

EFFECT OF FINANCIAL MANAGEMENT PRACTICES ON THE EFFICIENCY OF COOPERATIVE SOCIETIES IN SOKOTO STATE, NIGERIA

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Abstract

This paper examines the role of financial management practices in enhancing the efficiency of cooperative societies in Sokoto State, Nigeria. Cooperative societies are central to the promotion of grassroots development, yet many remain weak and inefficient due to poor financial management. This study focuses on two core financial management decisions; investment and financing decisions and their effect on two key dimensions of efficiency: productivity efficiency and allocative efficiency. Guided by Agency Theory, Resource-Based View, and Transaction Cost Economics, the study employed a cross-sectional survey design, with data collected from 279 members of cooperative society's management from 254 active registered cooperative societies with the ministry of commerce as at 2024. Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to analyze the data. Findings indicate that investment decisions insignificantly influence productivity efficiency, while financing decisions does not affect allocative efficiency.

Keywords: *Financial management, efficiency, cooperative societies.*

Introduction

Financial management has long been recognized as the foundation of organizational survival and growth. For cooperative societies, which are voluntary associations established to promote the welfare of members, financial management determines whether objectives are achieved or compromised. For instance, some researchers have maintained that, a firm would improve her return on assets and capital (Mwavu, 2018) as well as financial sustainability (Mercy & Ombata, 2020) with a good focus on financial management practices (Ekwochi & Ejim, 2011).

In Nigeria, cooperative societies play a vital role in bridging the gap between the formal financial sector and the grassroots. They provide access to credit, encourage savings, and enable small-scale investments population (Kareem et al., 2012). In Sokoto State, cooperative societies have become increasingly important in rural and urban communities alike. However, many have struggled with inefficiency, largely due to weak financial management practices. This raises crucial questions on the extent to which financial management (investment and financing decisions) significantly affect the efficiency of cooperatives societies.

Statement of the problem

Financial management is a critical determinant of organizational health and efficiency. A financially healthy organization is one that demonstrates sound financial practices, while poor

financial management signals organizational distress (Ogunmakin et al., 2022; Lodikero & Soyinka, 2023; John & Umar, 2025). Despite this recognized importance, cooperative societies in Nigeria continue to struggle with financial inefficiencies, leaving members unable to access funds during times of need or unforeseen circumstances. This persistent challenge raises concerns about the capacity of cooperative societies to fulfil their core mandate, even after many years of operation, and provides the primary motivation for this study.

From a methodological standpoint, several prior studies examining financial management and organizational performance have relied on small sample sizes (Mana, 2019; Ekwochi & Ejim, 2021; Essendi, 2013; Ogunmakin et al., 2022; John & Umar, 2025; Lodikero & Soyinka, 2023). Since larger sample sizes produce findings that more accurately reflect reality, the limited sample sizes adopted in these studies constrain the generalizability of their conclusions. This study addresses this gap by employing a larger and more representative sample.

Geographically, existing research on the effect of financial management on organizational performance has been concentrated in selected African countries, particularly Kenya, and in the southern and eastern regions of Nigeria (Amos et al., 2015; Ekwochi & Ejim, 2021; Essendi, 2013; Ikpefan et al., 2015; Mercy & Ombaba, 2020; Mwavu, 2018; Ogunmakin et al., 2022; Tonui & Otinga, 2019; Muhammad et al., 2025; Asabi et al., 2024; John & Umar, 2025; Lodikero & Soyinka, 2023). The northern states of Nigeria have received little to no scholarly attention in this regard. This geographical gap justifies the focus of the current study on cooperative societies in Sokoto State.

Research Objective

The broad objective is to examine the effect of financial management on the efficiency of cooperative societies in Sokoto State.

Research Hypotheses

H₀₁: Financial management (Investment decision) do not significantly affect the efficiency (productivity) of cooperative societies in Sokoto State.

H₀₂: Financial management (financing decision) do not significantly influence the efficiency (allocation) of cooperative societies in Sokoto State.

Literature Review

Financial Management

Financial management occupies a central role in the survival and growth of any organization, serving as both a planning and control mechanism for business finance (Brealey et al., 2020). While scholars broadly agree on its foundational importance, their conceptualizations vary in emphasis. Brealey et al. (2020) approach financial management primarily as an analytical and decision-making framework, whereas Ross et al. (2019) situates it within a broader organizational context by categorizing financial decisions into long-term and short-term liquidity decisions. What both perspectives share, however, is the recognition that financial management encompasses three core decision areas: investment, financing, and dividend policy. This consensus suggests that regardless of organizational type, sound financial management requires deliberate and coordinated action across all three dimensions.

