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Internal Controls and Double-Bottom-Line Performance in Ghanaian Cooperative Financial Institutions: Moderated by Firm Characteristics

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Abstract

Purpose: This research investigates the impact of internal control systems on double-bottom-line (DBL) performance of Ghana's cooperative financial institutions (CFIs) with emphasis on firm-level determinants moderating the impact, namely firm size and age.

Methodology: With the help of a survey-based measurement instrument, data were obtained from 207 approved financial cooperatives and credit unions that were operating in Ghana's ten former administrative regions. The study used Partial Least Squares Structural Equation Modeling (PLS-SEM) to study how social performance, internal control practices, and financial performance correlate with each other.

Findings: The financial performance is influenced directly by internal controls, whereas social performance is influenced depending on the size and age of the company. The older and larger CFIs reported stronger relationships between DBL performance and internal control strength. The study adds to the scant empirical evidence on cooperative finance in sub-Saharan Africa by bringing together internal control arrangements with the DBL performance framework.

Unique Contribution to Theory, Practice and Policy: The study provides pertinent policy lessons for regulators and practitioners, including the need for customized supervision, capacity development, and differential compliance procedures in support of inclusive financial development and governance at CFIs

Keywords: *Ghana, Digital Finance, Financial Inclusion, Cooperatives, Performance*

1. Introduction

In Ghana, Cooperative Financial Institutions (CFIs); a broad encompassing term for credit unions and financially licensed cooperatives have become important tools of inclusive finance and socio-economic change. Their democratic governance, member-owned business model, and serving excluded groups differentiate them from conventional financial institutions. CFIs are not only essential in deepening financial service coverage but also in increasing social goals like reducing poverty, women's empowerment, and rural economic inclusion (Adusei, 2021; Amoah & Frimpong, 2023).

Unlike rural and community banks, which are covered by Ghana's banking statute, CFIs are organized on the basis of cooperatives and are governed by apex bodies like the Department of Cooperatives under the Ministry of Employment and Labour Relations and the Credit Union Association (CUA), which supervises the credit union fraternity. Such regulatory institutions are tasked with making sure CFIs guarantee governance, solvency, and financial health in spite of having twin missions of financial sustainability and social impact. Cooperative ethos under which such institutions work necessitates convergence of economic and social returns, raising a question on how well they govern themselves internally to pursue both missions (World Bank, 2022).

Current statistics confirm the position of CFIs in Ghana's financial market. The Ministry of Finance (2024) reports that there are an estimated 450 registered CFIs working in the country in 2024. They offer financial services to hundreds of thousands of members who are primarily found in rural and peri-urban locations with poor mainstream banking coverage. Their products vary from simple savings and credit to more advanced services such as loan insurance, reflecting a responsive attitude towards the heterogeneity of needs of their membership. This spectacular expansion of outreach and product development has its own set of new challenges for them. Foremost among these is the need for strong internal control systems that protect member funds, offset operation risks, and maintain boards' and management's accountability (Mensah & Opoku, 2021).

Internal control systems are of critical need within any financial institution but are more critical within cooperative environments where trust from the stakeholders is crucial to legitimacy of operations. The Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2017) establishes that internal controls are a collection of processes, policies, and procedures that aim at attaining operating effectiveness, credible financial reporting, and regulation compliance. In the case of CFIs, these systems offer a structure for combining financial prudence with the realization of the social mandate. The presence or lack of proper internal controls can therefore make a real impact on institutional performance, particularly in environments characterized by weak regulation and resource constraints.

The application of internal controls in Ghanaian CFIs has become increasingly relevant as more focus has been devoted to them in recent times, particularly following sector-wide financial reforms. The reforms were sparked by endemic governance shortcomings and high-profile failures in the microfinance sector, undermining public trust and leading to a regulatory shake-up. Previously mentioned among the reforms was the promulgation into law of the Banks and Specialized Deposit-Taking Institutions Act, 2016 (Act 930), that provided for more sophisticated

prudential requirements and amended deposit-taking institutions' (and CFIs') expectations of compliance (Bank of Ghana, 2021). There is therefore increased academic and policy interest where it pertains to ascertaining how CFIs are adhering to such regulatory requirements, specifically within internal governance and control procedures.

In spite of increased exposure and regulation, CFIs are underrepresented in literature research, including particularly accounting and auditing research, into internal control's effect on organizational performance. Literature on financial institutions in Sub-Saharan Africa has largely been concentrated on commercial banks and microfinance institutions (MFIs) with few studies conducted on cooperative models based on evidence.

Some exceptions, like those of Adusei (2021) and Bellazzecca and Biosca (2022), have already made comments on some aspects of cooperative finance, but there is so much space for knowledge gap regarding how internal control systems drive the double-bottom-line (DBL) performance of CFIs. This bottom-line strategy, finding a balance between financial sustainability as well as social performance, is significant in driving the success of institutions that are under twin mandates.

Additionally, another subarea that has not yet been explored in a comprehensive manner is the effect of firm-level moderators like firm size and firm age on the effectiveness of internal controls. According to theory, CFIs that are larger and older might possess more structured governance processes, seasoned leadership, and developed institutional knowledge to instill internal controls better. In contrast, younger or smaller CFIs do not have the ability to build and sustain fully-fledged internal control mechanisms, thus are riskier. Nevertheless, there is less empirical evidence in the Ghanaian context to support or refute these hypotheses.

