistic). The Durbin–Watson statistic was computed to test for first-order serial correlation in the residuals. The values obtained DW = 1.967 for Model 1, DW = 2.031 for Model 2, and DW = 1.994 for Model 3 all fall within the conventional acceptance range of 1.5 to 2.5, indicating no significant positive or negative autocorrelation in any of the three models. The independence assumption is therefore satisfied.

Multicollinearity (Variance Inflation Factor). Since each model includes only a single predictor variable (cooperative society engagement), multicollinearity is definitionally absent and the VIF equals 1.000 across all three models, confirming no redundancy among predictors.

Taken together, these diagnostic results confirm that all classical OLS assumptions are satisfied across Models 1, 2, and 3. The regression coefficients reported in Tables 3 to 5 are therefore unbiased, efficient, and reliable for inferential interpretation.

Discussion of Findings

Cooperative Societies and Credit Access

The finding that cooperative societies significantly influence members' access to credit ($\beta = 0.534$, p = 0.000) is consistent with the conceptual view of cooperatives as alternative financial intermediaries that fill the financing gap left by conventional banking institutions. The high composite mean (4.15) obtained for credit access items, particularly members' ability to access loans not offered by traditional banks (Mean = 4.33), corroborates the position of the International Labour Organization (ILO, 2023) that cooperative societies contribute positively to financial inclusion through member savings mobilisation, internal lending schemes, and flexible credit access.

Beyond simply confirming prior studies, this pattern is particularly plausible in the Kaduna State context for two contextual reasons. First, the state's large informal economic base of smallholder farmers, traders, and artisans (Central Bank of Nigeria, 2021) means that a substantial share of cooperative members would, in the absence of cooperative credit, have little realistic recourse to

formal bank lending, which typically requires collateral and documentation that informal-sector operators in Kaduna State frequently lack. Second, the predominance of agricultural cooperatives in the sample (43.7%, Table 1) means many respondents access credit specifically timed to planting and harvest cycles a financing pattern that conventional banks are often poorly structured to serve, but which cooperative internal lending, drawing on members' first-hand knowledge of each other's farming calendars, can accommodate directly. This is consistent with the Financial Intermediation Theory explanation advanced in the theoretical framework: cooperatives reduce information asymmetry and monitoring costs precisely because members possess local knowledge that distant formal lenders do not. The Kaduna State-specific finding from Agbasi et al. (2024) further corroborates this interpretation, showing that cooperative savings mobilisation and loan distribution within the state generate meaningful revolving credit accessible to members who would otherwise remain financially excluded.

Cooperative Societies and Investment Activities

The significant positive relationship between cooperative engagement and investment activities ($\beta = 0.498$, $p = 0.000$) supports the view that cooperative societies stimulate productive investment among members through financial and institutional support mechanisms, consistent with the International Labour Organization (ILO, 2023) and the Food and Agriculture Organization (FAO, 2023). In the Kaduna State context, this investment-promoting role appears to operate substantially through collective procurement: cooperative members emphasised access to bulk-purchased inputs and shared equipment mechanisms through which the social-network logic of Social Capital Theory translates directly into investment behaviour. Members invest more not only because they have more credit, but because cooperative membership itself reduces the unit cost and risk of investing in shared productive assets.

Cooperative Societies and Enterprise Growth

The finding that cooperative engagement exerts the strongest influence on enterprise growth ($\beta = 0.521$, $R^2 = 0.503$, $p = 0.000$) among the variables examined suggests that the combined benefits of cooperative membership significantly contribute to business expansion, productivity improvement, and enterprise sustainability. This finding supports the conceptual position of Birchall (2022), who argues that cooperative societies are resilient economic institutions that strengthen members' bargaining power, facilitate access to productive resources, and promote sustainable livelihoods through collective ownership and member participation all of which are necessary conditions for sustained enterprise growth. It is also consistent with Novkovic (2022), who argues that sustainable enterprise growth is closely associated with access to finance, market participation, and organisational support systems that enhance business resilience.

The comparatively higher explanatory power of the enterprise-growth model relative to the credit-access and investment models is itself informative for the Kaduna State context: it implies that enterprise growth is not simply a downstream by-product of credit access alone, but is reinforced

by the combined effect of credit, collective investment, and market-support services (such as group marketing arrangements) that cooperatives in the sampled LGAs appear to provide jointly rather than separately. The implication is that cooperative societies in Kaduna State function not only as financial support institutions but also as integrated platforms for enterprise development among members.

Conclusion

This study set out to examine the contribution of cooperative societies to credit access, investment activities, and enterprise growth among members in Kaduna State, Nigeria. Across all three dimensions examined, cooperative society engagement emerged as a statistically significant, positive predictor: it explained 48.7% of the variance in credit access, 46.1% of the variance in investment activities, and 50.3% of the variance in enterprise growth. The findings confirm that cooperatives serve not merely as savings clubs or social organisations, but as active institutional mechanisms that improve members' access to affordable financing, encourage productive investment, and support the growth and sustainability of member enterprises.

The study's findings lend empirical support to both Social Capital Theory and Financial Intermediation Theory within the cooperative context in Kaduna State: cooperative membership functions simultaneously as a network of trust that lowers the social cost of credit, investment coordination, and market participation, and as a delegated financial intermediary that reduces the information and monitoring costs ordinarily associated with lending to low-income, informal-sector members. Regression diagnostic tests comprising the Shapiro–Wilk normality test, Breusch–Pagan homoscedasticity test, and Durbin–Watson autocorrelation test confirmed that all classical OLS assumptions were satisfied across the three models, reinforcing the reliability and validity of the reported findings. The findings carry policy significance, highlighting the practical case for governments and development partners to recognise and strengthen cooperatives as instruments for improving credit access, investment capacity, and enterprise development at the grassroots level in Nigeria.

Recommendations

Based on the empirical findings of this study, the following recommendations are offered, organised in line with the three study objectives:

1. Cooperative societies should strengthen their credit administration by encouraging regular savings among members, ensuring prompt loan processing and disbursement, and adopting flexible repayment arrangements that reflect members' income levels and business activities. The Kaduna State Ministry of Cooperatives and Wealth Creation should also provide regular supervision, technical support, and capacity-building programmes to improve cooperative credit management and enhance members' access to affordable finance.

2. Cooperative societies should promote productive investment among members by organising regular financial literacy and entrepreneurship training, encouraging group investment initiatives, and supporting members in acquiring productive assets through cooperative financing. Government agencies and development partners should complement these efforts by providing technical assistance and implementing programmes that strengthen the investment capacity of cooperative members.
3. Cooperative societies should provide continuous support for members' business growth by organising business development programmes, facilitating market linkages, and encouraging information sharing on business opportunities. They should also collaborate with relevant government agencies, financial institutions, and development organisations to provide mentoring, business advisory services, and other forms of support that will enable members to expand and sustain their enterprises over time.

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