Investment Decisions:

The investment decision, which is the allocation of limited financial resources to projects with the highest possible returns, has attracted considerable scholarly attention, though with differing emphases. Daniel and Amos (2015) categorize investment decisions broadly to include strategic investment, capital expenditure, innovation, and expansion, arguing that the nature of the asset acquired, whether long-term or short-term, fundamentally shapes the decision-making process. Ross et al. (2019) and Brealey et al. (2020) similarly highlight the importance of capital budgeting but place greater weight on risk management and the influence of macroeconomic variables such as inflation and tax benefits. Critically, while these studies provide robust frameworks for corporate investment decision-making, they are largely anchored in profit-oriented firms, leaving a conceptual gap regarding how investment decisions function within non-profit or member-driven entities such as cooperative societies, where profit maximization is not the primary objective.

Financing Decisions:

Financing decisions, which concern the optimal mix of debt and equity in funding organizational activities, have equally generated scholarly debate. Richard (2022) and Kester and Robbin (2019) both engage with capital structure theory, though from different angles: Richard (2022) emphasizes the theoretical relationship between debt employment and shareholder returns, while Kester and Robbin (2019) focus more on the practical trade-off between financial risk and return. A point of convergence across both perspectives is that an imbalanced capital structure, whether overly debt-dependent or equity-heavy, can undermine organizational performance. However, a critical limitation of this body of literature is that it predominantly addresses financing decisions in the context of large, publicly listed firms. The applicability of these capital structure theories to cooperative societies, which operate under member-contribution models rather than external capital markets, remains underexplored and warrants further investigation.

Cooperative Societies: Conceptual and Operational Considerations

The cooperative society model, rooted in the voluntary pooling of resources among like-minded individuals for mutual benefit, has been defined and theorized in various ways. The International Cooperative Alliance (ICA, 1995) provided the most widely cited definition, situating cooperatives as member-owned organizations serving shared social and economic goals. Kabugu (2014) builds on this by emphasizing the operational dimension, that cooperatives are not only owned by members but are also governed and run for their exclusive benefit. What distinguishes cooperatives from conventional business organizations, therefore, is not merely their ownership structure but their purpose: member welfare, rather than profit maximization, is the primary driver of decision-making. This distinction is critical because it implies that the financial management frameworks developed for profit-oriented firms cannot be uncritically applied to cooperatives. Yet, as the literature reviewed above demonstrates, most existing studies on financial management have failed to adequately account for this organizational difference, creating a theoretical gap this study seeks to address.

Efficiency: Productivity and Allocative Dimensions

Efficiency, as broadly defined as a way of achieving maximum output from minimum input, is a central performance metric for cooperative societies. Two dimensions are particularly relevant: productive efficiency, which measures how well an organization maximizes output given its available resources, and allocative efficiency, which concerns the optimal distribution of those resources across competing needs. Ekwochi et al. (2018) establish a direct link between financial

management and productive efficiency, arguing that how a firm manages its finances consequentially determines its long-term value and survival. However, their analysis focuses primarily on the productive dimension, with limited attention to allocative efficiency, a notable gap, given that cooperative societies must balance resource distribution among multiple members with competing needs. Synthesizing both dimensions therefore offers a more comprehensive lens for evaluating cooperative society performance, which this study adopts.

Empirical review

Considering a study carried out by Mercy and Ombaba (2020), in their study used theory of budgeting to investigate the effect of budgeting on financial sustainability of dairy cooperatives in Uasin Gishu area of Kenya, through descriptive survey research design. Using Ordinary Least Square (OLS) regression to analyze the secondary data obtained from 160 listed companies on Bompay Stock Exchange Index within 2000-2014, established that budgeting had a positive and significant effect on financial sustainability of dairy cooperatives. Despite focusing on budgeting to gain insight into financial sustainability of cooperatives, budgeting alone as an aspect of financing decision without other aspects of financial management like investment, dividends and working capital decisions cannot be relied upon to guarantee financial sustainability of cooperative societies.

In the same vein, Ekwochi and Ejim (2021) used regression to analyse panel data collected from 10 listed manufacturing firms in the South Eastern States of Nigeria from 2008-2017 when investigating the effect of working capital management with emphasis on factors such as cash collection and cash payment period as well as current ratio and inventory period on productivity as measured by return on asset. The finding of their study suggested that cash collection and cash payment period had a negative impact on return on assets, while both current ratio and inventory period had positive impact on return on assets. However, the outcome of their study may not be generalized because it only considered working capital which is a subset of financing decision for short term while ignoring other major components of financial management such as investment, financing and dividend decisions as considered by the current study.