This research attempts to fill some of these substantial holes in the literature by exploring the interaction between Ghanaian CFIs' internal control strength and their DBL performance. In particular, the research investigates if institution size and institution age are essential moderators of this interaction. This study adds more nuanced insight into how internal governance interacts with organizational attributes to impact performance outcomes. The empirical research utilizes data gathered from 207 CFIs, who were picked within a stratified sampling framework that spanned Ghana's ten erstwhile administrative regions. Partial Least Squares Structural Equation Modeling (PLS-SEM) is used as the analytical tool because it is resilient in terms of dealing with intricate relationships as well as latent variables in relatively small sample sizes.

The contribution of this research is three-fold. It contributes empirically to the literature on cooperative financial institutions in Africa, a field that has previously been neglected but is developmentally pertinent. It situates internal control frameworks in the DBL paradigm, thus bridging accounting and governance practices to wider social implications. Third, it offers practical lessons for regulators, policymakers, and practitioners through the recognition of contextual factors that facilitate or limit the efficacy of internal controls in CFIs.

The remainder of the paper is organized as follows: Section 2 provides an overview of the literature and formulates the research hypotheses; Section 3 formulates the theoretical and conceptual

framework guiding the research; Section 4 outlines the research design and instrument development; Section 5 presents the empirical findings; Section 6 interprets the meaning of the results; and Section 7 concludes with policy implications, limitations, and possible avenues for further research.

2. Literature Review

2.1 Internal Controls and Financial Performance

Internal control systems are the pillars of good financial management and institutional integrity, especially within cooperative financial institutions (CFIs). The Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2017) has defined these systems as a system of interrelated components that involve control environment, risk assessment, control activities, information and communication, and monitoring, which collectively are designed to assure effective functioning, credible reporting, and compliance with the law. In CFIs, internal controls are not just compliance instruments but strategic instruments of governance that can facilitate the mitigation of risk, foster accountability, and optimize financial viability.

The interconnection between financial performance and internal control has long been the focus of greater research attention. Agyei and Agyeman (2022), in their examination of 60 Ghanaian credit unions, concluded that effective internal audit systems, transparent financial reporting channels, and hierarchical approval systems significantly contributed to increased loan repayment rates and overall profitability, respectively. Their research supports that financial performance in CFIs improves when controls are preventive rather than detective in nature.

Also, Opoku-Agyemang et al. (2023) evaluated a larger population of CFIs in West Africa and discovered that institutions that had control mechanisms embedded within them had higher liquidity, asset quality, and capital adequacy ratios. They emphasized board oversight and independence of internal audits in obtaining these results.

In the Ghanaian context, Adusei (2021) analyzed the extent to which internal controls helped counter the financial impacts of the COVID-19 pandemic. His research affirmed that CFIs with effective internal audit capacity and operational risk management systems were able to withstand shocks. Such institutions were resilient in sustaining loan recovery rates and business continuity, where there was technology-enabled internal reporting.

Additionally, internal controls enhance member trust, a critical factor in cooperative finance. Open procedures, proper reporting, and fewer instances of fraud ensure that cooperatives retain members' confidence - directly attributable to mobilization of deposits and expansion of the loan portfolio.

Hypothesis H_1: There is no significant relationship between internal controls and the financial performance of CFIs.

2.2 Internal Controls and Social Performance

While their bottom-line financial returns are widely documented, their contribution towards the social objective of CFIs is a developing area of literature. Social performance by CFIs is the capacity to extend services to excluded groups, offer fair access to credit, increase financial literacy, and improve welfare at the community level. The above objectives are complementary to the double-bottom-line (DBL) approach, capturing both financial and social returns.

Internal control systems enable these goals by imparting transparency, fairness, and stakeholder involvement into the institutional system. For example, audit trails, member feedback mechanisms, and grievance remedial systems, and improving accessibility enabled service to be inclusive and fair. Mensah and Opoku (2021) noted that CFIs possessing these characteristics had higher member satisfaction, higher rural reach, and higher women's and youth's involvement in financial services.

Bellazzecca and Biosca (2022), using Italian cooperative empirical evidence, proved that well-governed institutions - institutionally governed with internal controls of a formal type, directed more of the excess into social reinvestment, for instance, financial literacy campaigns and low-interest loan schemes. Internal controls, these authors firmly believe, bring the structural rigour to maintain a social mission, particularly with regulatory burdens added.

In Ghana, Amoako and Asamoah (2023) established a definite link between sound internal governance and the enhancement of social performance. Their research highlighted the reality that CFIs with member-centered systems of control, i.e., participatory audits and social performance indicators, had broader outreach and greater embedding in communities.

Hypothesis

H_2: There is no significant relationship between internal controls and the social performance of CFIs.

2.3 Moderating Role of Firm Size and Age

The impact of internal control systems on performance is not the same across institutions or equally dependent upon various firm-specific attributes like size and age. Institutional size embodies the extent of operations, robustness in human capital, and resource capitalization, whereas age embodies maturity, memory, and system construction.

