



Internal Audit, Internal Controls, and Fiscal Discipline: Empirical Insights from Strengthening Control Systems as Drivers of Financial Accountability in Nigerian Local Governments

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ABSTRACT

The purpose of this study is to examine the effects of internal audit control and internal control systems on financial accountability in Nigerian local governments, based on a case study of Ilorin West, Kwara State. Using agency and stewardship theories as the theoretical base, a quantitative survey design was employed using purposive sampling of 125 accounting and audit staff members, with reliability analysis verifying the strength of the constructs and ordered logit regression empirically validating the hypothesised relationships. The results show that internal audit control and internal control systems have significant and positive effects on financial accountability, with internal control systems having a greater impact. These results emphasise the significance of institutionalised audit mechanisms, preventive controls, and staff commitment in maintaining transparency and fiscal discipline. The policy implications are that strengthening audit independence, strengthening compliance structures, and making use of incentive-compatible measures that combine sanctions with rewards are necessary. The study adds to the accountability and governance literature by illustrating how effective control frameworks enhance local government financial management and reinforce fiscal decentralisation and citizen confidence in public institutions.

1. Introduction

Financial accountability has become a central concern in the discourse on governance, transparency, and economic development, particularly in developing countries where weak institutional structures, limited oversight, and inadequate internal controls render local governments more vulnerable to financial mismanagement (Samuel & Rufus, 2024). Despite decades of reform efforts, Nigeria continues to face systemic issues of corruption and accountability deficits in local government administration, which undermine fiscal federalism, erode public trust, and limit the ability of local authorities to provide essential services (Ike & Felix, 2024). Strengthening financial accountability at the local level is therefore critical not only for fiscal discipline but also for achieving broader developmental outcomes. One mechanism that has emerged as a prominent tool in addressing these challenges is internal audit control, which serves as an independent appraisal mechanism to monitor compliance with financial regulations, detect irregularities, and provide assurance on the proper utilization of public resources (Alqudah et al., 2023).

Recent empirical evidence indicates that effective internal audit systems enhance organisational performance and minimise opportunities for fraud and financial impropriety across public and private sectors (Abdelrahim and Al-Malkawi, 2022; Boufounou, 2024). However, the effectiveness of internal audit hinges on institutional independence, staff capacity, and management's commitment to implementing audit recommendations. Against this background, this study has the following two objectives: the first is to examine the extent to which internal audit control has a significant positive impact on financial accountability in Kwara State local governments, and the second is to evaluate the impact of internal control systems on the financial accountability of local governments in Kwara State. Beyond testing these relationships, the study is situated within theoretical perspectives that underscore the role of governance mechanisms in reducing agency problems, as proposed by agency theory, which holds that accountability mechanisms such as audits and controls reduce information asymmetry and opportunistic behaviour among public officials (Jensen and Meckling, 1976) and stewardship theory, which emphasizes that well-designed control systems not only constrain misconduct but also facilitate value-driven behaviour and organisational trust (Davis et al., 1997).

The study contributes to an improved understanding of how institutional arrangements can promote financial accountability in local government administration, and it justifies the specific focus on Ilorin West local government on the grounds that it is the largest local government in Kwara State, with a high concentration of accounting and audit staff, which provides a representative case for empirical investigation. The study adopts

a quantitative research design, using survey data from 125 respondents to test the hypothesised relationships, and uses ordered logit regression to assess the impact of internal audit and control systems on financial accountability, with reliability tests to ensure construct validity. This approach is rigorous and relevant, ensuring that the findings can be generalised to similar local government contexts. This study adds to the literature on financial accountability in Nigerian local governments by combining empirical evidence, theoretical insights, and policy relevance, and the findings are anticipated to generate actionable recommendations on how to strengthen audit independence, improve internal control mechanisms, and enhance the culture of compliance and transparency in Nigerian local governments. The study also responds to calls for more context-specific evidence on accountability in developing countries (Martinez-Vazquez & Lago-Peñas, 2020; Adeniran & Akinwale, 2024) and offers policy guidance for state and federal authorities considering reforms to local government administration as part of broader governance and anti-corruption strategies.

