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Research Article

Revenue Diversification, Capital Budgeting Practices and Financial Sustainability: The Moderating Role of Sustainability Audits

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Abstract

Purpose: This study is anchored on the Resource-Based View and Modern Portfolio theories to investigate the impact of revenue diversification (RD) and capital budgeting practices (CBP) on financial sustainability (FS), moderated by sustainability audits (SA).

Design/Methodology: Data were collected from 228 managers using a cross-sectional research design and a questionnaire. Data analysis were through Partial least squares structural equation modeling (PLS-SEM).

Findings: Analysis reveals that RD and CBP significantly and positively drive FS, though RD demonstrates a greater effect. SA moderated positively the association between the RD and FS, but negatively on the CBP and FS linkage.

Practical Implications: The study's findings inform the management and policymakers of Savings and Credit Cooperative Organisations (SACCOS) in recognising and prioritising SA, RD, and CBP in their decision-making and planning processes to achieve financial success. They should embrace regular investment training, investment diversification, and designate a dedicated unit to manage revenue diversification and capital budgeting practices to achieve FS.

Introduction

A profit-oriented firm strives to survive and compete with corporate firms in the market (Zhou & Park, 2020). Efforts are made to stay afloat and deliver benefits to achieve the goals of the parties involved in the firm, both the manager and shareholders. These goals may not be achieved if the firm is not sustainable. However, in practice, these goals are not easily achieved. One of the causes is the change in the firm's market environment (internal and external), which is inevitable (Zhou & Park, 2020). The firm can view the challenge or change as an opportunity to develop new strategies and gain a competitive advantage over competitors (Radomska et al., 2021), thereby enhancing sustainability. In the midst of intense market competition, firms are more vulnerable to financial difficulties if management does not manage them well (Henock, 2019). Thus, financial sustainability (FS) will be affected if firms do not take initiatives to improve or find appropriate strategies or practices. Thus, financial sustainability is important for the firm to remain in the market and, eventually, achieve the goals of managers and shareholders, thereby ensuring long-term stability and resilience.

Although the FS definition varies, in the current study, it refers to the ability to generate adequate internal revenue (resilience) to meet operating costs and maintain excess revenue for future use or investment (long-term stability) (Flores-Chia & Mougenot, 2023; Li et al., 2023; Yitayaw, 2021). The extant literature identifies various external or internal determinants of financial sustainability. The highlighted external factors include unemployment, population profile, foreign investment, inflation, levels of human development, and labour force participation (Memon et al., 2021; Navarro-Galera et al., 2019). Internal drivers cover revenue and expense composition, sources of debt, membership size, mobilisation of savings, rates of interest, quality of governance, firm's age, asset magnitude, cost efficiency, leverage ratios, and size of the firm (Duguma & Han, 2018; Flores-Chia & Mougenot, 2023; Navarro-Galera et al., 2019; Naz et al., 2019; Yitayaw, 2021).

Despite their contribution, the impact of some of these factors remains unsettled. The evidence from Almehdawe et al. (2021) divulges a significant impact of the number of members and the interest rate on financial performance, contradicting the findings of Duguma and Han (2018). Such a contradiction can stem from differences in levels of development and legal frameworks across countries or entities. For example, a study by Almehdawe et al. (2021) was undertaken in Canada, which is a relatively well-developed country in economic and legal systems, unlike a study by Duguma and Han (2018), which was carried out in Ethiopia, particularly in rural member-based firms like Savings and Credit Cooperative Organisations (SACCOS), with less development. Additionally, a study by Almehdawe et al. (2021) used financial performance as dependent variable, which focuses on short-term financial goals using revenue growth and profitability metrics such as return on assets (ROA), return on equity (ROE) and return on investments (ROI), while Duguma and Han (2018) employed financial sustainability, which focuses on long term stability and resilience using measures like operational self-sufficiency (OSS), financial self-sufficiency (FSS), as also observed by Novitasari et al. (2024). Similarly, studies such as those by Al-Nimer et al. (2021), IPSASB (2013), and Navarro-Galera et al. (2019) focus on services, revenue, and profitability. Such premises call for further consideration of FS and the inclusion of different drivers. Specifically, long-term stability and resilience are critical for the success and sustainability of Savings and Credit Cooperative Organisations (SACCOS). These institutions depend heavily on trust, member participation, and sound financial management, so maintaining stability over time is essential. Thus, the current study focuses on resilience and long-term stability measures, including services, revenue, and profitability, in SACCOS.

Numerous developing countries have introduced initiatives that support and enhance firms' FS, deepening their contribution to financial inclusion and poverty alleviation (Omona, 2021). As such, the governments have instituted laws, regulatory authorities, and training campaigns to strengthen the firms. Tanzania is a good example; it introduced the National Microfinance Policy (2017), Microfinance Act and its regulations, a

centralised oversight system for microfinance institutions, regularly issuing operational directives, providing training programs, and sensitising the use of technology to improve firms' operations (Kesanta et al., 2025; TCDC, 2024; URT, 2018). While these initiatives are undertaken, firms still face threats to their FS. This is contributed to by a volatile climate and a competitive environment surrounding the firms' market operations (Almehdawe et al., 2021). Studies such as those by Akuei et al. (2025), Chumba et al. (2019), Rizova and Dimova (2025), and Washika et al. (2021) reported that firms are constantly under pressure to design, implement, and swiftly modify their investment management strategies or practices to reduce risk, improve financial performance and capacities, and ensure FS. An improved commitment and execution of investment management practices leads to better firm FS (Chumba et al., 2019; Simiyu et al., 2017; Washika et al., 2021). Supporting this resource-based view theory, it asserts that firm strategies or practices can predict performance throughout its life cycle, eventually leading to the attainment of competitive advantage, as indicated by its market stability and operational resilience, which are essential for sustainability (Lubis, 2022). This means that a firm can create long-term value and gain sustainable growth by adopting sound investment strategies (Manaf et al., 2024). Furthermore, stable and resilient firms are better positioned to achieve financial sustainability through effective risk management practices, including prudent lending, sound liquidity management, and strong governance structures, such as capital budgeting practices and revenue diversification.

Consequently, firms can use various governance structures, sometimes referred to as investment strategies, such as revenue diversification, to expand income streams beyond ordinary sources (resilience) and help to minimise risk to attain an optimal return for further investment and financial stability (Buyuran & Eksi, 2020; Kamau & Njiru, 2019). Specifically, a study by Molla et al. (2025) opines that revenue diversification (RD) is key to success for companies in an environment of continuous change, high competition, and increasingly rapid development. By diversifying revenue across lower-risk, higher-return investment streams, the firm can create value, compete, and achieve sustainable financial success (Molla et al., 2025). On the other hand, Washika et al. (2021) regard investment management as capital budgeting practices that facilitate management in making investment decisions in high-return avenues. It implies that capital budgeting techniques are essential for evaluating and making sound investment decisions that yield optimal returns and enhance shareholders' value, thereby contributing to long-term financial viability (Purnamasari & Adriza, 2024; Putri et al., 2024). Through capital budgeting practice (CBP), management can assess and allocate resources across viable investment options to meet the shareholders' expectations and the firm's financial objectives (Mollah et al., 2023; Purnamasari & Adriza, 2024).

Nevertheless, most prior studies reported the independent impact of RD or CBP on financial performance or profitability, with mixed results. For instance, the work of Molla et al. (2025) found that RD enhances firm profitability, contradicting the study by Rahmawati and Mardanugraha (2023). Similarly, few studies on the effect of revenue diversification on firms have yielded conflicting outcomes, such as those by Githaiga (2022) and Xie et al. (2022), which found that RD improves FS. Conversely, a study such as that of Tariq et al. (2025) reported a negative effect of RD on FS. Regarding CBP, a study by Purnamasari & Adriza (2024) noted that CBP predicts the financial performance of SMEs and large listed firms. Additionally, CBP contributes to creating value, controlling risks, satisfying shareholders' aspirations, and the firm's sustainability (Shaheen et al., 2024). Nevertheless, some of these unsettled results can arise from contextual differences, such as the types of organisations or countries in which the studies were conducted. Most prior studies focused on banks (Molla et al., 2025; Xie et al., 2022), microfinance institutions (Githaiga, 2022), health services (Tariq et al., 2025), SMEs and large listed firms (Purnamasari & Adriza, 2024). However, empirical research on how these factors jointly affect the FS of member-based organisations, such as SACCOS, remains underexplored.

Given the empirical gap, revenue diversification and capital budgeting can help to improve FS in SACCOS in Tanzania. By identifying and diversifying revenue streams, SACCOS can obtain additional income beyond their

limited traditional sources (gaining stability), reduce risks, create shareholder value, and compete, thereby becoming more resilient and attaining sustainable financial success (Githaiga, 2022; Kipkorir et al., 2017). This aligns with Modern Portfolio Theory (MPT), which contends that by diversifying investments in different assets, a firm can reduce risk, heighten shareholders' benefits, and increase financial success (Markowitz, 1952), which is essential for financial stability. Equally, through revenue diversification, firms like SACCOS can minimise the volatility risk that may arise when they rely on limited income sources, thereby ensuring resilience and sustainability (Kuria, 2025). Likewise, adoption of CBP can help SACCOS evaluate and allocate resources to viable investment opportunities with low risk and optimal returns, thereby contributing to financial stability (Purnamasari & Adriza, 2024; Putri et al., 2024). The resource-based view theory (RBV) supports that the CBP can serve as a critical managerial capability that facilitates evaluating and allocating distinct and valuable resources, such as financial resources, among the alternative investment streams, and creates a competitive advantage that is fundamental for enhancing financial outcomes that is ensuring resilience and long-term stability (Barney, 1991; Darmansyah et al., 2025).

Given that such interaction involves governance decision-making, it is necessary to include a mechanism that facilitates decision-making on utilising RD and CBP for predicting FS. This assertion can be supported by a study by Appiah et al. (2024), which suggests that sustainability audits serve as a specialised governance mechanism to shape the decision-making behaviour and accountability, ensuring a firm's sustainability. A study such as that of El-deeb et al. (2023) used audit as a governance mechanism to moderate the relationship between sustainability and firm value, especially in a dynamic environment that can affect financial health. Through audits, stakeholders can obtain information necessary in making sound decisions that help firms like SACCOS to improve RD and CBP, thereby minimising risks, adding value, and achieving financial goals (DeSimone et al., 2021; El-deeb et al., 2023). Such a view can be supported by MPT, which underscores the essential role of internal governance mechanisms in regulating internal systems, monitoring compliance, evaluating performance, and communicating operational status to stakeholders, thereby improving firms' FS (Appiah et al., 2024; Handoko et al., 2020).

Building on that, sustainability audits (SA) can serve as an essential governance mechanism that helps to evaluate operations and share information within SACCOS, thereby reducing unexpected risks, increasing transparency, and ensuring the firm's integrity in the financial market (Alodat et al., 2023). Further, the sustainability audit can be conceptually grounded in the Resource-Based View (RBV), viewing organisational resources and capabilities as the foundation for achieving long-term financial sustainability. RBV posits that firms gain sustained competitive advantage when they effectively manage valuable, rare, inimitable, and non-substitutable (VRIN) resources. In the context of SACCOS or similar institutions, sustainability audits emerge as a strategic mechanism for systematically evaluating how well internal resources, such as financial capital, human skills, governance structures, and information systems, are utilised and preserved over time. Through regular sustainability audits, organisations assess efficiency, accountability, environmental and social responsibility, and risk exposure, ensuring that critical resources are not depleted or mismanaged.

From an RBV perspective, the sustainability audit itself becomes a strategic capability, enhancing transparency, improving decision-making, and strengthening internal controls. It enables the institution to identify inefficiencies, reduce waste, and align resource utilisation with long-term objectives, thereby improving operational performance. This process also reinforces stakeholder confidence, particularly among members and regulators, which is crucial for maintaining steady capital inflows and institutional credibility. As a result, sustainability audits directly influence financial sustainability by promoting cost efficiency, minimising risks such as loan defaults and fraud, and supporting consistent revenue generation. Ultimately, by embedding sustainability audits within the RBV framework, organisations can transform internal resource management into a source of resilience and sustained financial performance.