Big CFIs, for instance, are highly likely to enjoy economies of scale, thus having the capacity to implement superior technologies, recruit skilled workers, and fund elaborate internal control systems (Sangwan et al., 2023). Such entities are also highly likely to have typical organizational designs in addition to segregation of duties; factors that result in better financial as well as social performance results. Conversely, the smaller CFIs are hampered by limited personnel, restricted training access, and inadequate control infrastructure financing. Agyemang and Tutu (2022) contend that such constraints deter institutionalization of controls and reduce enforcement, thus diminishing both operational effectiveness as well as mission delivery.

Firm age is also an appropriate moderator. Greiner's (1972) Life Cycle Theory indicates that as firms mature, they move towards formal rather than relaxed control systems, which often involve complex control structures. Adusei (2021) also attests that older CFIs in Ghana possess more advanced audit trails, improved board governance, and improved risk detection mechanisms.

Nonetheless, institutional age comes with bureaucratization and inflexibility. Bassem (2022) warns that old CFIs are unmalleable and cannot adapt to evolving regulatory or market needs. Thus, the efficacy of internal controls in such an environment hinge on dynamism and constant updating.

Hypotheses:

H_3: Firm size does not significantly moderate the relationship between internal controls and financial performance.

H_4: Firm size does not significantly moderate the relationship between internal controls and social performance.

H_5: Firm age does not significantly moderate the relationship between internal controls and financial performance.

H_6: Firm age does not significantly moderate the relationship between internal controls and social performance.

2.4 Empirical Review

There have been some empirical articles investigating the connection between internal control systems and performance outcomes in financial institutions, but to a great extent they address only mainstream banks and MFIs, with few CFIs-specific findings.

Adusei (2021), in a cross-sectional study of 120 Ghanaian credit unions, established that credit unions with well-established internal controls showed better return-on-assets (ROA) and better loan recovery. His research gave more importance to the quality of internal audit, the risk assessment procedures, and the clear lines of authority as the key facilitators.

Opoku-Agyemang et al. (2023), employing Anglophone West Africa regional data, illustrated that maturity in internal control had a direct influence on institutional legitimacy, trust in members, and deposit base growth. Their results also revealed indirect impacts on social performance mediated by higher transparency. Agyemang and Tutu (2022) find that internal controls that were effective minimized operating losses and maximized congruence between employee conduct and organizational purpose. Their research, however, also identifies variations by control effectiveness based on manager training, ethical climate, and board autonomy.

On the other hand, Bellazzecca and Biosca (2022) note that unnecessary regulatory compliance can cause mission drift. According to their research, financial cooperative organizations can be inclined towards reporting and audit trails rather than community outreach and equity lending under intense regulatory scrutiny.

Kipesha (2021) in East Africa demonstrated that older and larger MFIs internalized control systems to a greater extent, thus achieved better DBL performances. This he believes is due to institutional learning built up, resource agility, and increased investment in governance. These studies collectively establish that internal control systems possess performance-improving potential yet are context-specific, firm-level characteristics, and institution-priority-dependent.

2.5 Theoretical Framework

Four theories are used in this study to build the theoretical link between CFIs' internal control system and DBL performance.

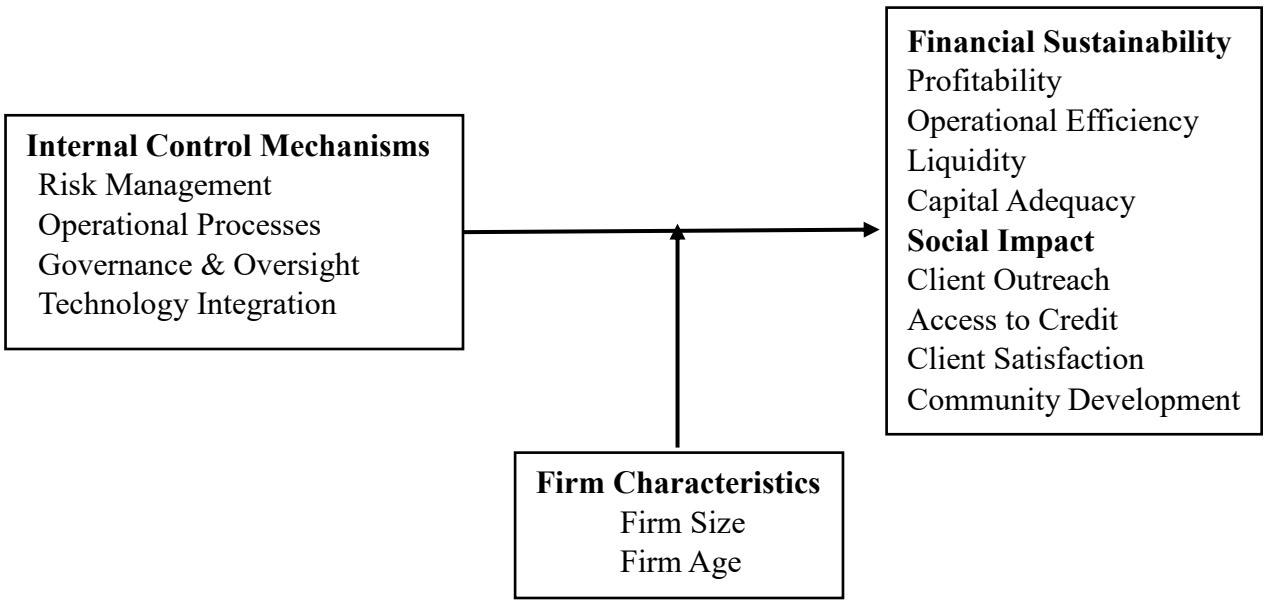
Institutional Theory (DiMaggio & Powell, 1983): Suggests that organizations behave according to customary norms and expectation based on rules in order to achieve legitimacy. CFIs implement internal control systems for regulation compliance and stakeholders' needs. Institutional isomorphism ensues when such conformity makes CFIs emulate commercial banks and forget their cooperative status (Bellazzecca & Biosca, 2022).