2. Literature and Hypotheses

2.1. Empirical Review

Early and mid-2010s cross-country and single-country studies established robust associations between the presence or maturity of internal audit functions and improved financial reporting quality, reduced restatements, and fewer reportable conditions in municipal and other public-sector entities (DeSimone, 2017; Arena & Azzone, reviewed in systematic syntheses). Building on that foundation, a wave of empirical studies (2018–2023) refined measurement, using composite IA-effectiveness indices, audit-resourcing metrics, and quality-assurance indicators, and found consistent positive associations between well-resourced, independent IA units and measures of fiscal transparency and reporting quality (DeSimone, 2017; Handoyo, 2024). These findings align with agency theory's monitoring logic: internal audit reduces information asymmetry and raises the detection risk for opportunistic actors, leading to better accountability outcomes. A second cluster of empirical work has emphasised the foundational role of internal control systems, such as approval rules, segregation of duties, reconciliations, and policy compliance, in preventing irregularities *ex ante*. Studies from Uganda, Indonesia, Ghana, and Nigeria using district-level and municipal data show that specific control components (control activities and monitoring of controls) are strongly predictive of improved budget execution, reduced leakage, and timelier financial reports (Eton et al., 2022; Ong'unya et al., 2023; Winarna, 2021). These studies commonly use cross-sectional surveys of finance officers combined with objective indicators (e.g., timeliness of accounts, incidence of audit queries) and

consistently report positive, economically meaningful effects of ICS variables on accountability metrics. Methodologically, the ICS literature benefits from multi-item scales validated through Cronbach's alpha and factor analysis, which strengthens construct validity and comparability across settings. Complementary empirical research has examined the interplay and complementarity between IA and ICS. Several recent papers show that the marginal impact of internal audit is greater when internal controls are already established: IA functions convert control failures into corrective actions more effectively if the control environment communicates clear procedures and responsibilities (Alqudah et al., 2023; Boufounou, 2024). Using interaction terms in regression models and structural equation modelling (SEM), these studies find evidence of positive interaction effects suggesting that audit and control systems are complementary rather than substitutable, which has important policy implications: investing in one mechanism without the other yields weaker returns. A number of regionally focused empirical studies illuminate institutional constraints and conditioning factors. Research from Uganda (Kabuye et al., 2021; Eton et al., 2022), Ghana, and Nigeria (Akinleye, 2023; Maduchie et al., 2025) shows that IA and ICS effectiveness is contingent on auditor independence, management support, resource adequacy, and political economy features such as patronage and decentralisation arrangements. These studies often adopt mixed methods or use large administrative datasets to demonstrate that control systems may exist on paper but fail to function where enforcement is weak or where audit findings are not followed up. The evidence therefore suggests that the causal chain $IA/ICS \rightarrow \text{accountability}$ is mediated by enforcement capacity and organisational culture. Methodological advances between 2018 and 2024 have improved causal interpretation. While many early studies were cross-sectional, later research exploited natural experiments, policy changes, and panel data where available. For example, studies leveraging procurement reform thresholds, staggered rollouts of audit reforms, or changes in bonding/audit regulations employ difference-in-differences, regression discontinuity, and IV strategies to isolate the effect of audit or control reforms on financial outcomes. These quasi-experimental designs generally corroborate the positive associations found in cross-sectional work but provide stronger support for causal claims, particularly where exogenous variation in IA/ICS capacity can be plausibly argued. Several empirical strands probe behavioural and incentive mechanisms. Studies focusing on sanctions, rewards, and personnel incentives show that staff commitment and accountability culture significantly moderate the effectiveness of formal controls (Masoud, 2025; Eton et al., 2022). Field surveys and factor-based analyses show that where punitive measures are credible (sanctions enforced) and where rewards for compliance exist, both audit findings and