Thus, through audit information, SACCOS can strengthen decision-making to make feasible investments and optimise shareholders' wealth, which is essential for driving FS (Boubaker et al., 2018; Steinmeier & Stich, 2019). Likewise, the empirical literature maintains that sustainability audit can help to improve the impact of investment management practices such as RD and CBP (Guidara & Ammari, 2022; Issa, 2025) on a firm's financial performance. Understanding this, extant research applies audits as a moderating factor in the relationships of different constructs. For example, audits moderated the correlations between audit committee characteristics and firm performance (Sunny & Apsara, 2026), earnings management and sustainable investment opportunities (Alsmady, 2023), and environmental, social, and governance disclosures and firms' value (El-deeb et al., 2023). Other studies, such as that of Appiah et al. (2024), used sustainability audits as a mediating factor in the relationship between internal audit effectiveness and energy-serving behaviour. Drawing from existing empirical literature, there is a paucity of evidence on the moderating role of SA on the association between RD, CBP, and FS in the SACCOS context. Therefore, the current study adopts SA as a moderating factor in the relationship between RD, CBP, and FS of SACCOS within the Tanzanian context. Within the logic of the Resource-Based View (RBV), revenue streams are treated as strategic organisational resources (it is where money comes from). Diversifying these streams (e.g., interest income, service fees, investments) enhances stability and reduces dependence on a single source.

However, the effectiveness of revenue diversity in improving financial sustainability depends heavily on the Sustainability Audit (SA) as a monitoring and validating mechanism. When SA is strong, it systematically evaluates the quality, risk, and performance of each revenue stream. It ensures that diversified revenues are not only increasing in number but are also profitable, compliant, and sustainable over time. For example, SA can detect over-reliance on risky income sources, identify under-performing streams, and verify whether diversification strategies actually improve financial outcomes. In this case, SA strengthens the positive relationship between revenue diversity and financial sustainability by filtering out inefficient or risky diversification and promoting an optimal revenue mix and stability. On the other hand, when SA is weak or absent, revenue diversity may become superficial or even harmful. Organisations might expand into multiple income streams without proper evaluation, leading to increased costs, inefficiencies, and financial risks. Some revenue sources may appear beneficial but actually reduce overall performance due to hidden costs or poor management. In such cases, SA fails to validate and control diversification efforts, thereby weakening, or even reversing, the positive relationship between revenue diversity and financial sustainability.

Moreover, CBP determines where money is invested, but SA ensures the investment decisions are correct and effective over time. Therefore, SA reviews and validates investment decisions by comparing projected vs. actual returns, detecting overinvestment or poor project selection, and ensuring accountability in capital allocation, thereby monitoring the long-term financial sustainability of projects within the organisation. SA provides feedback and corrections that enhance capital efficiency, leading to higher returns, reduced waste, and better asset utilisation. As such, CBP becomes more disciplined and evidence-based, thereby strengthening its relationship with financial sustainability, and vice versa. Thus, sustainability audits act as a moderating mechanism by providing continuous evaluation, verification, and corrective feedback on both revenue-generation and capital-allocation processes. Through this role, SA enhances the efficiency and reliability of revenue diversification and capital budgeting practices, thereby strengthening their positive relationship to financial sustainability; conversely, weak audit systems allow inefficiencies and risks to persist, thereby weakening this relationship. Therefore, SA acts as a moderating mechanism, ensuring that RD and CBP are effective, efficient, and sustainable, thereby amplifying their contribution to financial sustainability; without it, diversification and/or CBP alone may not guarantee improved financial outcomes. The following questions guide the current study:

RQ1: How does RD influence the FS of SACCOS?
RQ2: How does CBP influence the FS of SACCOS?
RQ3: What role do sustainability audits play in the relationship between RD, CBP, and FS?

Financial sustainability has become an important global concern and is prioritised by most companies and global organisations, such as the United Nations (UN) and the Sustainability Accounting Standards Board (SASB). Equally, the current study can help firms such as SACCOS to strive not only for short-term profits but also for long-term financial sustainability. Such an achievement can be met through implementing appropriate strategies, such as RD and CBP. It implies that, by implementing effective RD and CBP, SACCOS can adapt to a changing market environment and embrace FS. Similarly, it adds the sustainability audit factor as an essential governance mechanism for shaping the interactions among RD, CBP, and FS across member-based entities, such as SACCOS. Thus, the study aims to examine the influence of RD and CBP on financial sustainability and determine the moderating effect of sustainability audits on this relationship.

The remainder of the paper covers the following sections. Section 2 reviews the theories and develops hypotheses based on the literature on RD and CBP, their influence on FS, and the moderating role of sustainability audits. It also presents the conceptual framework, which lays the foundation for the current study. The third section explains the methodology applied to the current study. Finally, the remaining sections describe the findings, discussion, conclusions, and implications. Similarly, the limitations of the current study and recommendations for future research are addressed at the end.

Literature Review

Resource-Based View Theory

The current study is premised on the resource-based view (RBV), initially developed by Penrose (1959) and further advanced by Barney (1991). This theory assumes that a firm creates sustainable competitive advantage and enhances financial stability by organising and controlling its unique, rare, and valuable aggregation of tangible and intangible resources (Barney, 1991). By adopting RBV, a firm can organise and control resources through the management capabilities that entail skills, experience, knowledge, and know-how (Ismail et al., 2020; Yosa et al., 2024). Such management capabilities play a significant role in ensuring organisational competitiveness and the long-term viability (Lubis, 2022). These managerial capabilities facilitate decision-making, evaluation, allocation, and oversight of resources within an organisation, thereby optimising owners' benefits (Yosa et al., 2024). Similarly, through these capabilities, firm can create value by deploying tangible resources, such as financial assets. Capital budgeting serves as a strategic management capability that facilitates the evaluation and effective allocation of resources such as financial assets and personnel, enabling an organisation to achieve sustained competitive advantage and financial objectives (Nguyen, 2026). Nevertheless, the diversity in these resources and their attributes can result in disparity for investment worthiness and financial success across business entities (Barney, 1991; Henard & McFadyen, 2012). By employing sound capital budgeting techniques, firm such as SACCOS can evaluate relevance and allocate resources in profitable investments, thereby gaining a competitive advantage and yielding optimal returns to shareholders (Ferreira & Ferreira, 2023).

For SACCOS, RBV remains a crucial foundation for understanding how capital budgeting can facilitate the evaluation and deployment of assets in viable investment streams to achieve long-term competitive advantage, create benefits for members, and achieve financial success. SACCOS management with the required capabilities can adopt and implement effective capital budgeting techniques to inform decision-making and allocate financial resources to investments that yield optimal returns to members and achieve financial stability (Kipkorir

et al., 2017; Mlay et al., 2023). In SACCOS, the Board is responsible for planning and controlling processes, mechanisms, and other procedures, including implementing capital budgeting techniques to ensure strategic investment choices and the deployment of resources (Ismail et al., 2020; Lubis, 2022; URT, 2018). By practising these, management can enhance FS (Henard & McFadyen, 2012; Kipkorir et al., 2017). Based on that, RBV is an essential framework for guiding capital budgeting in SACCOS, facilitating the effective allocation and control of financial resources to high-return, low-risk investments and ensuring benefits for current and future members. While RBV explains internal resources and capabilities that achieve competitive advantage, it does not explicitly specify the mechanisms that enable effective monitoring and confirmation of each resource's efficacy. The Resource-Based View (RBV) does not explicitly prescribe specific mechanisms for monitoring and confirming the efficacy of each resource; rather, it is primarily a theoretical lens that explains how internal resources contribute to sustained competitive advantage. RBV identifies what kinds of resources matter those that are valuable, rare, inimitable, and non-substitutable (VRIN), but it does not operationalize how organizations should continuously measure, audit, or verify their performance.

However, RBV implicitly necessitates the development of such mechanisms. To determine whether a resource truly meets VRIN criteria and contributes to financial sustainability, organisations must adopt complementary tools and systems. These include sustainability audits, internal control systems, performance measurement frameworks (such as KPIs), and governance structures. For instance, a sustainability audit can serve as a practical extension of RBV by systematically evaluating whether resources are being efficiently utilised, properly safeguarded, and aligned with long-term strategic goals. Similarly, monitoring tools like balanced scorecards or risk management systems help translate RBV's abstract concepts into measurable outcomes. In this sense, RBV provides the "what" and "why", while mechanisms such as audits and monitoring systems provide the "how." Therefore, while RBV does not explicitly indicate monitoring mechanisms, it strongly justifies their necessity, as organisations must continuously evaluate and validate the effectiveness of their resources to sustain competitive advantage and achieve financial sustainability.

As such, sustainability auditing (SA) can provide useful information that facilitates the evaluation and monitoring of a SACCOS' operations, resource deployment, and investment opportunities (Steinmeier & Stich, 2019). Through SA, the quality, credibility, and accountability of capabilities can be assured and enhanced financial stability. Thus, the current study considers sustainability audits as a moderating variable for RD on the SACCOS' financial sustainability. Through SA, disclosure and decision-making practices can be improved, achieving financial goals and meeting members' interests. Although RBV theory provides a useful foundation for describing the mechanisms by which SACCOS can leverage internal resources to implement diversification strategies to gain a competitive advantage and create value, it overlooks how SACCOS' revenue can be structured into streams to minimise risks and optimise returns. It implies that RBV mainly focuses on capabilities and intangible or tangible resources within organisations, with little attention to the impact of external factors, such as market risks. To address this gap, Modern Portfolio Theory (MPT) can be applied to illuminate the role of RD in controlling market risk and optimising returns.

Modern Portfolio Theory

Furthermore, the study adopts Modern Portfolio Theory (MPT), pioneered by Harry Markowitz in 1952, which provides a basis for organisational stability within capricious markets. This theory is widely accepted in financial and investment studies, suggesting that investment diversification is an essential strategy for risk management and increased prospective returns (Ashraf & Nazir, 2023; Kamau & Njiru, 2019; Tariq et al., 2025). This means that by diversifying investments and revenue options, an organisation such as SACCOS can increase return and strengthen financial performance (Hung & Hager, 2019; Kamau & Njiru, 2019). Likewise, SACCOS can benefit from spreading investments and enhancing financial stability by choosing assets with lower risk and higher returns (Mutinda & Aluoch, 2025). As such, SACCOS can adopt MPT that encourages shareholders (members)

to spread investments across diverse income streams to reduce risk and maximise returns, thereby contributing to financial sustainability (Githaiga, 2022).

While MPT underpins the diversification of revenue sources to minimise risks and enhance returns, it also requires additional mechanisms to help governance assess, confirm, and monitor such investments and associated risks, and ensure optimal returns. This means that such a mechanism can offer assurance of quality and accountability to shareholders. Such assurance can be obtained through sustainability audits (SA) (DeSimone et al., 2021; Hazaea et al., 2022; Issa, 2025). Incorporating SA into MPT can facilitate SACCOS' management in obtaining accurate disclosure of potential investment opportunities, unforeseen threats, and expected profits, which supports sound decision-making, risk mitigation, increased accountability, greater shareholder trust, and long-term financial success.

Hypotheses Development

Revenue Diversification and Financial Sustainability

Organisations operating in the financial sector adopt a diversification approach to achieve optimal returns and sustainable financial goals (Xie et al., 2022). Numerous studies suggest that organisations can maximise wealth and enhance financial sustainability by diversifying their revenue streams (Githaiga, 2022; Hung & Hager, 2019; Xie et al., 2022). According to Xie et al. (2022), revenue diversification contributes to banking productivity and sustainability in Asian countries, consistent with modern portfolio theory. According to modern portfolio theory, firms deploy multiple revenue streams to mitigate risk and increase returns. Revenue diversification enables a firm to avoid reliance on a single source of income and improves its stability (Ansari & Jamaluddeen, 2024; Hung & Hager, 2019). While revenue diversification is essential, most firms, such as SACCOS, have few sources of revenue, which exposes them to financial instability (Said et al., 2019). By diversifying revenue streams into low-risk, high-return investments, SACCOS can gain a competitive advantage, sustain their financial success, and fulfill members' aspirations.

Nevertheless, existing empirical evidence provides incompatible results on the link between revenue diversification and financial sustainability (Ashraf & Nazir, 2023). The positive relationship between revenue diversification and financial sustainability was reported by Githaiga (2022), Xie et al. (2022), and Molla et al. (2025). Surprisingly, Ansari and Jamaluddeen (2024) reveal a negative impact of revenue diversification on the financial sustainability of Indian public sector banks. The negative effects of revenue diversification on bank performance (Rahmawati & Mardanugraha, 2023) and on the financial stability of humanitarian and emergency health services (Tariq et al., 2025) were also noted. Such inconclusive results can arise from contextual and conceptual variation across studies or outcome variables. In a contextual stance, studies such as Githaiga (2022) and Xie et al. (2022) were conducted in Asian and emerging economies where non-interest income sources are advanced and regulators promote diversification. On the other hand, a study by Ansari and Jamaluddeen (2024) focused on public sector banks under state control, which may face greater regulatory bureaucracy and lower incentives to embrace the benefits of revenue diversification. Conceptually, differences in revenue diversification and outcomes dimensions may be different. For example, Githaiga (2022) measured RD as a strategy for FS in MFIs, while Xie et al. (2022) measured sustainability using return on assets (ROA) and risk-adjusted measures. Likewise, a study by Rahmawati & Mardanugraha (2023) used profitability as an outcome variable, focusing primarily on short-term success. Based on this, the current study addresses such debate by examining the effect of RD on FS while integrating SA as a moderating factor. It also uses SACCOS as a member-based entity in the Tanzanian context, which may provide nuance on why the relationship between RD and FS behaves differently across settings. It is hypothesised that:

H1: Revenue diversification positively influences financial sustainability.