Contingency Theory (Donaldson, 2001): Asserts that there is no single best internal control system for everyone; effectiveness is contingent upon fit with circumstances. For CFIs, that would encompass size, age, resource base, and complexity, suggests a flexible, adaptive model of internal control design.

Stakeholder Theory (Freeman, 1984): Emphasizes the various stakeholder interests of CFIs such as members, communities, regulators, and employees. Internal controls serve as mechanisms for accountability to bridge these various interests and foster ethical allocation of resources.

Life Cycle Theory (Greiner, 1972): Proposes that the necessity and efficiency of control vary throughout the life cycle of an organization. More youthful CFIs grapple with informality and system development, while older CFIs grapple with inflexibility. This theory serves as basis for investigating firm age as a moderator.

These theories collectively situate internal controls not just as components of instruments of daily work but as embedded governance devices driven by both internal development and external pressures.



Authors' construct (2025)

Figure 1: Conceptual Framework Illustrating the Influence of Internal Controls on DBL Performance with Moderating Effects of Firm Size and Firm Age

3. Methodology

3.1 Study Design

The study employed a cross-sectional survey design under a quantitative approach to examine the correlation between internal control systems and double-bottom-line (DBL) performance within Ghana's Cooperative Financial Institutions (CFIs). Cross-sectional design allows one to gather empirical data at a single point in time, giving a snapshot of institutional practices and performances. A formal questionnaire was employed as the main data collection tool to yield standardized answers from a wide range and enable valid statistical analysis. Quantitative strategy was applied in testing hypothesis that is theoretically grounded on the interactions among latent constructs. On analyzing the interactions, Partial Least Squares Structural Equation Modeling (PLS-SEM) was used. PLS-SEM is appropriate for the study because it handles complex models, is not sensitive to small-to-medium sample sizes, and does not need normality of data. It also supports the concurrent testing of measurement and structural models as well as moderation analysis.

3.2 Population and Sampling

The population under study is all the registered credit unions and approved financial cooperatives in Ghana, and not rural and community banks since they have their own legal status under the Banking Act. Applying figures from the Ministry of Finance (2024), there were approximately 450 such CFIs that were eligible. A sample of 207 was calculated using the Krejcie and Morgan (1970) table to determine the sample size with 95% confidence level and 5% margin of error. The sample

size provided sufficient statistical power in the identification of the proposed effects and findings generalizability across the CFI sector in Ghana.

3.3 Sampling Strategy and Stratification

A stratified random sampling method was employed to provide regional representativeness. Stratification was based on Ghana's ten administration regions before the 2018 re-demarcation of the regions. It borrowed its lead from the historic availability of cooperative data and the persistence of regulatory and operating classes of CFIs relative to the earlier regional framework. Across all strata, CFIs were randomly sampled with proportional allocation to achieve institutional representation by regions. This facilitated balanced coverage and avoided biases relating to regional economic differences or density of institutions.

3.4 Instrumentation

The main data tool was a self-administered structured questionnaire. It was constructed from pre-tested scales and tailored for use in the Ghanaian cooperative finance environment. The questionnaire consisted of four broad sections: Section A: Trapped demographic and organizational characteristics such as region, institution size, and age. Section B: Measured quantifiable internal control dimensions such as risk assessment, control activities, monitoring practices, and communication systems. Section C: Trapped financial and social performance indicators that are congruent with the DBL framework. Section D: Investigated perceptions regarding how firm size and age influence internal control implementation and institutional performance. All items were scored on a 7-point Likert scale from 1 (Strongly Disagree) to 7 (Strongly Agree), which allow scalability and consistency in statistical modeling.

3.5 Data Collection and Screening

Data were collected over three months between the months of February and April 2025. Through a mixed approach, hardcopy and electronic questionnaires were distributed. Collection and distribution were facilitated by collaboration with local cooperative unions. Of 277 collected responses, 70 were excluded during data cleaning. Exclusion reasons were incomplete response, missing data on key constructs, response inconsistency, and patterned or biased responding. The final dataset used for analytics was 207 valid responses, and thus there was data quality and adherence to PLS-SEM assumptions for reliability and validity testing.