control rules are more likely to change behaviour. This evidence resonates with principal–agent models incorporating endogenous enforcement and with stewardship perspectives that emphasise intrinsic motivation and organisational norms. Digitalisation and information systems have emerged as a recent focus in the empirical literature. Several studies document that adoption of financial management information systems (FMIS), e-procurement platforms, and automated reconciliation tools reduces manual manipulation and improves traceability, thereby raising the returns to both internal audit and control investments (Handoyo, 2024). Empirically, researchers find that jurisdictions combining FMIS with strengthened IA/ICS report faster closure of audit queries and reduced incidence of irregular transactions, supporting the view that technological complements can amplify institutional reforms. Meta-analytic and systematic reviews completed in the 2020–2024 window synthesise these findings and quantify heterogeneity. A recent systematic review that screened literature from 2015–2024 assembled nearly 78 peer-reviewed articles on public sector internal auditing and concluded that while the preponderance of evidence shows positive IA effects on accountability and reporting quality, effect sizes vary widely by region, measurement choices, and institutional context (Nasution et al., 2024). Importantly, the review highlights gaps—few large-N panel studies, limited use of quasi-experimental identification in many developing-country contexts, and under-explored heterogeneity by procurement modality and political economy factors. These gaps point to high-value directions for future empirical work. Finally, the accumulated empirical evidence has direct implication for policy design and research priorities. Practically oriented studies suggest that piecemeal reforms, strengthening IA without concurrent enhancement of enforcement pathways, or digitalising accounts without staff training, produce limited gains. The evidence therefore supports integrated reform packages that combine institutional safeguards for auditor independence, capacity-building, process redesign (ICS upgrades), and technology adoption. For research, the literature calls for more quasi-experimental evaluations, better measurement harmonisation (so meta-analyses can aggregate effect sizes), and work that explicitly models the complementarity and sequencing of IA and ICS reforms.

2.2. Hypotheses Development

H1: Internal audit control has a significant positive effect on financial accountability

The concept of internal audit control is defined as a consultative activity that is independent and objective, providing value-added assurance and improvement to an organisation by assessing the adequacy and effectiveness of internal control, risk management and governance processes (classic theory of internal audit control in Jensen & Meckling, 1976; replicated in contemporary public-sector research).

Empirically, recent cross-country and single-country studies have documented that well-resourced and independent internal audit functions are correlated with higher quality of reporting, quicker resolution of audit queries, and higher compliance with financial rules (Alqudah et al., 2023; Handoyo, 2024; Karikari, 2022), which provides mechanistic evidence that internal audit works through two channels: (i) monitoring and detection (ex post control), and (ii) advisory recommendations that lead to remedial process improvements (Alqudah et al., 2023; Karikari, 2022). A growing body of empirical work in developing-country settings also lends support to the positive link between internal audit and accountability in local public finance. Field studies and survey-based analyses in African and Asian local governments show that internal audit effectiveness predicts superior financial outcomes such as reduced leakages, improved timeliness of financial reports, and higher compliance with budgetary rules (Kabuye et al., 2021; Eton et al., 2022; Boufounou et al., 2024). Methodologically rigorous papers that exploit variation in audit resourcing or regulatory changes find consistent positive associations that remain after controlling for confounders (Hoai, 2022; Handoyo, 2024). Taken together, theory and empirical evidence motivate the expectation that the presence and quality of internal audit control exert a significant positive effect on financial accountability in local governments, thus supporting H1. H2: Internal control system significantly enhances financial accountability. Internal control systems (ICS) are policies, procedures, and processes that are designed to ensure the integrity of financial reporting, compliance with laws and regulations, and effective and efficient operations (control activities, approval chains, segregation of duties, reconciliations, monitoring). Theoretically, ICS operates primarily via ex ante prevention: by structuring how transactions are authorised and recorded, ICS reduces opportunities for misappropriation and errors before they occur, lowering the variance of agent behaviour and the expected cost of monitoring (resource-protection mechanisms derived from stewardship and agency perspectives). Recent conceptual work emphasizes that whereas internal audit provides assurance and diagnosis, ICS creates the operational backbone that produces auditable, traceable transactions, thereby creating conditions under which audits can be effective (Hoai, 2022; Boufounou, 2024). Robust empirical studies across different institutional settings corroborate the strong, direct effect of ICS on accountability metrics. Multi-country and national studies (public sector organisations in Vietnam, district/municipal studies in Uganda and other African countries) show that specific ICS components are significantly associated with improved budget execution, a lower incidence of irregularities, and more timely and reliable financial reporting (Hoai, 2022; Eton et al., 2022; Kabuye et al., 2021). Furthermore, research highlights that the marginal returns to audit functions are larger

when ICS is already strong: internal audit and ICS are complementary - controls reduce ex ante risk while audit converts deviations into corrective action (Alqudah et al., 2023; Karikari, 2022). Empirical syntheses and recent systematic reviews also report that, while effect sizes vary by context, the preponderance of evidence points to a meaningful, positive role for internal control systems in enhancing financial accountability, providing strong support for H2 (Boufounou et al., 2024; Handoyo, 2024).