Capital Budgeting Practices and Financial Sustainability

CBP has become an integral part of organisational financial management and strategic decision-making. A study by Mollah et al. (2023) explains capital budgeting as organisational planning, selection, appraisal, execution, and oversight. By employing capital budgeting techniques, firms can attain sustainable investments and financial viability (Shaheen et al., 2024). CBP facilitates an organisation in analysing and prioritising profitable investment opportunities and allocating resources to improve shareholder wealth (Gitman, 2015; Mang'ana et al., 2023). This corroborates the resource-based view (RBV), which explains how management can apply capabilities to analyse and select the best investment options for allocating resources to achieve organisational sustainability. Empirical literature indicates that capital budgeting practices (CBP) play an essential role in strengthening a firm's financial stability. Specifically, these practices ensure investment risks control and a thorough deployment of resources (Dabor & Modugu, 2013) for wealth maximisation (Bosch-Badia et al., 2020). Similarly, assessing investment streams helps organisations to optimise viable investments (Putri et al., 2024). To achieve this, a firm like SACCOS can employ various CPB analytical approaches, such as payback period (PP), benefit-cost ratio (B-CR), average rate of return (ARR), internal rate of return (IRR), and net present value (NPV) (Putri et al., 2024). Although PP, NPV, and IRR are popularly employed investment evaluation approaches in various firms (Jha, 2025; Kadam & Singh, 2025; Purnamasari & Adriza, 2024; Shields et al., 2024). While capital budgeting is essential for value creation, risk control, fulfilling shareholders' aspirations and contributing to a sustainable future, its adoption in member-based organisations like SACCOS remains unclear. By using such approaches in SACCOS, viable investment opportunities can be identified, and resources allocated prudently, thereby enhancing financial success and shareholders' interests.

Despite the documented impact of CPB on FS in extant studies, most limit their scope to listed organisations and small and medium enterprises (SMEs) (Mang'ana et al., 2023; Purnamasari & Adriza, 2024), thereby falling short in the context of other firms in emerging economies. The current study bridges such a cavity by assessing the association between CBP and FS. This contributes to the Board and management's understanding of CBP's critical role in increasing financial sustainability. It is therefore hypothesised that:

H2: Capital budgeting practices positively influence financial sustainability.

Moderating Effect of Sustainability Audits

SA is a key area of audit practice in the 21st century that verifies an organisation's sustainability practices. As stated by Fraser et al. (2020), SA involves specialised audits covering environment, corporate social responsibility, social compliance, and ethics. These audits are typically aimed at collecting and investigating facts related to operational processes, transactions, controls, and compliance with legal, ethical, and environmental requirements (Handoko et al., 2020; Hazaea et al., 2022). As such, SA embodies the functions of both internal and external audits, which evaluate operations and associated risks, thereby ensuring ongoing organisational concern (Appiah et al., 2024; DeSimone et al., 2021). Equally, SA for firms can provide pertinent information concerning managerial efficiency, investment management practices, internal control, legal compliance, risk management, and performance levels. Such information is essential for Firms' managerial decision-making to employ appropriate strategies that improve accountability and performance (Amoako et al., 2023; Appiah et al, 2024). Through SA, organisations can benchmark their practices, plan and institute strategies that enhance accountability and financial performance (Handoko et al., 2020). Similarly, it promotes assurance and confidence among internal and external stakeholders, contributing to investment management planning and the firm's sustainability (Hazaea et al., 2022).

Moreover, information from SA helps firms assess and allocate resources to the least risky and most viable investment streams, supporting the MPT proposed by Markowitz (1952). As such, accumulated revenue can be further diversified into higher-earnings opportunities, ensuring financial stability (Xie et al., 2022). This provides shareholders and related beneficiaries with confidence to invest further and utilise services, thereby strengthening the firm's financial health (Alsmady, 2023). The capabilities of management and shareholders to assess, plan, choose, and oversee potential investment options for intensified financial performance (Steinmeier & Stich, 2019) conform to RBV. Through RBV, management can add wealth for shareholders by effectively deploying financial resources (Gitman, 2015; Shaheen et al., 2024).

Based on the extant empirical literature, SA are essential governance mechanisms that can enhance investment management choices (Boubaker et al., 2018; Steinmeier & Stich, 2019) and financial stability across organisations (Alodat et al., 2023; Handoko et al., 2020). RBV posits that RD is where money comes from, CBP is where money is invested and SA is how well both RD and CBP are checked, corrected, and improved. Thus, strong SA reduces risk, enhances quality, and improves efficiency, thereby strengthening RD and CBP effects on FS. On the other hand, prior research underscores the importance of interactions among RD, CBP, and FS (Manaf et al., 2024; Natser, 2025). Nevertheless, scant empirical evidence exists on the effect of SA on the relationship between RD and CBP and financial sustainability. The study, therefore, establishes that RD and CBP can enhance financial sustainability through the moderating effect of SA. Accordingly, SA exerts a positive moderating impact on capital-earning management, the quality of financial reporting, investment management opportunities, audit committees, and earnings management (Alsmady, 2023; Bouaziz & Moalla, 2024). Thus, there is a possibility that SA moderates the influence of RD and CBP on their interaction with financial sustainability.

H3: Sustainability audits positively and significantly moderate the influence of revenue diversification on financial sustainability.
H4: Sustainability audits positively and significantly moderate the influence of capital budgeting practices on financial sustainability.

Conceptual Model

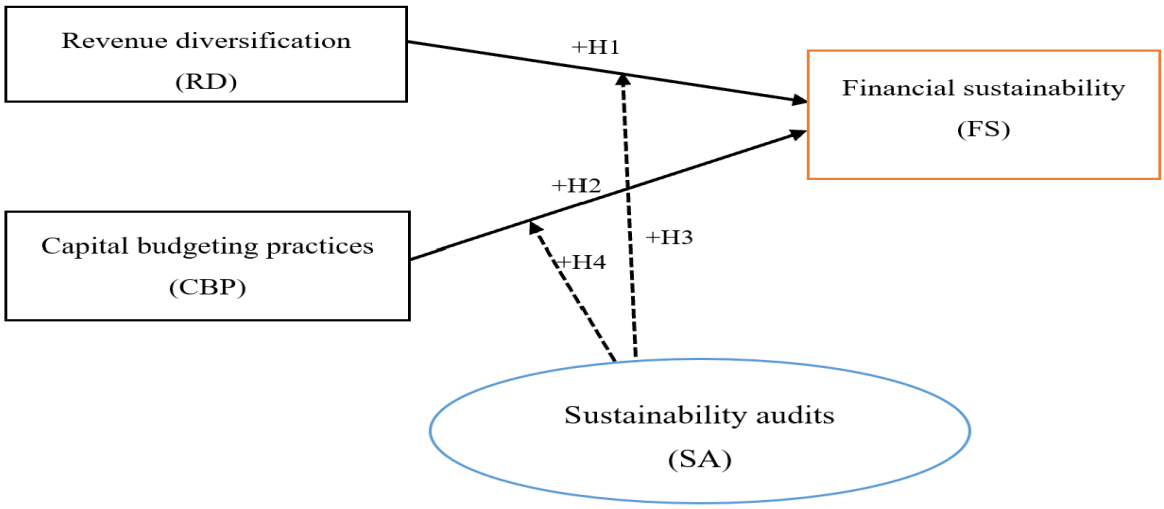

Figure 1: Conceptual Model

For the current study, a conceptual framework was developed from a thorough review of the existing empirical and theoretical literature. Specifically, the framework stems from the formulated hypotheses. The model accentuates that RD and CBP influence FS. The model further explains that SA moderates the relationships among RD, CBP, and FS. Such interaction is illustrated in Figure 1.

Methodology

Research Design and Study Area

The study adopted a cross-sectional research design due to its efficiency in collecting data from a specific population within a defined period (Wang & Cheng, 2020). The approach helped to collect substantial data from pre-set variables in response to the research hypotheses. Additionally, such an approach facilitates the collection of relevant participants' views, experiences, and understanding of the study's variables (Kesmodel, 2018). Through this design, a significant number of participants were reached across all six mainland Tanzania regions within a short time and on a limited budget. Furthermore, this design provided an avenue for assessing the validity and reliability of the study's hypotheses using primary data and for analyzing interactions among independent, dependent, and moderator variables (Pandis, 2014; Wang & Cheng, 2020). This approach was also appropriate for getting data directly from SACCOS, which are predominantly firms characterised by irregular financial sustainability (Luvanda & Iwata, 2024). Similarly, such a design has been widely employed in research on stakeholders' opinions in financial firms, such as SACCOS (Kyabarongo et al., 2024; Mlay et al., 2023; Nderitu et al., 2020). Six regions of mainland Tanzania, namely, Dar es Salaam, Morogoro, Dodoma, Kilimanjaro, Mbeya, and Arusha, constituted an area from which data were gathered to fulfil the study's objectives. The regions were purposively chosen based on an escalated number of licensed SACCOS. These regions account for sixty-four per cent of the entire licensed SACCOS (TCDC, 2024). Additionally, population growth, economic activities, and infrastructure development (Haule & Kilonzo, 2024) can encourage more people to join or establish viable SACCOS.

Sampling and Data Collection

The current study engaged a sampling frame of 563 licensed SACCOS. This sampling frame was drawn from the study area through the SACCOS database from the Tanzania Cooperative Development Commission (TCDC, 2024). From this population, a sample size of 234 was determined using Yamane's (1973) formula with a 95% confidence interval. Subsequently, representatives from each selected region were determined through a stratified random sampling procedure. Representative SACCOS were randomly selected from each stratum, and this ensured an equal opportunity for each SACCOS in the sampling frame to be studied (Tabash et al., 2022). Before data collection, the formal consent was secured from the University of Dodoma, the Ministry responsible for Regional Administration and Local governments, Local Authorities, and the management of selected SACCOS. To ensure access and support from SACCOS management, official introduction letters from the University, Ministry, and Local Authorities levels were granted, describing the research's legitimacy, objectives, and coverage. The structured questionnaire was employed to collect primary data from SACCOS managers from December 2024 to March 2025 (Kesanta et al., 2025). The adoption of the questionnaire helped to save time and cost and was efficient in collecting uniform data from all participants (Sadan, 2017). This questionnaire was distributed to SACCOS managers for their responses, which were thereafter collected. SACCOS Managers play a critical role in strategic planning, oversee routine SACCOS operations, formulate and implement operational policies, ensure compliance, participate in decision-making, serve as a secretary to the Board, and are responsible for maintaining operational and financial records (URT, 2019) and a single response per institution was ensured through controlled survey administration to minimise duplication and reduce potential common-method bias. Based on that, managers were selected as respondents because they

have extensive knowledge of SACCOS operations, are mandated to provide information on SACCOS, and can understand and complete the validated scales in the questionnaire, which minises common method bias. Self-administered questionnaire completion allowed respondents to provide independent responses at their convenience, thereby minimising the interviewer's bias (Mazikana, 2023). To ensure effective data collection across all regions, two research assistants were trained and engaged to distribute questionnaires, address some issues, and collect responses. This approach yielded a high response rate of 97.4% (n=228), which is considered adequate to provide a strong basis for empirical analysis (Ericson et al., 2023).

Measurement of Study Variables

The current study operationalised FS as the dependent variable and measured it as a unidimensional construct. The study adopted six validated items from Al-Nimer et al. (2021), IPSASB (2013), and Navarro-Galera et al. (2019) focusing on service quality, revenue, and profitability. This suggests that when SACCOS generate adequate internal revenue, they can gain profit and offer quality services that satisfy members, encouraging them to continue contributing and using services that enhance stability. Thus, the indicators were used in the current study for the following reasons. First, profitability captures the organisation's ability to generate surplus after covering costs, which is essential for capital accumulation, reserve building, and long-term survival. Without profitability, the institution cannot reinvest or absorb shocks. Second, revenue reflects the stability and diversification of income streams, which ensures liquidity and operational continuity. A financially sustainable organisation must not only be profitable but also maintain consistent, reliable inflows to support its activities. Third, service quality represents a non-financial but strategically critical dimension, as it drives member satisfaction, retention, and loyalty, which are key determinants of sustained revenue generation in member-based institutions such as SACCOS.