More so, Ogunmakin et al. (2022) used OLS regression to analyze five manufacturing companies when investigating the effect of financial management practices on the performance (using proxies such as profit after tax, retained earnings and debt-equity) of manufacturing companies in Nigeria, through their ex-post-factor research for a period of 10years (2010-2020). The findings of their study suggested that there was a considerable positive association between effective financial management practices and retained profits. This finding suggests that placing greater emphasis on financial management practices can always improve the efficacy and efficiency of firms' operations. However, using measures such as profit after tax, retained earnings and debt-equity to measure performance of firm does not suffice to make generalization across the sector because they are short for short run compared to this current study.

In a study by Lodikero and Soyinka (2023) where panel data estimation was used when examining the effect of financial management practices such as working capital, capital structure and corporate governance on the performance measured with return on capital employed (ROE) of 40 listed manufacturing companies in Nigeria. The findings of their study suggested that a positive and strong correlation exist between working capital management, capital structure, corporate finance and business performance (ROE). However, relying on only ROE and neglecting other measures of performance may limits the generalization of their study. Hence, the need for the current study.

In a recent time, Asabi et al. (2024) expanded the scope of the search by using regression to analyze 267 SMEs in Osun State, Nigeria when investigating the effect of financial management skills (such as record keeping, financing, and working capital management) on the performance of women entrepreneurs via growth. The findings of their studies suggested that financial management skills have significant effect on the performance of women entrepreneurship. However, relying on factors such as record keeping, financing and working capital management alone as a measures of financial management skills does not suffice for generalizing the effect of financial management on performance unlike investment and dividend decisions. Likewise, the study ignored other factors of performance like productivity efficiency, allocative efficiency, and dynamics/innovation as considered by the current study.

John and Umar (2025) intensify this effort by regressing data from 13 banks in Nigeria when examining the impact of financial management using credit policies and expense on the expansion of deposit money banks via return on assets (ROA) and return on capital employed (ROE) in Nigeria. The findings of their study showed that positive relationship exist between credit policies, expenses, ROE, and ROA. Despite their efforts, the use of ROE and ROA alone may not guarantee long term expansion of the organisations, while working capital management only cannot account for efficiency.

Similarly, Daniel and Amos (2015) analyzed a ten-year financial statement of 13 manufacturing firms in Eldoret area of Kenya using correlation and regression analysis when investigating the effect of working capital management on organizational performance. Doing this, their study, captured working capital management using proxies such as cash conversion cycle (CCC), current assets to total assets (CA-TA), and current liabilities to total assets (CL-TA) while performance was measured using return on assets (ROA) and return on equity (ROE). Findings of their study suggest that working capital management is negatively related with ROA and ROE. Despite they restricted their study to working capital management which is just an aspect of financial management, the proxies used in capturing this segment was not enough to explain its effect on performance, unlike others variables such as inventory, stock policy, training, as well as strict loan terms and conditions.

Methodology

Using quantitative survey research method data was collected from the field using structural questionnaire from the sampled respondents to be meaningfully quantified through the use of statistical techniques.

The population is made up of 254 registered Cooperative Societies operating within Sokoto State out of a total of 698 (Ministry of Commerce and Industry, Sokoto, 2024).

The sample size for this study was ascertained using Taro Yamane (1967) sample size determination formula for attaining a sample size from a given population. Using the formula, the sample size arrived at was 254 as shown in the formula below:

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

Where:

n= Sample size

N= Population size (698)

e= Significance level (5% or 0.05)

Therefore,

$$n = \frac{N}{1 + N(0.05)^2}$$

$$n = \frac{N}{1 + N(0.05)^2}$$

$$n = \frac{698}{1 + 698(0.05)^2}$$

$$n = \frac{698}{1 + 698(0.0025)}$$

$$n = \frac{698}{1 + 1.745}$$

$$n = \frac{698}{2.745}$$

$$= 254$$

However, to cater for incomplete records and un-submitted responses by the respondents which may be due to some contingencies, a 10% (25.4) provision is made to anticipate a minimum sample size of 279 responses from the respondents. This is deemed suitable and used for study (Abdullahi, 2022; Andrade, 2020). Therefore, 279 active cooperative societies were the selected sample size for this research.