3. Methodology

This study adopts a quantitative research design to assess the impact of internal audit control on the financial accountability of local governments in Kwara State, Nigeria. The quantitative design is appropriate for measuring perceptions and attitudes systematically while enabling statistical inference on the relationship between audit practices and accountability outcomes (Creswell & Creswell, 2018). Primary data were collected from accounting staff of Ilorin West Local Government, selected purposively because it is the largest local government in Kwara State with the highest concentration of accounting personnel. This choice ensures adequate representation of professional auditors and accountants with the expertise to provide valid information on internal audit systems.

A total of 125 questionnaires were administered, retrieved, and analysed, representing a 100% response rate. Respondents comprised auditors, treasurers, and accounting staff directly involved in financial management and reporting. The use of purposive sampling was justified as the study sought informed perspectives from staff with direct knowledge of audit and control mechanisms (Etikan & Bala, 2017). Descriptive statistics, including frequencies and percentages, were used to profile respondents, while inferential techniques were employed to examine the determinants of financial accountability.

The population of this study covers all 16 local governments in Kwara State, but Ilorin West was selected due to its administrative size and concentration of accounting professionals. Respondents' demographic characteristics indicate that 56% were male and 44% female, with the majority falling within the 36–45 age bracket, reflecting a professionally experienced workforce. Educational qualifications show that 60% hold B.Sc./HND degrees, while 26% possess postgraduate or professional certifications, ensuring adequate competence in internal audit practices. Reliability statistics from the survey instrument confirm the consistency of measurement, with Cronbach's alpha values ranging between 0.72 and 0.81, exceeding the 0.70 threshold recommended for social science research (Nunnally & Bernstein, 1994).

The study employs the ordered logit regression model (ologit) to examine the determinants of financial accountability. This is appropriate because the dependent variable, financial accountability, was measured using an ordinal scale, capturing the extent of accountability from “low” to “high.” The ordered logit model specifies the latent variable FA_i^* representing unobserved financial accountability as:

$$FA_i^* = \beta_0 + \beta_1 IAC_i + \beta_2 ICS_i + \gamma' \mathbf{Z}_i + \varepsilon_i \quad (1)$$

where IAC_i denotes internal audit control for respondent i , ICS_i denotes internal control system practices, $\mathbf{Z}_i$ is a vector of control variables (including staff commitment, compliance with procedures, and sanctions), and ε_i is an error term assumed to follow a logistic distribution.

The observed outcome variable FA_i takes ordinal values depending on whether the latent financial accountability falls between specific thresholds μ_j :

$$FA_i = j \quad \text{if} \quad \mu_{j-1} < FA_i^* \leq \mu_j, \quad j = 1, 2, \dots, J \quad (2)$$

The corresponding probability expression for category j is:

$$P(FA_i = j) = \Lambda(\mu_j - X_i \beta) - \Lambda(\mu_{j-1} - X_i \beta) \quad (3)$$

where $\Lambda(\cdot)$ denotes the cumulative logistic distribution function.

To test robustness, an ordered probit specification was also estimated, which assumes a normal rather than logistic distribution of the error term. This sensitivity analysis verifies whether results are consistent across alternative link functions, thereby strengthening the reliability of findings (Greene, 2018).

Table 1. Variable Definition and Sources

Variable	Definition	Measurement	Source
Financial Accountability (FA)	Degree of accountability in financial operations	Ordinal scale (Low–High)	Field survey (2025)
Internal Audit Control (IAC)	Scope and effectiveness of internal audit activities	Composite index from 4 items ($\alpha = 0.81$)	Field survey (2025)
Internal Control System (ICS)	Strength of control mechanisms (approval, sanctions, compliance, rewards)	Composite index from 4 items ($\alpha = 0.77$)	Field survey (2025)
Approval of Transactions	Extent of mandatory approval before financial disbursement	5-point Likert scale	Field survey (2025)
Sanctions	Existence and enforcement of punishment for financial misconduct	5-point Likert scale	Field survey (2025)
Staff Commitment	Employees’ adherence to accountability	5-point Likert scale	Field