These dimensions are jointly constitutive of financial sustainability because they operate in a reinforcing cycle: high service quality enhances customer retention and trust, which stabilises and potentially diversifies revenue streams; stable and sufficient revenue supports cost coverage and operational efficiency, leading to improved profitability; and sustained profitability enables reinvestment into systems and service improvements, further enhancing service quality. Therefore, excluding any one of these dimensions would provide an incomplete and potentially misleading assessment of FS. However, the study was crafted around a unidimensional variable of financial sustainability; thus, the indicators were captured in the items measuring FS. The RD and CBP were both utilised to represent independent variables. Five items from the validated scales by Hung & Hager (2019), Molla et al. (2025), and Xie et al. (2022) were employed to measure RD. For CBP, five items were adopted from Mang'ana et al. (2023), Mollah et al.(2023), and Purnamasari & Adriza (2024). On the other hand, the SA comprised three items adapted from DeSimone et al. (2021) and Appiah et al. (2024). Cumulatively, these items were embedded in a five-point Likert scale, administered questionnaire, with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The Likert scale was chosen because of its well-established use and reliability in the social science literature, particularly for measuring respondents' opinions (Tanujaya et al., 2022). While formal record-keeping is a challenge in SACCOS (Luvanda & Iwata, 2024), it was essential to obtain respondents' opinions to fulfil the study's constructs. Similarly, the adoption of a Likert scale enabled efficient quantitative data collection and analysis to meet the study objectives.

Data Analysis

The study employed Partial Least Squares Structural Modeling (PLS-SEM) using SmartPLS version 4 to analyse the collected data. The rationale for this analytical tool was its suitability for analysing complex relationships, including both direct and moderating variables within the model (Reis & Macedo, 2025). Adopting this tool enabled a statistical investigation of the impact of RD and CBP on FS, moderated by SA. This tool also helped process and analyse multiple indicators from a Likert-scale questionnaire (Hair et al., 2019). Extensive

application of PLS-SEM in contemporary research with similar contexts (Keong, 2020; Majid, 2024; Mang'ana et al., 2023; Otache et al., 2023) further motivated its use in the current study. Besides, the choice of SmartPLS version 4 software was based on its efficiency and accuracy in analysing and displaying path models of direct relationships and moderating effects (Sarstedt et al., 2024). Furthermore, the moderation analysis adopted a two-stage approach in SmartPLS 4 to determine its effects on the relationship between RD, CBP, and FS, as advanced by Becker et al. (2018). The latent variables were mean-centered, and bootstrapping was set to 10,000 resamples. This helped to reduce multicollinearity.

Results

Findings for the Measurement Model

To ensure the quality of the measurement scales, the study applied established reliability and validity assessment criteria. Indicator reliability was first evaluated using outer loadings (Table 1 & Figure 2).

Table 1: Measurement model

Construct	Items & Code	Outer Loading	VIF	Cronbach's alpha	Composite reliability	AVE
Revenue diversification	**RD**			**0.813**	**0.820**	**0.572**
	RD1	0.791	1.641			
	RD2	0.717	1.599			
	RD3	0.696	1.348			
	RD4	0.748	1.736			
	RD5	0.823	1.641			
Capital budgeting practices	**CBP**			**0.854**	**0.862**	**0.773**
	CBP1	0.897	2.198			
	CBP2	0.884	2.150			
	CBP3	0.856	2.004			
Sustainability audits	**SA**			**0.801**	**0.853**	**0.715**
	SA1	0.896	2.132			
	SA2	0.895	2.495			
	SA3	0.734	1.449			
Financial sustainability	**FS**			**0.748**	**0.748**	**0.570**
	FS1	0.765	1.584			
	FS2	0.773	1.590			
	FS3	0.763	1.428			
	FS4	0.716	1.326			

Source (s): SmartPLS4 Output

Note(s): AVE - average variance extracted; VIF – Variance inflation factor

Indicators with loadings above 0.65 (ranging from 0.696 for RD3 to 0.897 for CBP1) were retained, as they contributed to achieving acceptable levels of composite reliability (CR) and average variance extracted (AVE), consistent with recommendations by Hair et al. (2017). Internal consistency reliability was then examined using Cronbach's alpha (α) and composite reliability (CR). The results showed that all constructs; RD (α = 0.813; CR = 0.820), CBP (α = 0.854; CR = 0.862), FS (α = 0.748; CR = 0.748), and SA (α = 0.801; CR = 0.853), exceeded the recommended threshold of 0.70 (Cheung et al., 2023), indicating satisfactory reliability. Convergent validity was assessed using the average variance extracted (AVE), with all constructs achieving values of 0.50 or higher. This confirms that the indicators adequately represent their respective constructs, explaining at least 50% of the

variance and demonstrating adequate convergent validity while minimising measurement error (Al-Marsomi & Al-Zwainy, 2023).

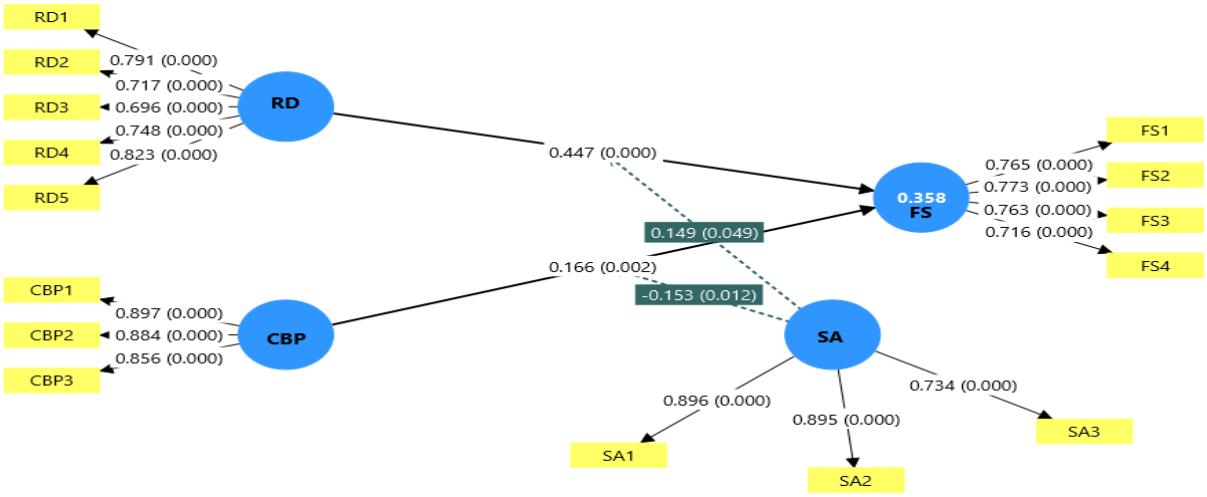

Figure 2: The structural model

Source (s): SmartPLS4 Output

Note(s): FS = Financial sustainability; SA = Sustainability audits; CBP = Capital budgeting practices; RD = Revenue diversification

The study measured discriminant validity using the Heterotrait-Monotrait (HTMT) ratio and the Fornell-Larcker criterion, as suggested by Al-Marsomi and Al-Zwainy (2023) and Dzin and Lay (2021). The empirical literature suggests acceptance of discriminant validity when the HTMT value is less than 0.85 or 0.90 (Dzin & Lay, 2021; Hair et al., 2019; Rasoolimanesh, 2022). The analytical measurements in Table 2(a) show HTMT values ranging from 0.277 to 0.659, which are lower than the suggested 0.85. Concerning the Fornell-Larcker criterion in Table 2(b), the square root of AVE values of the constructs along the diagonal matrix were greater compared to the values of the constructs lying beyond the diagonal. These results demonstrate that the constructs exhibit sufficient discriminant validity and are useful for empirical research (Henseler et al., 2015).

Furthermore, Variance Inflation Factors (VIFs) were used to test multicollinearity among the variables (Table 1). All VIF values were below the 5-threshold recommended by Shrestha (2020) (i.e., 1.326 to 2.495). This suggests that multicollinearity did not pose a threat to overall model reliability, allowing subsequent analytical tests.

Table 2 (a): Heterotrait-monotrait ratio (HTMT)

	CBP	FS	RD	SA	SA x CBP	SA x RD
CBP						
FS	0.421					
RD	0.355	0.659				
SA	0.361	0.369	0.277			
SA x CBP	0.140	0.094	0.097	0.660		
SA x RD	0.105	0.090	0.088	0.199	0.520	

Source (s): SmartPLS4 Output

Table 2 (b): Fornell-Larcker criterion

	CBP	FS	RD	SA
CBP	0.879			
FS	0.344	0.755		
RD	0.292	0.522	0.756	
SA	0.239	0.295	0.229	0.845

Source (s): SmartPLS4 Output

Common Method Bias

Common method bias is an essential component in assessing the appropriateness of the methods employed during data collection (Kock, 2015). Specifically, the common bias in this context could arise when the same respondents answer all questions, even if they have incorrect memories of the required facts. To address such common method bias, the SACCOS managers with adequate knowledge and experience were approached to answer simple, unique, and direct questions or statements. These questions or statements were validated after pretesting. Similarly, the participants were allowed to respond to the questionnaire without direct interaction with the interviewer. In addition, the study employed a statistical Variance Inflation Factor (VIF) to test for common-method bias, as proposed by Kock (2015). The results in Table 1 reveal that all VIF scores were below the threshold of 3.3 (Kock, 2015; Kock & Lynn, 2012), underlining the absence of common method bias in the model.

Findings for the Structural Model

Following the assurance of the measurement model, the structural model was evaluated in accordance with prescribed analytical procedures (Al-Marsomi & Al-Zwainy, 2023). This included testing the model's explanatory power, and the result indicated that the coefficient of determination (R2) was 0.358 (Table 4). The result indicates that the model exhibits moderate explanatory power, as noted by Hair et al. (2019). It also implies that revenue diversification and capital budgeting explain 35.8 percent of a firm's financial sustainability. Additionally, the relative contribution of individual predictors was evaluated through the effect size (f-square). The results in Table 3 reveal a significant effect of RD and CBP on FS. Although the effect size of RD was moderate (f-square = 0.270), CBP exhibited a small effect size (f-square of 0.037) as per the benchmark suggested by Aburumman et al. (2023). Moreover, the study assessed the model's predictive relevance (Q-square) using the blindfolding procedure, yielding a score of 0.308 (Table 4), which exceeds zero as proposed by Hair et al. (2019). Such predictive relevance was also justified by a Root Mean Square Error (RMSE) of 0.845 and a Mean Absolute Error (MAE) of 0.646. Based on these findings, this model can serve as an important managerial tool that helps SACCOS to make informed decisions and ensure FS.

Findings of Hypothesis Testing

Further analysis was conducted, including testing four hypotheses to assess the statistical significance of the relationship between exogenous and endogenous variables and the moderating effect. A bootstrapping procedure with 10,000 subsamples was employed in the PLS-SEM to provide reliable estimates (Hair et al., 2017). The path coefficients represented as standardized betas (β), t-statistics, and p-values were used to test hypotheses and draw conclusions, as presented in Table 3 and Figure 2. The analysis supports hypothesis H1, which posits that RD significantly and positively impacts SACCOS' FS ($\beta = 0.447$, $t = 7.925$, $p = 0.000$). These findings indicate a t-value of 7.925, which considerably exceeds the recommended threshold of 1.96 for a two-tailed test ($t > 1.96$). At the same time, the p-value falls extremely below the 0.05 significance level ($p < 0.05$)

as per Al-Marsomi and Al-Zwainy (2023). Such results confirm a statistically significant relationship between RD and FS, suggesting that SACCOS are better positioned to attain FS by diversifying their revenue streams.

Concerning hypothesis H2. The findings reveal a significant positive effect of CBP on financial sustainability (β = 0.166, t = 2.960, p = 0.002), thus supporting H2. Such statistical values imply that CBP improves FS in SACCOS. Besides, the immediate impact of the moderating variable was determined. Results in Table 3 demonstrate that the SA has a significant positive direct effect on the SACCOS' FS (β = 0.242, t = 2.690, p = 0.004). While FS can be intensified by exercising SA, its effect, as indicated by f2 = 0.053, is relatively small.

The assessment of the moderating effect of sustainability audits on the association among CBP, RD, and FS yielded mixed results. First, H3 was supported, as sustainability audits revealed a positive and significant moderating impact on the interaction between revenue diversification and financial sustainability (β = 0.149, t = 1.658, p = 0.049). This implies that relevant managerial information can be obtained through sustainability audit streams, thereby helping SACCOS diversify revenue streams and ensure financial stability. Second, H4 was not supported, as the strong inverse moderating effect of sustainability audits on the correlation between financial sustainability and capital budgeting practices (β = -0.153, t = 2.254, p = 0.012) was observed. It implies that including sustainability audits can dilute the impact of capital budgeting practices on financial sustainability by exposing weaknesses among mostly inexperienced, low-skilled personnel who prefer rudimentary capital budgeting approaches to assess both short- and long-term investments and predict the financial stability of organisations such as SACCOS.