This study employed a purposive sampling technique, a type of non-probability sampling, to select respondents from the population. Purposive sampling was chosen because the study specifically required responses from management staff and members of the Board of Trustees (BOT) of cooperative societies, being the individuals who possess the requisite knowledge of financial management practices and decision-making within their organizations. This deliberate selection of information-rich respondents is well-suited to studies focused on organizational processes and governance (Etikan et al., 2016). Although non-probability sampling limits statistical generalizability, its use here is justified by the need to obtain expert, context-specific data that aligns with the study's objectives.

Measurement of Variables

Independent Variable: Financial management as an independent variable was operationalized using a dimensional approach comprising two sub-constructs: (1) Investment Decisions, which captures how cooperative societies allocate capital resources to productive ventures; and (2) Financing Decisions, which reflects how societies source and manage funds to support operations. Items measuring these dimensions were adapted from established scales in the cooperative and financial management literature and rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Dependent Variable: Cooperative efficiency being the dependent variable was also measured using two dimensions: (1) Productive Efficiency, which evaluates the capacity of cooperatives to maximise output from available inputs; and (2) Allocative Efficiency, which assesses how well cooperatives distribute resources to achieve optimal member welfare and organizational goals. Items were similarly rated on the five-point Likert scale.

Instrument Design and Structure

The structured questionnaire was the primary instrument for data collection. It was designed in a user-friendly format to reduce respondent burden and improve response quality. The questionnaire comprised two sections: Section A collected demographic information from respondents (10 items), covering variables such as age, gender, educational qualification, and years of membership/service. Section B contained items measuring the study's constructs — investment decisions, financing decisions, productive efficiency, and allocative efficiency — all rated on a five-point Likert scale

Validity and Reliability

The face and content validity of the instrument was established through expert review. The questionnaire was presented to the supervisors and specialists in cooperative societies management who assessed whether the items adequately captured the intended constructs. Feedback from the experts was incorporated before the final instrument was administered. Construct validity was assessed within the PLS-SEM framework through confirmatory factor analysis, examining indicator loadings, Average Variance Extracted (AVE), and discriminant validity. Convergent validity was confirmed where AVE values exceeded the recommended threshold of 0.50, and discriminant validity was verified using the Heterotrait-Monotrait (HTMT) ratio criterion (Hair et al., 2019). The reliability of the instrument was assessed through a pilot test conducted on a subset of respondents not included in the main study. The pilot test yielded a Cronbach's alpha coefficient of 0.8, which falls within the acceptable reliability threshold of 0.5 to 1.0 (Kadandani & Maiwada, 2015). Internal consistency was further assessed using composite reliability (CR) within the PLS-SEM model, with values above 0.70 considered acceptable (Hair et al., 2019).

Method of Data Analysis

Both descriptive and inferential statistics were employed for data analysis. Descriptive statistics (frequencies, means, and standard deviations) were used to profile the demographic characteristics of respondents and describe the distribution of responses across the constructs. For hypothesis testing, Partial Least Squares Structural Equation Modelling (PLS-SEM) was employed using SmartPLS software. PLS-SEM was preferred over CB-SEM because of its suitability for exploratory research, its ability to handle small-to-moderate sample sizes, and its robustness with non-normally distributed data (Hair et al., 2019; Ringle et al., 2015).

The PLS-SEM analysis was conducted in two stages: Measurement Model Assessment: This evaluated the reliability and validity of the constructs, including indicator loadings (threshold ≥ 0.70), internal consistency reliability (Cronbach's alpha and CR ≥ 0.70), convergent validity (AVE ≥ 0.50), and discriminant validity (HTMT < 0.85). Structural Model Assessment: This examined the hypothesised relationships between financial management (investment decisions and financing decisions) and cooperative efficiency (productive efficiency and allocative efficiency), using path coefficients, R^2 values, and the significance of path relationships via bootstrapping (5,000 sub-samples) at a 5% significance level.

Analysis and Results

H₀₁: Investment decision does not significantly affect productivity efficiency of cooperative societies in Sokoto State.

The result presented in the table below supports the acceptance of null hypothesis 1, revealing an insignificant positive effect of investment decisions on the productive efficiency of cooperative

societies in Sokoto State. This is evidenced by a path coefficient ($\beta = 0.054$), a t-statistics value of 0.717, which is below the ± 1.96 threshold, and a p-value of 0.473, which substantially exceeds the 5% level of significance. The low coefficient and high p-value collectively indicate that investment decisions, as currently practiced by cooperative societies in Sokoto State, do not produce a statistically meaningful improvement in productive efficiency. This finding aligns with Daniel and Amos (2015), who demonstrated that working capital management decisions had a negative and insignificant relationship with organizational performance, suggesting that poorly structured investment choices fail to generate productive outcomes in member-based organizations. Corroborating this, Abor and Quartey (2010) argued that organizations operating in resource-constrained environments often make investment decisions that are reactive rather than strategic, thereby limiting their productive capacity over time. In the cooperative context, this is particularly significant because Birchall (2014) noted that investment decisions in cooperative societies must be explicitly aligned with the dual objectives of financial sustainability and member benefit, a balance that appears to be lacking among cooperative societies in Sokoto State.