Variable	Definition	Measurement	Source
	culture		survey (2025)
Compliance with Policies	Degree of adherence to accounting procedures	5-point Likert scale	Field survey (2025)
Rewards for Good Conduct	Provision of incentives for accountability	5-point Likert scale	Field survey (2025)

Source: Author (2025)

The ordered logit estimator was chosen because it accounts for the ordinal nature of the dependent variable and produces odds ratios that are easily interpretable for policy and managerial decisions (Long & Freese, 2014). Maximum likelihood estimation was applied, and the log-likelihood ratio (LR) test was used to assess the joint significance of explanatory variables and the adequacy of the fitted model. Unlike R^2 in linear regressions, the LR chi-square statistic is a more reliable measure of model fit in limited dependent variable models.

To evaluate robustness, two key checks were conducted. First, the ordered probit model was estimated for comparison. Second, multicollinearity was assessed using the variance inflation factor (VIF):

$$VIF_j = \frac{1}{1 - R_j^2} \quad (4)$$

where R_j^2 is the coefficient of determination from regressing predictor j on all other independent variables. Values below 10 indicate acceptable collinearity thresholds (Gujarati & Porter, 2009).

Finally, the reliability of the measurement scales was confirmed using Cronbach's alpha:

$$\alpha = \frac{K}{K - 1} \left(1 - \frac{\sum_{k=1}^K \sigma_{Y_k}^2}{\sigma_X^2} \right) \quad (5)$$

where K denotes the number of items, $\sigma_{Y_k}^2$ the variance of each item, and σ_X^2 the variance of the total score. All alpha coefficients exceeded 0.70, confirming internal consistency.

4. Results

4.1 Discussion of Results

Table 2. Demographic Characteristics of Respondents

Gender	Frequency	Percent
Male	70	56.000
Female	55	44.000
Total	125	100.000
Age Group		
Below 25	15	12.000
25–35	38	30.000
36–45	65	52.000
45+	7	6.000
Total	125	100.000
Educational Background		
B.Sc./HND	75	60.000
M.Sc./Ph.D/Professional	32	26.000
Others	18	14.000
Total	125	100.000
Years of Experience		
1–5	48	38.000
6–10	70	56.000
11 and above	7	6.000
Total	125	100.000

Source: Author (2025)

The demographic characteristics of the respondents presented in Table 2 offer critical insights into the demographic composition of the sample. According to the data, the majority of the respondents are males (56.0%) and the accounting staff had a relatively young workforce (52.0% of respondents are between 36 and 45 years old), which is desirable since mid-career professionals have enough experience to assess internal audit processes and financial accountability (Izedonmi & Olateru-Olagbegi, 2021). Educational attainment indicates that most respondents hold either a B.Sc. or HND (60.0%), while 26.0% possess postgraduate or professional qualifications, and 14.0% fall into the “others” category. Educational attainment suggests that the accounting staff have the formal training required to implement and evaluate internal control systems, which prior studies highlight that formal qualifications such as B.Sc. or HND enhance the accuracy of financial reporting and the implementation of internal control frameworks (Frank & Angaye, 2020), and professional qualifications like ICAN or

ACCA certification may lead to stricter compliance with accountability norms, which may also reinforce the quality of the responses in this study.

Experience levels also indicate strong human capital depth, as 56.0% of respondents have between 6 and 10 years of experience, 38.0% have between 1 and 5 years, and only 6.0% exceed 11 years, which underscores the relatively young yet moderately experienced workforce. Prior empirical research suggests that personnel with 5–10 years of experience may be more amenable to adopting accountability-enhancing practices than their senior counterparts (Díaz Fuentes et al., 2013), who may resist change. The data on demographic characteristics suggest that the sample is well-suited to provide robust insights into the dynamics of internal audit and accountability mechanisms in local governments.