The importance-performance analysis in Table 5 and Figure 3 further indicates the independent and moderating variables' contribution to the financial sustainability of Tanzanian SACCOS. Based on such analysis, revenue diversification largely contributes to financial sustainability. Subsequently, it shows that sustainability audits moderate and contribute to financial sustainability, followed by capital budgeting practices. From this analysis, it can be established that SACCOS management and regulators should emphasise and embrace strategies that diversify revenue streams into viable sources to attain financial sustainability. Additionally, implementing sustainability audits can serve as a direct driver of financial sustainability and reinforce the relationship between revenue diversification and financial sustainability. Such contention is well illustrated in Figure 3, where RD and SA make significant contributions to enhancing SACCOS' FS, as supported by the view that factors with high contributions should be given priority (Matekele & Mbogela, 2025).

Table 3: Hypothesis testing

Hypotheses	Path	Original sample (βstd.)	Mean (βstd.)	SD	T-statistics	P-values	f-square (f2)	Outcome
H1	RD→FS	0.447	0.451	0.056	7.925	0.000	0.270	Supported
H2	CBP→FS	0.166	0.170	0.056	2.960	0.002	0.037	Supported
	SA→FS	0.242	0.248	0.090	2.690	0.004	0.053	Supported
H3	SA x RD→FS	0.149	0.137	0.090	1.658	0.049	0.026	Supported
H4	SA x CBP→FS	-0.153	-0.155	0.068	2.254	0.012	0.029	Not Supported

Source (s): SmartPLS4 Output
Notes: SD – Standard deviation

Table 4: PLSpredict LV Summary

Variable	Q^2predict	RMSE	MAE	Coefficient of determination (R2)
FS	0.308	0.845	0.646	0.358

Source (s): SmartPLS4 Output

Table 5: Importance – performance matrix for FS

Variable	Total effect	Performance	Ranking
RD	0.447	67.819	1
CBP	0.166	50.317	3
SA	0.242	49.824	2

Source (s): SmartPLS4 Output (2025)

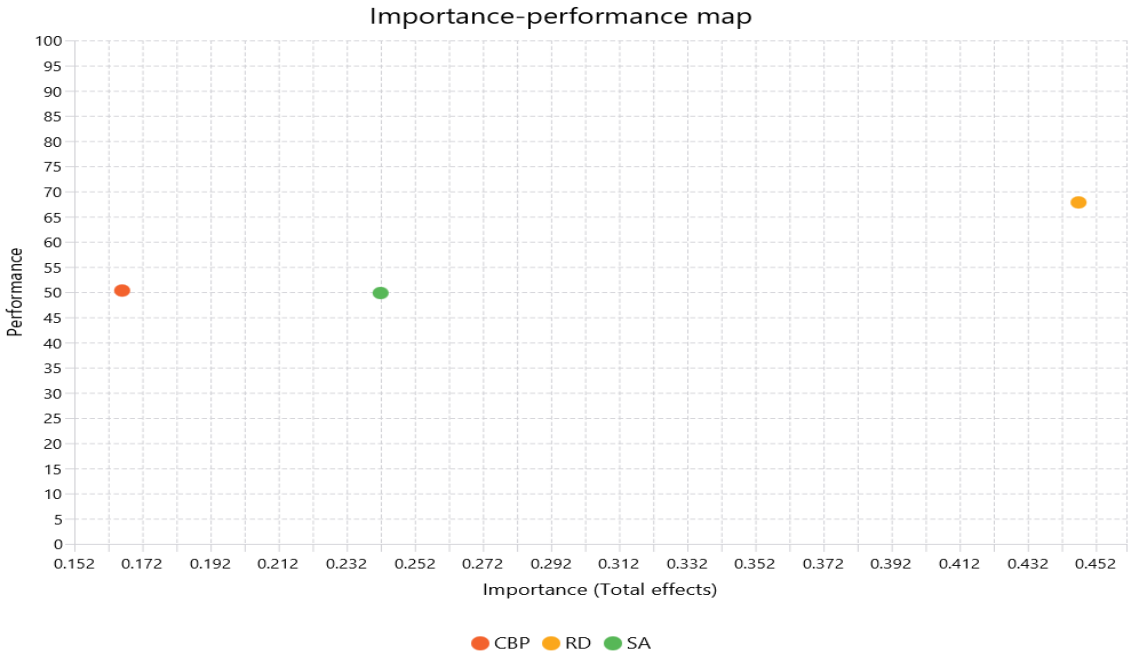

Figure 3: Importance-performance map

Source (s): SmartPLS4 Output (2025)

Note(s): CBP = Capital budgeting practices; RD = Revenue diversification; SA = Sustainability audits

Discussion

The discussion interprets the empirical results concerning the influence of revenue diversification and capital budgeting practices on financial sustainability, moderated by sustainability audits. The findings confirm that both revenue diversification and capital budgeting practices exert a positive and significant effect on financial sustainability. Unlike capital budgeting practices, revenue diversification exhibits a strong contribution to financial sustainability. The greater contribution of revenue diversification to FS stems from the business nature of SACCOS, which predominantly offer a variety of financial services to members, thereby necessitating the generation of funds through various revenue streams to meet members' needs. Such a view aligns with evidence from a study by Kipkorir et al. (2017), who reported that SACCOS need multiple income sources, such as

interest on members' loans and government grants, as well as front-office activities (FOSA) to strengthen their financial performance. As such, SACCOS that diversify their income streams to various viable revenue sources, such as financial instruments, can build adequate internal finance to satisfy members' loan demand, fulfil operational costs, expand investments, and achieve long-term financial success. Through revenue diversification, SACCOS management can reduce risks and increase profits, thereby achieving financial goals, as emphasised by the Modern Portfolio Theory. This conforms with the work of Molla et al. (2025) and Githaiga (2022), who contend that a firm can manage risks and increase financial success through diversifying its sources of income.

Particularly, firms can improve their financial viability by regularly assessing existing revenue sources, identifying new income-generating opportunities, developing new products, and investing in strategic income-generating assets (loans, shares, government bonds/bills, and deposits). Similarly, additional income sources outside conventional members' contributions, such as fees and interest income from loans or deposits, can improve financial performance. This agrees with studies by Xie et al. (2022) and Mutinda and Aluoch (2025), who noted that diversifying revenue from non-interest income, including the sale of shares, bonds, and other financial instruments, can strengthen the financial stability of commercial banks. Conversely, the finding contradicts the findings of Tariq et al. (2025) and Rahmawati and Mardanugraha (2023), who reported a negative relationship between revenue diversification and the organisation's financial performance or profitability. Such inconsistency could arise from differences in their settings. For instance, SACCOS, a member-based organisation, operates within a specific locality or bond, whose members are primary beneficiaries of services, and may make quick decisions to diversify revenue more easily than public or other private firms, which may require analytical procedures and technical know-how.

Moreover, capital budgeting practices (CBP) exhibited a positive and significant effect on financial sustainability. Such a result suggests that SACCOS can wisely deploy funds to ensure they become more financially sustainable. As such, SACCOS that embrace capital budgeting practices can identify and critically analyse investment opportunities, select the highest-return investments, create benefits for members, and achieve financial objectives. The identified contribution of CBP to SACCOS' financial sustainability aligns with Purnamasari and Adriza (2024), who found that capital budgeting strategies positively and significantly contribute to financial performance. It implies that as SACCOS opt to make short, medium, and long-term investments, they can apply capital budgeting strategies such as Payback period (PP), cost-benefit analysis, Net Present Value (NPV), Internal Rate of Return (IRR), scenario analysis, and/or other analytical methods to assess the feasibility of investment streams to enhance their financial sustainability.

Despite CBP's contribution, its lower path coefficient indicates a small effect on overall financial sustainability. This may be associated with SACCOS' operational nature, which tends to apply conventional, rudimentary capital budgeting techniques and invest in short-term financial services delivery, such as short-term loans and deposits to members. Furthermore, the cooperative ownership profile, size, managers' inexperience, inadequate management expertise, and the time and costs required may deter SACCOS from adopting sophisticated CBP to evaluate strategic investment alternatives that can optimally generate returns for their sustainability. This corroborates with studies such as those by Alles et al. (2021) and Onoriode and C (2025), which claim that limited liquidity and managerial capacity are among the critical factors that lead several small enterprises, such as SACCOS, to rely mainly on simple capital budgeting methods. Although this result contradicts the findings of Mang'ana et al. (2023), who reported that capital budgeting practices have no significant impact on the performance of Tanzanian agricultural small and medium enterprises (Agri-SMEs). This outcome difference may arise from differences in their operational contexts, ownership, and financial structures. While SACCOS' objective is to offer financial services to members, Agri-SMEs mostly deal with agricultural products whose beneficiaries are not necessarily the owners.

Furthermore, the introduction of a moderating factor for sustainability audits in the interaction between revenue diversification, capital budgeting practices, and financial sustainability yielded two outcomes. The first outcome reveals that sustainability audits increase the correlation between revenue diversification and financial sustainability. This implies that SACCOS can utilise audit information and assurance to diversify revenue into viable investments and increase income to meet members' satisfaction and financial goals. This corroborates the work of Boubaker et al. (2018) and Steinmeier and Stich (2019), who noted that sustainability audits provide essential information that facilitates managerial decisions to make successful investments, create value, and improve organisational performance. It suggests that sustainability audits can deliver important information on revenue gaps and impacts, thereby helping managerial strategies to invest in potential revenue sources that stimulate financial sustainability. In addition, through sustainability audits, SACCOS can enhance responsibility, planning, and supervision of their income among various investment opportunities, aligning with the work of Handoko et al. (2020) and RBV.

The second outcome indicates that sustainability audits lower the contribution of capital budgeting practices to the financial sustainability of SACCOS. It can be said that sustainability audits create hurdles that prevent firms' management from implementing capital budgeting practices to enhance financial sustainability. Such an argument agrees with the work of Shields et al. (2024), which observed that conducting sustainability audits within firms may reveal weaknesses that undermine the link between capital budgeting and financial sustainability. Such a result can stem from the fact that most SACCOS are managed by personnel with inadequate financial literacy and experience (Magashi et al., 2023; Masanyiwa et al., 2022), who may not effectively adopt sustainability audits to apply a capital budgeting process to make viable investment decisions. The conception also corroborates the study by Alles et al. (2021), who found that managerial skills, experience, duration, and expense considerations hinder the adoption of effective capital budgeting practices in SMEs. Similarly, Chisiri and Manzini (2021) add that most of these organisations are unable to conduct effective assessments using capital budgeting methods to ensure viable investments and profit optimisation. In a similar context, by adding sustainability audits to the interplay between capital budgeting practices and financial sustainability, SACCOS management can find it difficult to make investment decisions. Through this, they can decide to commit their income to business ventures with small or modest revenue that weaken financial viability.

The theoretical explanation of the findings can be narrated that the positive effect of Revenue Diversity (RD) on FS (H1) is strongly supported by both RBV and MPT. From an RBV perspective, diversified revenue streams represent a broader, more valuable resource base that enhances organisational resilience. Complementarily, MPT explains that diversification reduces unsystematic risk by spreading exposure across multiple income sources. Thus, SACCOS that diversify their revenue streams are effectively building a "portfolio of income streams," minimising risk without necessarily sacrificing returns. This dual-theoretical lens reinforces the conclusion that revenue diversification improves financial sustainability by optimising the risk-return trade-off.

The significant positive relationship between Capital Budgeting Practices (CBP) and FS (H2) can also be interpreted through MPT. While RBV emphasises CBP as a capability for efficient resource allocation, MPT frames capital budgeting as a portfolio selection problem, in which organisations must choose investments that maximise returns for a given level of risk. Effective CBP ensures that SACCOS allocate capital to projects that lie closer to the "efficient frontier," thereby improving overall financial performance. Hence, CBP enhances FS by optimising investment decisions in line with risk–return efficiency principles. The direct positive effect of Sustainability Audits (SA) on FS suggests that auditing functions as a governance and monitoring mechanism that improves the quality of both resource utilisation and portfolio decisions. In RBV terms, SA is a complementary capability that enhances transparency and accountability. From an MPT perspective, SA ensures

that the portfolio's actual performance aligns with its expected risk-return profile by identifying underperforming or excessively risky activities.