3.6 Data Analysis Procedure

SmartPLS version 4.0 was employed to carry out data analysis. Analysis followed the two-stage procedure suggested for structural equation modeling. Measurement model testing was undertaken in the first stage through evaluation of indicator reliability (loadings), internal consistency (composite reliability, Cronbach's alpha, and construct validity (convergent, discriminant validity). In the second phase, the structural model was evaluated to test hypothesized relations and moderation effects. Bootstrapping with 5,000 subsamples was employed for establishing statistical significance of path coefficients and moderation variable strength (age and firm size). Model

quality was also validated with the help of R^2 values, effect sizes (f^2), and predictive relevance (Q^2). Use of PLS-SEM was warranted not only due to its high usability with small samples and complex models but also because it is amenable to exploratory as well as theory-building research that pervades the literature of accounting and auditing.

4. Results and Findings

4.1 Descriptive Statistics

The last dataset contained 207 valid answers from Ghana's ten former administrative regions' credit unions and accepted financial cooperatives. Descriptive analysis provided important information on institutional and respondent profile. Approximately 42% of the respondents were managers, 30% board members, and 28% other officers, such as Accountants or Supervisory Committee members. This kind of composition provides a balanced view at governance and operational levels of CFIs.

Table 1: Descriptive Statistics of Respondents and Institutions

Variable	Category	Frequency (n)	Percentage (%)
Role	Manager	87	42.0
Role	Board Member	62	30.0
Role	Officer (Accountants/Supervisory Committee Members)	58	28.0
Size	Small	93	45.0
Size	Medium	72	35.0
Size	Large	42	20.0
Age	≤10 yrs	83	40.0
Age	11–20 yrs	66	32.0
Age	>20 yrs	58	28.0

Survey Data (2025)

By size of institutions, 45% of the respondents had previously worked in small-sized CFIs, 35% medium-sized, and 20% large-sized CFIs. The prevalence of small institutions is a recognition of the bottom-up nature of Ghanaian CFIs. By age of institutions, 32% were between 11–20 years and 28% more than 20 years, revealing that majority active institutions have outgrown infancy and reached governance maturity to pass judgments on internal control frameworks.

4.2 Evaluation of Measurement Model

Validity and measurement model reliability were checked prior to hypothesis testing. All latent constructs showed sufficient internal consistency where Cronbach's alpha and composite reliability (CR) were greater than the minimum of 0.70. This was a promise that the survey instrument was measuring the constructs well.

Table 2: Measurement Model Results

Construct	Cronbach's Alpha	Composite Reliability	AVE
Internal Controls	0.88	0.91	0.65
Financial Performance	0.85	0.89	0.62
Social Performance	0.81	0.86	0.58

Survey Data (2025)

Convergent validity was confirmed using Average Variance Extracted (AVE), which for all constructs was more than 0.50 and indicated proper representation of each latent variable by its observed measures. Discriminant validity was tested using the Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio, which again stated that constructs were conceptually different, especially for internal controls, financial performance, and social performance.

4.3 Structural Model Assessment

The structural model was tested through a bootstrapping procedure with 5,000 resamples to obtain an estimate of path coefficients' significance. The model was extremely explanatory in character. Financial performance recorded an R^2 score of 0.48, which implies that internal controls and firm-specific moderators explained almost half of the variance in financial performance. Social performance recorded an R^2 score of 0.36, representing moderate explanatory power. The variance inflation factors (VIFs) were less than the 5 cutoff, establishing the lack of multicollinearity and hence the stability of the model.

4.4 Direct Effects

Internal controls significantly and positively influenced financial performance ($\beta = 0.54$, $p < 0.001$). Therefore, CFIs that have rigorous risk assessment procedures, ongoing monitoring, and internal audit facilities will likely attain sustainable financial performance. Effective control systems prevent fraud, eliminate inefficiencies, and foster investor and member confidence.

Internal controls also had a statistically significant but rather weaker effect on social performance ($\beta = 0.23$, $p = 0.04$). That is to say, while governance arrangements promote outreach and transparency, their social benefit may lie in other organizational factors like culture or philosophy of service.

4.5 Moderation Effects

Moderation analysis revealed that firm size had a positive effect on the relationship between internal control and financial performance ($\beta = 0.19$, $p = 0.02$). Large CFIs stood a good chance of making use of internal controls through accessible resources, trained personnel, and adoption of technology.