The insignificant result may therefore reflect a pattern where investment decisions are driven by short-term liquidity needs rather than long-term productive objectives. This interpretation is further supported by Nkrumah et al. (2016), who found that cooperative societies lacking structured investment appraisal frameworks consistently recorded lower productivity outcomes compared to those with formalized investment planning processes. These findings collectively suggest that cooperative societies in Sokoto State require more deliberate and member-focused investment planning to convert financial resources into measurable productive efficiency gains.

H0₂: Financing decision does not significantly affect allocative efficiency of cooperative societies in Sokoto State.

The result presented in the table below supports the acceptance of null hypothesis 2, indicating that financing decisions do not have a significant effect on the allocative efficiency of cooperative societies in Sokoto State. This is evidenced by a path coefficient ($\beta = 0.133$), a t-statistics value of 1.790, which falls below the ± 1.96 threshold, and a p-value of 0.074, which exceeds the 5% level of significance. Although the direction of the relationship is positive, the effect remains statistically insignificant, suggesting that current financing decisions made by cooperative managers do not meaningfully determine how resources are allocated to meet member needs. This result is consistent with Fidelis (2020), who found that working capital management components, specifically accounts receivable, exerted a negative and insignificant influence on the profitability of Nigerian listed companies over the period 2000–2009, highlighting that financing-related decisions do not automatically translate into improved outcomes in organizations operating within the Nigerian economic environment. Similarly, Nwude and Okeke (2018) observed that in member-based organizations, financing decisions tend to be driven predominantly by liquidity imperatives rather than strategic allocation priorities, thereby weakening the connection between financing choices and efficiency outcomes. This pattern appears to be reflected in the cooperative societies under study.

The insignificant relationship may further be explained by the governance conditions identified by Matemilola et al. (2015), who established that weak financial oversight and limited member participation in key decisions, conditions documented within cooperative societies in northern Nigeria, reduce the capacity of financing decisions to produce allocatively efficient results. This suggests that the absence of a significant effect is not merely a statistical outcome but reflects deeper structural and governance constraints within the cooperative sector in

Sokoto State. Addressing these constraints through improved financial governance frameworks and member-inclusive decision-making processes may be necessary to strengthen the relationship between financing decisions and allocative efficiency in future practice and research.

Table 4.6:

Structural model assessment

Hypothesis	Beta value	(STDEV)	t-statistics	p-values	Decision
IVD → PD 1	0.054	0.076	0.717	0.473	Supported
FD → AL 2	0.133	0.074	1.790	0.074	Supported

Source: Smart-PLS 4 Output, 2024

Conclusion and Recommendations

The study examined the effect of financial management with special attention to investment decisions and financing decisions, on the efficiency of cooperative societies in Sokoto State. The findings revealed that both investment decisions and financing decisions have positive but statistically insignificant effects on productive efficiency and allocative efficiency respectively. These results suggest that while financial management practices point in the expected direction, they have not yet reached a level of effectiveness that produces meaningful efficiency outcomes among cooperative societies in Sokoto State. It would therefore be premature to conclude that financial management is a critical determinant of cooperative inefficiency; rather, the evidence indicates that current practices are insufficiently developed to drive significant efficiency gains.

These findings highlight the need for cooperative societies to reassess and strengthen their financial management practices, particularly in aligning investment and financing decisions with member welfare objectives and long-term organizational sustainability.

Recommendations

- i. Cooperative managers should adopt more structured and member-focused investment planning frameworks to improve the productive impact of investment decisions, given that current practices show no significant effect on productivity efficiency.
- ii. Financing decisions should be deliberately aligned with the allocative priorities of members rather than short-term liquidity concerns, so as to improve the likelihood of achieving allocative efficiency outcomes.
- iii. Policymakers and regulatory bodies should introduce capacity-building programmes, financial governance guidelines, and supportive regulations targeted at improving the quality of financial decision-making within cooperative societies in Sokoto State.
- iv. Future research should extend the scope to other states and consider mixed-method approaches to better understand the contextual factors that may be constraining the effect of financial management on cooperative efficiency.

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