The moderating effects provide the most nuanced insights. The positive moderation of SA on the RD-FS relationship (H3) indicates that monitoring enhances the benefits of diversification. MPT assumes that diversification is effective only when assets are properly evaluated and managed; similarly, SA ensures that each revenue stream contributes positively to the overall "portfolio." Thus, SA helps SACCOS avoid inefficient or overly risky diversification, strengthening the risk-reduction benefits predicted by MPT. Conversely, the negative moderating effect of SA on the CBP-FS relationship (H4) highlights a potential trade-off between control and efficiency. While MPT emphasises optimal portfolio selection, overly stringent auditing may slow down investment decisions, limit managerial discretion, or discourage risk-taking, potentially preventing SACCOS from reaching optimal portfolio positions. From an RBV standpoint, this reflects capability misalignment or rigidity, in which excessive control mechanisms undermine the effectiveness of strategic investment capabilities.

By integrating RBV and MPT, the findings demonstrate that financial sustainability is not only a function of resource diversity and investment efficiency, but also of how well these are monitored and balanced. Revenue diversification reduces risk (MPT) and strengthens the resource base (RBV); capital budgeting practices optimise investment portfolios (MPT) and resource deployment (RBV); while sustainability audits ensure alignment but may also introduce constraints if overemphasised. Therefore, the study advances theory by showing that financial sustainability arises from the interaction among diversification, investment efficiency, and governance mechanisms within a risk-return optimisation framework.

Conclusion

The purpose of the current study was to investigate the extent to which revenue diversification (RD) and capital budgeting practices (CBP) influence financial sustainability (FS), with sustainability audits (SA) acting as a moderating variable. Grounded in the resource-based view (RBV) and modern portfolio theory (MPT), the study addressed an important empirical gap by examining the combined effects of RD and CBP on financial sustainability in business entities within developing countries, particularly SACCOS, while incorporating SA as a contextual moderator. The study's analysis indicates that both RD and CBP have significant, positive effects on financial sustainability. However, the moderating role of sustainability audits presents mixed outcomes. Specifically, SA strengthens the positive relationship between RD and FS, suggesting that sustainability audit practices enhance the effectiveness of diversified revenue strategies. In contrast, SA weakens the relationship between CBP and FS, suggesting that sustainability audits may constrain or moderate the effectiveness of capital budgeting practices, possibly due to increased compliance requirements, stricter evaluation criteria, or shifts in investment priorities toward sustainability-oriented considerations.

These findings imply that while SACCOS can leverage sustainability audit information to improve revenue diversification strategies, caution is required when integrating such audits into capital budgeting processes. Managers should carefully balance sustainability considerations with financial decision-making to avoid unintended inefficiencies in investment outcomes. Theoretically, this study contributes to RBV by positioning sustainability audits as a strategic managerial capability that enhances governance, decision-making quality, and resource utilisation. At the same time, the findings extend MPT by demonstrating that sustainability-related assurance mechanisms can influence portfolio decisions differently, enhancing diversification benefits while potentially constraining capital investment efficiency. Thus, the interaction among SA, RD, CBP, and financial sustainability provides a more nuanced understanding of risk-return optimization in sustainability-oriented financial management.

Managerial Implications

This research guides firms, especially SACCOS boards, committees, staff, and strategic partners, on how financial sustainability can be enhanced by adopting investment management practices and sustainability audits. Through this understanding, the investment management practices and sustainability audits can form an integral part of governance decision-making. Firms' governance can benefit from incorporating sound investment management practices, such as RD and CBP, into their main organisational structures. The integration of RD into strategic planning and monitoring systems enables firms to achieve FS. By exploring and allocating income into feasible investment opportunities with optimum returns, such as loans to members, shares, deposits, and government securities, firms can be better positioned to achieve financial success. Equally, application of robust capital budgeting techniques, including cost-benefit ratios, Net Present Value, Internal Rate of Return, payback period, scenario analysis and a systematic method can be considered by firms' management/leaders and regulators in guiding the decision-making process for deploying financial resources into higher yielding investments and ensuring financial stability.

Managers in SACCOS should leverage sustainability audits (SA) as a strategic tool to enhance transparency and decision-making, particularly in strengthening the effectiveness of revenue diversification (RD) strategies to improve financial sustainability (FS). However, given that SA weakens the relationship between capital budgeting practices (CBP) and FS, managers need to apply sustainability audit requirements cautiously in investment decisions, balancing compliance with financial efficiency. This may involve integrating sustainability criteria without over-restricting profitable opportunities, streamlining audit processes to avoid delays, and adopting flexible evaluation frameworks that align both financial and sustainability goals. Additionally, managers should build internal capacity to interpret and use sustainability audit information effectively, ensuring it supports rather than constrains optimal resource allocation and long-term organisational performance.

Policy Implications

The study suggests that policymakers should promote sustainability audits (SA) as a key governance tool to enhance transparency, accountability, and the effectiveness of revenue diversification (RD) in improving financial sustainability (FS). However, given SA's negative moderating effect on the relationship between capital budgeting practices (CBP) and FS, regulatory frameworks should be designed with sufficient flexibility to avoid overly constraining investment decisions. Policymakers should also invest in capacity-building to equip SACCOS stakeholders with the skills needed to effectively integrate sustainability considerations into financial management. Additionally, encouraging integrated financial and sustainability reporting, alongside incentives to adopt sustainability practices and diversification strategies, can further strengthen institutional performance. Overall, a balanced policy approach is required to ensure that sustainability audits enhance governance without undermining efficient capital allocation.

Theoretical Implications

This study makes several important contributions to theory, particularly to the Resource-Based View (RBV) and Modern Portfolio Theory (MPT), by integrating sustainability audits (SA) into the analysis of financial sustainability. First, from the perspective of RBV, the study extends the theory by conceptualising sustainability audits as a strategic organisational capability rather than merely a compliance mechanism. RBV emphasises that firms achieve superior performance through valuable, rare, inimitable, and non-substitutable (VRIN) resources. The findings suggest that SA functions as an intangible governance resource that enhances the effectiveness of revenue diversification (RD) by improving transparency, accountability, and decision quality. However, the negative moderating effect of SA on the relationship between capital budgeting practices (CBP) and financial sustainability (FS) challenges the assumption that all strategic capabilities uniformly enhance performance. Instead, it demonstrates that certain capabilities may impose constraints or trade-offs, particularly when they

introduce stricter controls or shift priorities toward sustainability compliance. This refines RBV by highlighting that resource effectiveness is context-dependent and may produce both enabling and constraining effects.

Second, the study contributes to MPT by extending its traditional focus on risk-return optimisation to incorporate sustainability-oriented governance mechanisms. While MPT advocates diversification as a strategy to minimise risk and maximise returns, the findings support this proposition by showing that RD positively influences financial sustainability and that SA further strengthens this effect. However, the weakening effect of SA on CBP–FS relationships introduces a new dimension to MPT, suggesting that sustainability considerations may alter investment decision criteria, potentially limiting high-return opportunities in favour of lower-risk, sustainability-compliant investments. This provides a more nuanced understanding of portfolio selection by incorporating non-financial constraints into the risk-return framework.

Third, the study advances theoretical understanding by integrating governance mechanisms (SA) with strategic financial practices (RD and CBP) within a single model. This integration highlights the interactive and sometimes contradictory effects of sustainability-oriented practices on financial outcomes, particularly in the context of developing economies such as SACCOS. It therefore contributes to the growing body of literature that calls for the incorporation of sustainability and governance dimensions into mainstream financial and strategic management theories. Thus, the study demonstrates that sustainability audits are not neutral tools but active strategic elements that reshape the effectiveness of financial strategies, thereby enriching both RBV and MPT with a more dynamic and context-sensitive perspective.

Limitations and Suggestions for Future Studies

The study acknowledges limitations in causal inference, although it assessed common method bias using a statistical Variance Inflation Factor (VIF). Through such assessment, all VIF scores were below the threshold of 3.3, suggesting that no substantial common method bias exists in the model. Given that the study relies on cross-sectional data collected from the same respondents, the ability to make strong causal claims is inherently limited. The observed relationships between Revenue Diversity (RD), Capital Budgeting Practices (CBP), Sustainability Audits (SA), and Financial Sustainability (FS) could therefore be interpreted as associational rather than strictly causal. While the theoretical grounding, particularly from the Resource-Based View (RBV), supports the directional logic that internal capabilities (RD, CBP, SA) can influence financial sustainability, the research design does not fully establish temporal precedence. It is possible, for example, that financially sustainable SACCOS are better positioned to implement stronger sustainability audits or more sophisticated capital budgeting practices, suggesting the possibility of reverse causality or reciprocal relationships. Thus, to address this limitation, causality is theoretically inferred rather than empirically confirmed. It is recommended that future research employ longitudinal designs, panel data, or experimental approaches to better establish causal direction. Moreover, the study relies on self-reported data, which may be affected by common method bias and respondent subjectivity, potentially influencing the accuracy of the findings.

The study is valuable for explaining the impact of sustainability audits on the RD, CBP and FS relationship. Despite this, it falls short in some areas that guide future research. For instance, the study applies only two investment management practice variables, comprising capital budgeting practices and revenue diversification. To broaden understanding of FS drivers, subsequent research can incorporate other variables, such as governance structure, research and development, capital structure, and market orientation. Likewise, for firms, only SACCOS were covered in the current study. Its findings may not be generalised to other firms or countries due to contextual differences in their formation, development levels, and cultural and legal settings. Subsequent research could seek to confirm and extend the current study's findings by investigating similar relationships in firms operating across different developing countries in Africa, Asia, and other continents. Equally, investigating other types of financial firms in Tanzania or other emerging economies could yield significant

comparative insights. The present study further incorporates sustainability audits as a moderating variable, reflecting two distinct impacts on the interaction among RD, CBP, and FS. Future work may benefit from exploring the direct relationships among the variables or from including alternative moderating or mediating variables, such as governance structure or regulatory enforcement.

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Conflicts of Interest:
The authors declare no conflict of interest.

Data Availability Statement:
The supporting data for the findings of this study are available from the corresponding author upon reasonable request.

References

Aburumman, O. J., Omar, K., Al Shbail, M., & Aldoghan, M. (2023). How to Deal with the Results of PLS-SEM? How to Deal with the Results of PLS-SEM? In: Alareeni, B., Hamdan, A. (eds). Explore Business, Technology Opportunities and Challenges After the Covid-19 Pandemic. ICBT 2022. *Lecture Notes in Networks and Systems*, *495 LNNS*(January), 1196–1206. https://doi.org/10.1007/978-3-031-08954-1_101

Akuei, M. S., Wanjare, J., & Wafula, C. (2025). Does Investment Incentives Mediate the Relationship Between Government Revenue Management Practices and Financial Sustainability? Evidence from Oil Resources in. *Journal of Finance and Investment Analysis,* 14(1), 1–11. https://doi.org/doi.org/10.47260/jfia/1411

Al-Marsomi, M. S. K., & Al-Zwainy, F. M. S. (2023). Structural equation modeling of critical success factors in the development of regional. *Journal of Project Management (Canada)*, *8*(2), 119–132. https://doi.org/10.5267/j.jpm.2022.11.002

Al-Nimer, M., Abbadi, S. S., Al-Omush, A., & Ahmad, H. (2021). Risk Management Practices and Firm Performance with a Mediating Role of Business Model Innovation. Observations from Jordan. *Journal of Risk and Financial Management*, *14*(3). https://doi.org/10.3390/jrfm14030113

Alles, L., Jayathilaka, R., Kumari, N., Malalathunga, T., Obeyesekera, H., & Sharmila, S. (2021). An investigation of the usage of capital budgeting techniques by small and medium enterprises. *Quality and Quantity*, *55*(3), 993–1006. https://doi.org/10.1007/s11135-020-01036-z

Almehdawe, E., Khan, S., Lamsal, M., & Poirier, A. (2021). Factors affecting Canadian credit unions' financial performance. *Agricultural Finance Review*, *81*(1), 51–75. https://doi.org/10.1108/AFR-06-2019-0065

Alodat, A. Y., Amosh, H. Al, Khatib, S. F. A., & Mansour, M. (2023). Audit committee chair effectiveness and firm performance: The mediating role of sustainability disclosure. *Cogent Business & Management*, *10*(1), 1–21. https://doi.org/10.1080/23311975.2023.2181156

Alsmady, A. A. (2023). The moderating role of audit quality between earnings management and sustainable

investment opportunities: Evidence from Gulf Cooperation Council countries. *International Journal of Applied Economics, Finance and Accounting*, *16*(1), 18–32. https://doi.org/10.33094/ijaefa.v16i1.874

Amoako, G. K., Bawuah, J., Asafo-adjei, E., Amoako, G. K., Bawuah, J., Asafo-adjei, E., & Ayimbire, C. (2023). Internal audit functions and sustainability audits: Insights from manufacturing firms. *Cogent Business & Management,* 10(1). https://doi.org/10.1080/23311975.2023.2192313

Ansari, M. N., & Jamaluddeen. (2024). Exploring the Financial Sustainability of Indian Public Sector Banks: A Study on Revenue Diversification Patterns. *Paradigm: A Management Research Journal*, *28*(2), 139–156. https://doi.org/10.1177/09718907241276257

Appiah, M. K., Dordaah, J. N., Sam, A., Yeboah, S. A., & Amaning, N. (2024). Modeling the Influence of Internal Audit Efficacy on Energy Saving Behavior: The Role of Sustainability Audit. *SAGE Open*, *14*(2), 1–14. https://doi.org/10.1177/21582440241257784

Ashraf, Y., & Nazir, M. S. (2023). Income diversification and bank performance: evidence from the emerging economy of Pakistan. *Journal of Economic and Administrative Sciences*, (2001). https://doi.org/10.1108/JEAS-05-2023-0119

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage, Journal of Management, Vol. *Journal of Management*, *17*(1), 99–120.