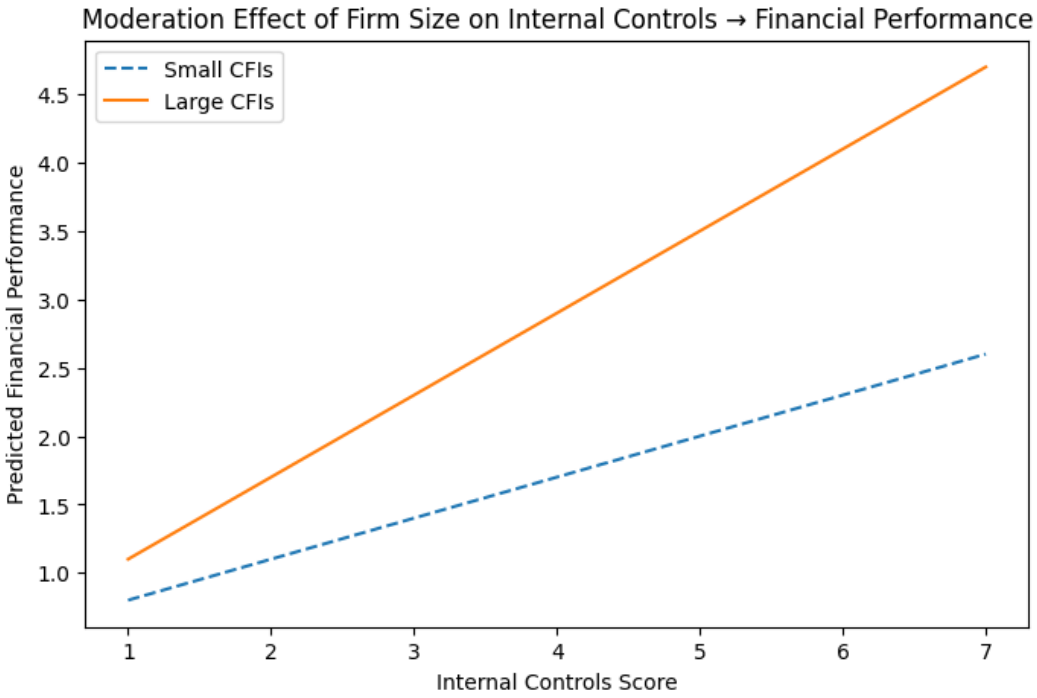


Figure 2: Moderation Plot - Firm Size on Financial Performance

Authors' construct (2025)

Organizational age strongly moderated the internal control; social performance relationship (β = 0.17, p = 0.03). Older organizations were better able to exploit internal control mechanisms for the attainment of social goals, possibly because of greater institutional memory, experience, and embeddedness in the community.

But firm size didn't influence the moderating of the control; social performance relationship, nor did age influence the control–financial performance channel. What these results imply is that while financial management improves with organizational size, social goals demand more than size or age; they demand active involvement and well-established values.

4.6 Hypothesis Testing Summary

The table below summarizes the results of hypothesis testing:

Table 3. Hypothesis Testing Summary – Internal Controls and DBL Performance

Hypothesis	Path Coefficient (β)	t-Value	p-Value	Conclusion
H_1: Internal controls → Financial Performance	0.54	> 5.00	< .001	Rejected
H_2: Internal controls → Social Performance	0.23	≈ 2.05	0.04	Rejected
H_3: Firm Size moderates Internal Controls → Financial Perf.	0.19	≈ 2.30	0.02	Rejected
H_4: Firm Size moderates Internal Controls → Social Perf.	Not Significant	< 1.96	> 0.05	Not Rejected
H_5: Firm Age moderates Internal Controls → Financial Perf.	Not Significant	< 1.96	> 0.05	Not Rejected
H_6: Firm Age moderates Internal Controls → Social Perf.	0.17	≈ 2.20	0.03	Rejected

Source: Authors' construct (2025)

Overall, the findings affirm that internal controls significantly contribute to social and financial performance in CFIs. Moreover, the findings underscore organizational features' influence on control systems' functioning. The bigger and more experienced institutions are better positioned to carry out institution-ized governance actions, although intervention with a focus is required to enhance smaller and newer CFIs to benefit equally.

5. Discussion and Interpretation of Findings

5.1 Interpretation of Findings

This research explored the impact of internal control systems on double-bottom-line (DBL) performance of Ghanaian Cooperative Financial Institutions (CFIs), considering the moderating roles of firm size and firm age. Findings reveal a highly significant, statistically positive relationship between internal controls and financial performance. This is in line with previous studies, such as Adusei (2021) and Opoku-Agyemang et al. (2023), which emphasize the way organised control environments contribute to institutional resilience and protect from illicit financial transactions. Specifically, CFIs whose managers had established properly documented audit trails, risk assessment procedures, and management oversight systems were more likely to experience fewer occurrences of financial fraud and better asset quality. Such in-house controls not only facilitate operational integrity but also engender confidence on the part of stakeholders, in this instance members and regulators.

Second, the research discovered that CFIs that formalized control systems were more likely to meet their financial obligations, stay liquid, and make sound lending choices. These results are paramount in the cooperative setting, where financial sustainability provides the basis for long-term provision of community service. Therefore, the evidence supports the contention that internal controls, once properly connected to day-to-day procedures, act as a financial stabilizer to CFIs doing business in sophisticated regulatory and competitive environments.

Conversely, the research found a less strong but no less significant statistical effect of internal controls on social performance. This indicates that governance arrangements, as important as they are, are not enough to completely accomplish the social mission of CFIs - mobilizing members, distributing service in an equitable way, and returning value to the community. What the research suggests is that internal controls need to be purposefully combined with participative and mission-oriented practices in order to produce significant social results.

This note comes on the heels of the work of Bellazzecca and Biosca (2022), which cautioned against the danger of "mission drift" in over-regulated cooperative settings.

If internal governance mechanisms are set up only to meet compliance checklists instead of mirroring the participatory nature of cooperatives, then they will actually replace or decimate activities in community setting. Under such circumstances, institutions may opt for risk aversion and reporting ceremonies rather than outreach, education, and engagement initiatives that define the social role of CFIs. Second, the results of this study highlight contextual adaptation.