Becker, J., Ringle, C. M., & Sarstedt, M. (2018). PLS-SEM and PLSC-SEM: Interaction term generation * Data treatment. *Journal of Applied Structural Equation Modeling, 2(2),* 1–21.

Bosch-Badia, M.-T., Montllor-Serrats, J., & Tarrazon-Rodon, M.-A. (2020). The Capital Budgeting of Corporate Social Responsibility. *Sustainability (MDPI)*, *12*(3542), 1–28.

Bouaziz, D., & Moalla, M. (2024). Does external audit quality moderates the relationship between audit committee effectiveness and earnings management? Evidence from France. *EuroMed Journal of Business*. https://doi.org/10.1108/EMJB-06-2024-0153

Boubaker, S., Houcine, A., Ftiti, Z., & Masri, H. (2018). Does audit quality affect firms' investment efficiency ? *Journal of the Operational Research Society*, *69*(10), 1688–1699. https://doi.org/10.1080/01605682.2018.1489357

Buyuran, B., & Eksi, I. H. (2020). Revenue Diversification and Bank Performance: Evidence From Turkey. *South- Eastern Europe Journal of Economics*, 1, 7–18.

Cheung, G. W., Cooper, H. D., Rebecca, T., & Wang, L. C. (2023). Reporting reliability, convergent and discriminant and best-practice recommendations. *Asia Pacific Journal of Management*, (0123456789). https://doi.org/10.1007/s10490-023-09871-y

Chisiri, T., & Manzini, S. (2021). Impact of Financial Management Practices on Sustainable Growth of SMEs: A Case of Catering Organisations in Bulawayo Metropolitan Province. *International Journal of Entrepreneurial Research*, *4*(3), 48–53. https://doi.org/10.31580/ijer.v4i3.2042

Chumba, J. A., Muturi, W., & Oluoch, J. O. (2019). Effect of financial investment strategies on the financial sustainability of Universities in Kenya. *International Academic Journal of Economics and Finance*, *3*(3), 37–49. Retrieved from http://www.iajournals.org/articles/iajef_v3_i3_37_49.pdf

Dabor, E. L., & Modugu, K. P. (2013). Capital budgeting practices in quoted banks in Nigeria. *International Journal of Accounting and Financial Management Research (IJAFMR)*, *3*(3), 31–40.

Darmansyah, A., Ali, Q., & Parveen, S. (2025). Sophisticated Capital Budgeting Decisions for Financial Performance and Risk Management—A Tale of Two Business Entities. *Journal of Risk and Financial Management*, 18(6), 1–22. https://doi.org/10.3390/jrfm18060297

DeSimone, S., D'Onza, G., & Sarens, G. (2021). Correlates of internal audit function involvement in sustainability audits. In *Journal of Management and Governance* (Vol. 25). Springer US. https://doi.org/10.1007/s10997-020-09511-3

Duguma, G. J., & Han, J. (2018). Effect of Deposit Mobilisation on the Financial Sustainability of Rural Saving

and Credit Cooperatives: Evidence from Ethiopia. *Sustainability (Switzerland) MDPI*, *10*, 1–23. https://doi.org/10.3390/su10103387

Dzin, N. H. M., & Lay, Y. F. (2021). Validity and Reliability of Adapted Self-Efficacy Scales in the Malaysian Context Using PLS-SEM Approach. *Education Science*, *11*(676), 2–22. https://doi.org/10.3390/educsci11110676

El-deeb, M. S., Adel, A., & Banna, E. (2023). Does audit quality moderate the impact of environmental, social and governance disclosure on firm value? Further evidence from Egypt. *Journal of Humanities and Applied*, *5*(4), 293–322. https://doi.org/10.1108/JHASS-11-2022-0155

Ericson, A., Bonuck, K., Green, L. A., Conry, C., Martin, J. C., & Carney, P. A. (2023). Optimising Survey Response Rates in Graduate Medical Education Research Studies. *Family Medicine*, *55*(5), 304–310. https://doi.org/10.22454/FamMed.2023.750371

Ferreira, N. C. M. Q. F., & Ferreira, J. M. (2023). The field of resource-based view research: mapping past, present and future trends. *Management Decision*, *63*(4), 1124–1153. https://doi.org/10.1108/MD-10-2023-1908

Flores-Chia, J., & Mougenot, B. (2023). Analysis of the financial sustainability of the cooperative savings and credit sector in Peru. *International Journal of Social Economics*, *50*(3), 452–461. https://doi.org/10.1108/IJSE-01-2022-0064

Fraser, I. J., Schwarzkopf, J., & Müller, M. (2020). Exploring supplier sustainability audit standards: Potential for and barriers to standardisation. *Sustainability (Switzerland)*, *12*(8223), 1–31. https://doi.org/10.3390/su12198223

Githaiga, P. N. (2022). Revenue diversification and financial sustainability of microfinance institutions. *Asian Journal of Accounting Research*, *7*(1), 31–43. https://doi.org/10.1108/AJAR-11-2020-0122

Gitman, L. J. (2015). Principles of Managerial Finance. *In Pearson Higher Education (AU)* (Tenth Edit). Pearson Higher Education (AU).

Guidara, A., & Ammari, A. El. (2022). Strength of auditing and reporting standards, ethical behaviour of firms and sustainability: a cross-country investigation. *EuroMed Journal of Business*, *17*(1), 105–116. https://doi.org/10.1108/EMJB-10-2020-0107

Hair, J. F., Hult, G. T. M., & Ringle, C. M. (2017). *A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM).*

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Handoko, B. L., Swat, A., & Lindawati, L. (2020). The Importance of Sustainability Audit Report in the Go Public Companies Sector, in Indonesia. *Advances in Science, Technology and Engineering Systems Journal*, *5*(4), 217–222. https://doi.org/org/10.25046/aj050427

Haule, K. O., & Kilonzo, R. (2024). Growing Through Cities in Tanzania: The Implications for National Development. *Tanzania Journal of Development Studies*, *22*(2), 69–94. https://doi.org/10.56279/njiy8787/tjds.v22i2.4

Hazaea, S. A., Zhu, J., Khatib, S. F. A., Bazhair, A. H., & Elamer, A. A. (2022). Sustainability assurance practices: a systematic review and future research agenda. *Environmental Science and Pollution Research*, *29*(4), 4843–4864. https://doi.org/10.1007/s11356-021-17359-9

Henard, D. H., & McFadyen, M. A. (2012). Resource dedication and new product performance: A resource-based view. *Journal of Product Innovation Management*, *29*(2), 193–204. https://doi.org/10.1111/j.1540-5885.2011.00889.x

Henock, S. M. (2019). Financial sustainability and outreach performance of saving and credit cooperatives: The case of Eastern Ethiopia. *Asia Pacific Management Review*, *24*(1), 1–9. https://doi.org/10.1016/j.apmrv.2018.08.001

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-

based structural equation modelling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hung, C., & Hager, M. A. (2019). The Impact of Revenue Diversification on Non-profit Financial Health : A Meta-analysis. *SAGE*, *48*(1), 5–27. https://doi.org/10.1177/0899764018807080

IPSASB. (2013). Reporting on the long-term sustainability of an entity's finances. International Public Sector Accounting Standards Board.

Ismail, A. M., Ahmadi, S. M., Yatim, N., & Ismail, P. M. (2020). The impact of board characteristics on cooperative reputation from the lens of resource-based view theory (RBV). *International Journal of Financial Research*, *11*(3), 43–61. https://doi.org/10.5430/ijfr.v11n3p43

Issa, A. (2025). Sustainability committees' influence on ESG controversies and sustainability assurance: a comparative study in polluting and non-polluting firms. Journal of Global Responsibility, 16(4), 686–704. https://doi.org/10.1108/JGR-02-2024-0035

Jha, A. (2025). A review of the relationship between sustainability and capital budgeting. *Journal of Informatics Education and Research*, *5*(1), 2244–2260.

Kadam, M., & Singh, N. (2025). A Study of the Identification of Capital Budgeting Tools applied in Investment Decision. *International Quarterly Journal of Life Science*, *20*(1), 671–676.

Kamau, M. W., & Njiru, A. (2019). Effect of Investment Portfolio Diversification on Financial Performance of Deposit Taking Savings and Credit Cooperatives in Kenya. *International Journal of Management and Commerce Innovations*, 6(2), 211–221. www.researchpublish.com

Keong, O. C. (2020). Determinants of Intentions to Engage in Sustainability Accounting & Reporting (SAR) and Moderating Role of Internal Audit Function: *The Perspective of Accountants*. *4*(1), 33–43.

Kesanta, M. N., Makuya, V., & Makona, A. (2025). Risk management practices and financial sustainability: evidence from savings and credit cooperative societies in Tanzania. *Cogent Business & Management*, *12*(1), 1–16. https://doi.org/10.1080/23311975.2025.2563034

Kesmodel, U. S. (2018). Cross-sectional studies – what are they good for? *Acta Obstetricia et Gynecologica Scandinavica*, *97*, 388–393. https://doi.org/10.1111/aogs.13331

Kipkorir, R. D., Namiinda, B. M., & Njeje, D. (2017). Influence of Investment Decisions on the Financial Performance of SACCOS: A Survey of Registered SACCOS in Baringo County. *International Journal of Science and Research (IJSR)*, (January 2015).

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of E-Collaboration*, *11*(4), 1–10. https://doi.org/10.4018/ijec.2015100101

Kock, N., & Lynn, G. S. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems,* 1–40.

Kuria, P. (2025). Effects of Portfolio Diversification on the Financial Performance of Listed Investment Firms in Kenya. *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM),* 12(1), 28–32. https://doi.org/10.5281/zenodo.14844133

Kyabarongo, B., Agaba, M., Munyabonera, F., Mpora, E. B., Kikawa, C., & Ahabwe, O. (2024). The Effect of Board Risk Management on Financial Performance of Selected the Effect of Board Risk Management on Financial Performance of Selected Saccos in Kiruhura District, Uganda. *Journal of Economics, Finance and Business Analytics*, *2*(1), 1–13.

Li, Y., Ashhari, Z. M., & Fan, Y. (2023). Financial sustainability and capital leverage of microfinance institutions in China: The mediating role of profitability Financial sustainability and capital leverage of microfinance institutions in China : The mediating role of profitability. *Cogent Economics & Finance*, *10*(1), 1–17. https://doi.org/10.1080/23322039.2022.2153411

Lubis, N. W. (2022). Resource-Based View (RBV) in Improving Company Strategic Capacity. *Research Horizon*, *2*(6), 587–596. https://doi.org/10.54518/rh.2.6.2022.587-596

Luvanda, E. G., & Iwata, J. J. (2024). Digital preservation of records at Wazalendo and Umoja Savings and Credit Cooperative Societies in Tanzania. *Journal of the South African Society of Archivists*, *57*, 74–91. https://doi.org/10.4314/jsasa.v57i1.7

Magashi, C., Sam, A., Agbinya, J., & Mbelwa, J. (2023). Indicative Factors for SACCOs' Failure in *Engineering, Technology & Applied Science Research*, *13*(4), 11177–11181. https://doi.org/https://doi.org/10.48084/etasr.5989

Majid, R. (2024). What drives prospective investors to support small and medium enterprises via Islamic securities crowdfunding? An empirical evidence from Indonesia. *Journal of Islamic Marketing*. https://doi.org/10.1108/JIMA-11-2023-0375

Manaf, S., Mukhyi, M. A., Ahyar, M., Inagama, S., Ikhsanuddin, U. D., & Gunadarma, U. (2024). Corporate Financial Management, Risk Assessment, and Investment Strategies : Analysing Their Effects on Business Sustainability Open Access. *Global International Journal of Innovative Research, 2*(6), 1408–1414.

Mang'ana, K. M., Ndyetabula, D. W., & Hokororo, S. J. (2023). Financial management practices and performance of agricultural small and medium enterprises in Tanzania. *Social Sciences and Humanities Open*, *7*(1). https://doi.org/10.1016/j.ssaho.2023.100494

Markowitz, H. (1952). Modern portfolio theory. Journal of Finance, 7(11), 77-91.

Masanyiwa, Z. S., Chusi, T. N., & Haji, A. U. (2022). Determinants for Sustainability of Microfinance Institutions in North "A" District in Zanzibar. *Open Journal of Business and Management*, *10*(04), 1583–1600. https://doi.org/10.4236/ojbm.2022.104083

Matekele, C. K., & Mbogela, C. S. (2025). The Effects of Accounting Language and Staff Capacity on Local Government Authorities' Financial Reporting Quality. *SEISENSE Journal of Management, 8(1),* 98–118. https://doi.org/https://doi.org/10.33215/bd2se367,

Mazikana, A. T. (2023). The Good Part of Using a Questionnaire: Advantages and Disadvantages. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4386399

Memon, M. A., Ramayah, T., Cheah, J.-H., Ting, H., Chuah, F., & Cham, T. H. (2021). PLS-SEM statistical programs: A review. *Journal of Applied Structural Equation Modelling*, *5*(1), i–xiv. https://doi.org/10.47263/JASEM.5(1)06

Mlay, L. S., Temu, S. S., & Mataba, L. D. (2023). The Impact of Board Characteristics on the Financial Performance of Savings and Credit Cooperative Societies in Arusha and Dar es Salaam, Tanzania. *Tanzanian Economic Review, 13*(1), 129–154.

Molla, M. I., Mustary, M., Rahaman, M. K. Bin, Biswas, N., & Das, S. R. (2025). Does revenue diversification lead to greater stability and profitability of banks? Empirical evidence from Bangladesh. *LBS Journal of Management & Research*. https://doi.org/10.1108/lbsjmr-07-2024-0074

Mollah, A. S., Rouf, A., & Rana, S. M. S. (2023). A study on capital budgeting practices of some selected companies in Bangladesh. *PSU Research Review*, *7*(2), 137–151. https://doi.org/10.1108/PRR-10-2020-0035

Mutinda, D. M., & Aluoch, M. O. (2025). Portfolio diversification and profitability in selected commercial banks in Kenya. *International Academic Journal of Economics and Finance (IAJEF)*, *4*(4), 65–89. Retrieved from https://iajournals.org/articles/iajef_v4_i4_65_89.pdf

Natser, M. (2025). Strategic Financial Management in a Dynamic Economy: Optimising Investment, Mitigating Risks, and Leveraging Financial Technology for Corporate Sustainability. *Golden ratio 5(3),* 476–481. ttps://doi.org/10.52970/grdis.v5i3.1121

Navarro-Galera, A., Alcaide-Muñoz, L., López-Subires, M. D., & Rodríguez-Bolívar, M. P. (2019). Identifying risk determinants of the financial sustainability of regional governments. *Public Money and Management*, *41*(3), 255–263. https://doi.org/10.1080/09540962.2019.1684025

Naz, F., Salim, S., ur Rehman, R., Ishfaq Ahmad, M., & Ali, R. (2019). Determinants of financial sustainability of microfinance institutions in Pakistan. *Upravlenets*, *10*(4), 51–64. https://doi.org/10.29141/2218-5003-

2019-10-4-5

Maina, Justus Nderitu; Kiai, Richard Muthii; Kyalo, Teresia Ngina (2020) : Financial innovation practice, sacco size and financial sustainability of deposit taking saving and credit co-operatives in Kenya, Financial Studies, ISSN 2066-6071, Romanian Academy, National Institute of Economic Research (INCE), "Victor Slăvescu" *Centre for Financial and Monetary Research, Bucharest,* Vol. 24, Iss. 3 (89), pp. 51-65

Nguyen, T. T. T. (2026). Mapping the Relationship between Budget Process and Firm Performance: A Global Perspective Review. *Management Dynamics in the Knowledge Economy,* 14(1), 88–107. https://doi.org/10.2478/mdke-2026-0006

Novitasari, N. L. G., Yadnyana, I. K., Gayatri, G., & Putra, I. N. W. A. (2024). A Systematic Literature Review of Financial Sustainability. *Indonesian Journal of Sustainability Accounting and Management*, 8(1), 92–106. https://doi.org/10.28992/ijsam.v8i1.816

Omona, J. (2021). Poverty eradication and wealth creation: The role and challenges of savings and credit cooperatives (SACCOs) in Uganda. *African Journal of Business Management*, *15*(8), 198–210. https://doi.org/10.5897/AJBM2021.9234

Onoriode, M. A., & C E. V. (2025). Investment Decision and Capital Budgeting. *International Journal of Academic and Applied Research (IJAAR)*, *9*(5), 107–115.

Otache, I., Echukwu, I. J., Umar, K., & Audu, S. (2023). Internal factors affecting the performance of employee-based savings and credit cooperatives: evidence from Nigeria. *Journal of Enterprising Communities: People and Places in the Global Economy*, *17*(6), 1154–1170. https://doi.org/10.1108/JEC-03-2022-0046

Pandis, N. (2014). Cross-sectional studies. *American Journal of Orthodontics and Dentofacial Orthopaedics*, *146*(1), 127–129. https://doi.org/10.1016/j.ajodo.2014.05.005

Penrose, E. T. (1959). The Theory of the Growth of the Firm. New York: John Wiley & Sons Inc. Penrose.

Purnamasari, P., & Adriza. (2024). Capital budgeting techniques and financial performance: a comparison between SMEs and large listed firms. *Cogent Economics and Finance*, *12*(1). https://doi.org/10.1080/23322039.2024.2404707

Putri, M., Ramadanty, J., & Mukhtaruddin. (2024). Analysing the Development of Capital Budgeting Methods in Investment Decision Making: A Systematic Literature Review. *IFR Journal of Economics and Business Management*, *1*(2), 27–33. https://doi.org/10.70146/ebmv01i02.004

Radomska, J. Szpulak, A. (2021). Injecting Courage into Strategy: The Perspective of Competitive Advantage. *European Business Review, 33(3),* 505–534.

Rahmawati, D., & Mardanugraha, E. (2023). Impact Analysis of Income Diversification on Banking Profitability Case Study of Banking in Indonesia. *Jurnal Ekonomi*, *12*(02), 625-634. Retrieved from http://ejournal.seaninstitute.or.id/index.php/Ekonomi

Rasoolimanesh, S. M. (2022). Discriminant validity assessment in PLS-SEM: A comprehensive composite-based approach. *Data Analysis Perspectives Journal, 3(2),* 1–8.

Reis, J. C. H. B., & Macedo, M. A. da S. (2025). The Potential of Partial Least Squares Structural Equation Modelling (PLS-SEM) with a Formative Approach in Accounting Research. *Revista de Educação e Pesquisa Em Contabilidade (REPeC)*, *19*, 1–9. https://doi.org/10.17524/repec.v19.e3679

Rizova, T., & Dimova, N. (2025). Investment Management in Tourism Through Implementing Digital Technologies Stimulating Sustainable Consumer Behaviour. *Journal of Management Research and Review*, 01(06), 282–289. https://doi.org/10.65150/ep-jmrr/v1e6/2025-06

Sadan, V. (2017). Data Collection Methods in Quantitative Research. *Indian Journal of Continuing Nursing Education*, *18*(2), 58–63.

Said, M. S., Annuar, H. A., & Hamdan, H. Bin. (2019). An investigation into the financial sustainability of Islamic Saving, Credit Cooperative Society (SACCOS) in Tanzania. *International Journal of Ethics and Systems*, *35*(2), 242–259. https://doi.org/10.1108/IJOES-11-2018-0159

Sarstedt, M., Richter, N. F., Hauff, S., & Ringle, C. M. (2024). Combined importance–performance map analysis (cIPMA) in partial least squares structural equation modelling (PLS) SEM: a SmartPLS 4 tutorial. *Journal of Marketing Analytics*, *12*, 746–760. https://doi.org/10.1057/s41270-024-00325-y

Shaheen, W. A., Saleem, T., Shafi, N., & Ullah, U. (2024). Systematic Literature Review on Capital Budgeting Techniques. *UCP Journal of Business Perspectives*, *2*(1), 17–29.

Shields, J. F., Bilsky, B. A., & Shelleman, J. M. (2024). SMEs, Sustainability, and Capital Budgeting. *Small Business Institute Journal*, *20*(1), 1–7. https://doi.org/10.53703/001c.115383

Shrestha, N. (2020). Detecting Multicollinearity in Regression Analysis. *American Journal of Applied Mathematics and Statistics*, *8*(2), 39–42. https://doi.org/10.12691/ajams-8-2-1

Simiyu, F. R., Namusonge, P. G., & Sakwa, P. M. (2017). Influence of Strategic Investment Management Practices on Financial Performance of Sugar Manufacturing Companies in Kenya. *IOSR Journal of Business and Management*, *19*(01), 05–14. https://doi.org/10.9790/487x-1901070514

Steinmeier, M., & Stich, M. (2019). Does Sustainability Assurance Improve Managerial Investment Decisions? *European Accounting Review*, *28*(1), 177–209. https://doi.org/10.1080/09638180.2017.1412337

Sunny, S. A., & Apsara, F. A. (2026). The moderating role of audit quality on the relationship between audit committee characteristics and firm performance: evidence from an emerging economy. *Asian Journal of Economics and Banking*, (January), 1–19. https://doi.org/10.1108/ajeb-12-2024-0135

Tabash, M. I., Salamzadeh, A., Abduli, S., & Rahaman, S. (2022). Sampling techniques (probability) for quantitative social science researchers: A conceptual guidelines with examples. *SEEU Review*, *17*(1), 42–51.

Tanujaya, B., Prahmana, R. C. I., & Mumu, J. (2022). Likert Scale in Social Sciences Research: Problems and Difficulties. *FWU Journal of Social Sciences*, *16*(4), 89–101. https://doi.org/10.51709/19951272/Winter2022/7

Tariq, S., Zaffar, M. A., Riaz, Y., & Jalil, M. N. (2025). Revenue composition and financial health of non-profit humanitarian and emergency health services. *Journal of Economic and Administrative Sciences*, *41*(2), 806–824. https://doi.org/10.1108/JEAS-07-2022-0174

TCDC. (2024). The savings and credit cooperative societies (SACCOS) annual performance report for 2023. The annual report on operations, performance, and supervision of SACCOS in Tanzania (3rd ed.). https://www.ushirika.go.tz/index.php/publications

United Republic of Tanzania [URT]. (2018, November). Microfinance Act (Act Supplement, No. 10). Government Printer, Dodoma. https://www.bot.go.tz/Publications/Acts,%20 Regulations, %20Circulars, %20Guidelines/Acts/en/202002130644421418.pdf

United Republic of Tanzania [URT]. (2019). The Microfinance (Savings and Credit Cooperative Societies) Regulations, 2019 (GN No. 675). Dar es Salaam: Government Printer. Retrieved from https://www.bot.go.tz/Publications/Acts, Regulations, Circulars, Guidelines/Regulations/en/ 2020031803513151.pdf

Wang, X., & Cheng, Z. (2020). Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations. *Chest*, *158*(1), S65–S71. https://doi.org/10.1016/j.chest.2020.03.012

Washika, A. O., Kiragu, D., Ngunyi, A., & Shano, M. (2021). Effect of Investment Management Practices on the Sustainability of Private Hospitals in Nairobi. *International Journal of Science and Research (IJSR)*, *10*(1), 864–870. https://doi.org/10.21275/SR21108232103

Xie, Z., Liu, X., Najam, H., Fu, Q., Abbas, J., Comite, U., Miculescu, A. (2022). Achieving Financial Sustainability through Revenue Diversification: A Green Pathway for Financial Institutions in Asia. *Sustainability (Switzerland)*, *14*(6). https://doi.org/10.3390/su14063512

Yamane, T. (1973), Statistics: an Introduction Analysis, Harper and Row, New York, NY.

Yitayaw, M. K. (2021). Determinants of Profitability and Financial Sustainability of Saving and Credit Cooperatives in Eastern Ethiopia. *International Journal of Rural Management*, *17*(2), 239–261.

https://doi.org/10.1177/0973005220980599

Yosa, F., Agabalinda, C., & Vilard Isoh, A. (2024). The Mediating Effects of Board Role Performance in the Relationship Between Board Capital and Survival of Financial Cooperatives in Uganda. *SEISENSE Business Review,* 4(1), 268–285. https://doi.org/10.33215/f49nrk77

Zhou, N., and Park, S. H. (2020). Growth or Profit? Strategic Orientations and Long-Term Performance in China. Strategic Management Journal, 41(11), 2050–2071.