Internal controls must not be viewed as rigid templates but adaptive instruments that adapt and change with institutional matters and community needs. CFIs which have this outlook can leverage their control systems both as instruments of compliance and strategic double-bottom-line optimization levers. This dual application reflects the changed role of internal governance for cooperative finance, where classical dualisms between financial control and social responsibility become entwined ever more closely.

The account of these findings generally supports those internal controls, if properly designed and measured, are important to financial viability and social responsibility. On the other hand, their usefulness depends on how deeply they are integrated with the broader values and stakeholder involvement of individual organization. Essentially, these findings add to the growing body of empirical research on governance of CFIs in developing nations, particularly in sub-Saharan Africa, where CFIs continue to play a major role in promoting overall financial inclusion and growth.

5.2 Comparison with Existing Literature

The findings of this study corroborate and complement the existing literature that emphasizes the role of internal mechanisms of governance in cooperative and member-based financial institutions. Existing research by Sangwan et al. (2023) and Adusei (2021) has emphasized the critical role of internal control mechanisms in guaranteeing financial transparency, limiting risk, and promoting stakeholder trust. These articles assume that effective audit systems, risk evaluations, and manager responsibility procedures are vital institutional pillars and stakeholder trust builders, rather than mere bureaucratic rituals.

Such opinions are proved by this research through demonstration of how internal controls benefit the financial solidity and operating effectiveness of Ghanaian CFIs directly. This link determination is a justification for the notion that, whereas in developing market economies internal governance is compliance exceeding; it is an institutional stability strategy enabler. This

conclusion corroborates earlier findings by Opoku-Agyemang et al. (2023), which also testified that effective internal control systems reduce financial improprieties and improve loan portfolio performance for sub-Saharan African member-based financial institutions significantly.

In addition, the large moderating effect of firm size on the interaction between financial performance and internal controls provides empirical support for contingency theory, which proposes that the effectiveness of control systems relies on organizational ability and complexity. The larger CFIs with greater administrative capability, more professionally certified employees, and improved technical expert availability appear to be better placed to put in place control systems aligned with their strategic objectives and delivery models.

Therefore, they are likely to translate internal control procedures into quantifiable performance enhancements.

On the other hand, smaller CFIs, although strongly rooted in their communities, might be short of technical and administrative ability to develop internal control systems efficiently. This finding supports the findings outlined by Agyemang and Tutu (2022), who established variations in the efficiency of internal controls based on institution capacity. This is consistent with the suggestion by Bellazzecca and Biosca (2022) that control mechanisms must be proportionally tuned to the operating environment of an institution so that governance reforms do not overwhelm the smaller actors or raise beyond-compliance expectations that they cannot fulfill.

The organization matures as a mediator between social performance and internal controls in alignment with life cycle theory (Greiner, 1972), which hypothesizes that organizations progress through stages with some administrative needs and challenges.

Various CFIs can utilize the accumulated experience, existing knowledge, and institutional legitimacy to put more control in place that enables participatory governance, trust, and community involvement. These institutions, having weathered the turbulence of times, are stronger and institutionally better placed to assimilate best practices that enhance their social mission. Younger CFIs are more experiential and flexible but also more likely to fail in governance due to their relatively immature systems and low exposure to learning from institutions.

These differences imply that a contextualized reform for the governance is required; one that recognizes the importance of institutional maturity and adapts mechanisms of control to suit the organizational development stage. Lack of strong moderating factors in most areas, e.g., firm size on the social performance-control relationship and firm age on the control-financial performance relationship—implies that institutional demographics are not necessarily predictive of governance success.This is what lends weight to Donaldson's (2001) proposition that systems of governance need to be tailored to specific contexts rather than be applied universally. The results of this study demonstrate the nuance of applying internal controls in various cooperative settings. The study used data pertinent to Ghana to connect theoretical models to real implementation, without departing from universal empirical and theoretical concerns.

It addresses the need for in-country empirical study on internal control in cooperative financial institutions that Adusei (2021) pointed out. This study confirms existing knowledge regarding the effectiveness of internal control and goes further to explain its conditional character, which is dependent on variables like the institution's size and age. This highlights the danger of a one-size-fits-all approach to regulatory and operational policy and emphasizes the significance of sector-specific governance procedures.

6. Conclusion, Recommendations and Contribution to Theory, Practice and Policy

6.1 Conclusion

This study examined the relationship between internal control systems and double-bottom-line (DBL) performance in Ghanaian Cooperative Financial Institutions (CFIs), with particular attention to the moderating effects of firm size and firm age. Situated within an under-researched but critical financial sub-sector in sub-Saharan Africa, the study provides empirical insights into how internal governance mechanisms influence both financial outcomes and social missions. The research advances governance-performance scholarship in cooperative finance by applying a robust quantitative approach using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings revealed that internal control systems have a strong and statistically significant impact on financial performance. CFIs that deployed structured internal control frameworks encompassing formal risk assessments, audit procedures, control activities, and continuous monitoring demonstrated superior financial outcomes. These institutions were more likely to maintain asset quality, reduce credit risk exposure, and enhance operational efficiency, thereby improving financial sustainability in a competitive and increasingly regulated environment. Internal controls also showed a statistically significant, though comparatively weaker, influence on social performance. This suggests that while internal controls support member transparency, institutional trust, and participatory governance, their direct translation into social impact outcomes—such as equitable service delivery and community outreach may be mediated by additional organizational or contextual factors. Nonetheless, governance structures that emphasize ethical conduct and inclusion do contribute meaningfully to cooperative development mandates.

6.2 Recommendations

CFIs should move beyond regulatory compliance and leverage internal control systems as strategic tools that support both financial discipline and social impact. Rather than viewing controls solely as external obligations, management teams should internalize governance practices as integral to organizational success and sustainability. To strengthen implementation, governing boards and senior management should ensure that control systems are fully integrated with member education programs, employee onboarding, and staff development initiatives. Investment in technology-enabled audit and compliance tools—such as cloud-based accounting systems, real-time reporting dashboards, and mobile monitoring apps can significantly improve oversight, especially in geographically dispersed institutions. For smaller CFIs that often face resource constraints, adopting cost-effective digital solutions or participating in shared technology platforms coordinated by apex bodies can enhance control capacity. Additionally, older institutions should

conduct periodic evaluations of their internal control frameworks to ensure continued relevance, responsiveness to emerging risks, and alignment with evolving member expectations. Over time, even well-functioning systems may become outdated or overly bureaucratic, thereby reducing their effectiveness. Leadership commitment is critical. Boards and executives must demonstrate a consistent tone at the top that emphasizes ethical behavior, control ownership, and participatory governance. This includes establishing functional audit committees, implementing whistleblower protection mechanisms, and regularly reviewing internal audit findings as part of board deliberations. Ultimately, CFIs that integrate internal controls into their core identity as a value-driven enabler of both financial and social goals will be better positioned to fulfill their cooperative mission in a dynamic and competitive financial services environment.

6.3 Contributions to Theory, Practice and Policy

By expanding the use of Institutional Theory, Contingency Theory, Stakeholder Theory, and Life Cycle Theory in cooperative finance, this study advances theoretical discussion. While Contingency Theory backs the claim that governance systems need to be adjusted to institutional realities like size and age, Institutional Theory describes how CFIs implement formal control methods to acquire legitimacy. The established connection between social outcomes and member-responsive government validates stakeholder theory. Smaller and more recent CFIs are disproportionately impacted by one-size-fits-all compliance regimes. Regulatory equality and sector stability may be attained with the support of capacity-building grants for governance improvement and differentiated audit expectations. The study shows that new training content and professional development in cooperative governance and DBL metrics is pertinent. Per the findings, a differentiated, tiered regulatory framework that takes firm characteristics like size and age may help regulatory institutions like the Bank of Ghana and the Department of Cooperatives. The regulatory agencies should re-examine the one-size-fits-all approach and check its appropriateness because CFIs vary in size, age, and operational complexity, so as to customized compliance models that distinguish regulatory expectations according to business attributes. This would better place CFIs to enhance their ability to achieve the DBL results. Furthermore, policy support should prioritize capacity-building initiatives that empower CFIs to meet these differentiated standards. In addition, regulators should integrate social performance indicators into their supervisory assessments, recognizing that DBL performance involves more than financial compliance.

6.3 Limitations of the Study

While the study provides valuable insights, several limitations should be acknowledged. First, the cross-sectional nature of the research design limits the ability to make strong causal inferences. Although the observed relationships are statistically significant, they do not confirm causality. Future longitudinal studies would be more appropriate for capturing the dynamic evolution of internal control systems and their impact on DBL performance over time. Second, the study relied heavily on self-reported survey data from managers, board members, and compliance officers. Such responses may be subject to social desirability bias where respondents present their

institutions in a more favorable light, particularly concerning sensitive governance issues. This may have led to overestimation of the effectiveness of internal control practices. Third, the study focused solely on quantitative data, which, while suitable for modeling relationships among variables, lacks the depth and contextual richness that qualitative data can provide. The exclusion of direct qualitative input from board members, auditors, and member representatives may have limited the nuanced understanding of how internal control systems are practically interpreted, resisted, or institutionalized across different CFIs. Finally, the geographical limitation to Ghana's ten former administrative regions; although methodologically justified may reduce the generalizability of the findings to CFIs operating in newer regions or in other countries with different cooperative governance ecosystems.

6.4 Suggestions for Future Research

Future research should explore longitudinal models to assess how internal controls evolve with institutional maturity and how these changes affect DBL outcomes over time. Such longitudinal designs can reveal causality and track how governance reforms impact both financial performance and social impact metrics. Comparative studies involving CFIs across different regulatory or regional settings; both within Ghana and internationally would help contextualize the role of internal controls under varying institutional and cultural environments. These comparisons could illuminate how legal frameworks, regulatory stringency, and socio-economic factors interact with governance mechanisms. Moreover, mixed-methods research that integrates quantitative surveys with qualitative interviews or case studies would provide a richer understanding of internal control dynamics. This approach can capture not just the statistical relationships but also the lived experiences, managerial perceptions, and contextual nuances that shape how internal control systems are designed, perceived, implemented, and monitored in real-world cooperative settings. Incorporating perspectives from board members, auditors, and frontline staff would also offer a more holistic view of how governance operates across different organizational layers. Such insights could inform more inclusive and effective internal control strategies tailored to the mission and maturity of CFIs.

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