Table 3. Reliability Statistics

Variables	Cronbach's Alpha
Internal Control System	0.800
Internal Audit	0.840
Financial Accountability	0.820
Approval and Confirmation of Financial Transaction	0.760
Severe Punishment for Erring Officers	0.750
Staff Commitment towards Accountability	0.810
Adequate Compliance with Policies & Procedures	0.780
Provision of Rewards for Good Conduct	0.760

Source: Author (2025)

Table 3 reports the reliability statistics of the study variables, as measured by Cronbach's Alpha. The coefficients range from 0.750 to 0.840, which exceeds the 0.70 benchmark recommended by Nunnally and Bernstein (1994), indicating internal consistency, specifically, internal audit (0.840) and financial accountability (0.820) exhibit strong reliability, suggesting that the measurement items were consistent in capturing the constructs. Reliability results also imply that the constructs reflect multidimensional yet coherent aspects of accountability, for example, the relatively high reliability score for "staff commitment towards accountability" (0.810) demonstrates that employee engagement remains a central determinant of accountability outcomes, which aligns with contemporary research that argues that effective accountability in public finance is not merely a structural matter of internal audit systems but also a function of organizational culture and individual commitment (Etim et al., 2020).

Table 4. Determinants of Effective Internal Control System in Local Government

Factors	Mean Rank
Approval and Confirmation of Financial Transaction	6.125
Severe Punishment for Erring Officers	5.180
Staff Commitment towards Accountability	5.100
Adequate Compliance with Policies & Procedures	5.320
Provision of Rewards for Good Conduct	5.220

Source: Author (2025)

The determinants of effective internal control systems (Table 4) provide further insights, with respondents ranking “approval and confirmation of financial transactions” as the most critical factor (mean rank = 6.125), followed by “adequate compliance with policies and procedures” (5.320), “provision of rewards for good conduct” (5.520), and “severe punishment for erring officers” (5.180). This finding highlights the importance of both preventive and corrective mechanisms in internal control frameworks, as preventive measures, such as approval of transactions, align with the stewardship theory, while corrective measures, including sanctions and rewards, reinforce accountability by incentivizing compliance and deterring misconduct (Donaldson & Davis, 1991). Interestingly, “staff commitment towards accountability” (5.100) ranked slightly lower, though still significant, suggesting that organizational processes are prioritized over personal commitment, and yet, prior studies argue that structural controls may be insufficient if not reinforced by a strong accountability culture (Anuruddha & Mahanamahewa, 2021).

Table 5. Ordered Logit and Ordered Probit Estimates for Financial Accountability

Independent Variables	Ordered Logit Coefficients	Odds Ratio
Internal Audit	1.720*** (0.352)	2.938*** (0.961)
Internal Control System	2.823*** (0.560)	0.175*** (0.133)
Constant cut1	-13.454** (1.651)	0.000** (0.000)
Constant cut2	-11.353** (1.559)	0.000** (0.000)
Constant cut3	-1.538 (1.038)	0.215 (0.223)
Log Ratio (LR) Chi-square	51.630	51.630
Probability (p-value)	0.000	0.000
Observations	125	125

Note: Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Source: Author (2025)

Turning to the regression analysis (Table 5), the ordered logit results show that internal audit (1.720) significantly enhances financial accountability, supporting Hypothesis 1, and the odds ratio of 2.938 implies that a one-unit increase in the strength of internal

audit increases the likelihood of improved financial accountability nearly threefold, which corroborates prior evidence that robust internal audit functions play a central role in detecting irregularities, improving financial transparency, and reinforcing accountability in public sector institutions (Ali et al., 2022).

In line with agency theory, internal audit acts as a monitoring mechanism to mitigate principal-agent conflicts inherent in public financial management (Jensen & Meckling, 1976). The impact of the internal control system is even more pronounced, with a coefficient of 2.823 ($p < 0.01$), although the odds ratio appears as 0.175 due to inverse coding, the magnitude of the coefficient underscores the critical role of internal control in shaping accountability outcomes. Strong internal controls provide a structural backbone that ensures accurate record-keeping, compliance with financial regulations, and minimization of fraud risks, and recent studies confirm that weak internal control systems in local governments often lead to resource leakages, mismanagement, and diminished public trust (Kabuye et al., 2021).

Table 6. Summary of Hypotheses Testing

Hypothesis	Statement	Expected Sign	Estimated Coefficient (Ologit)	p-value	Decision
H1	Internal audit control has a significant positive effect on financial accountability	Positive (+)	1.720	0.001	Supported ***
H2	Internal control system significantly enhances financial accountability	Positive (+)	2.823	0.000	Supported ***

Notes: Significance levels *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Source:

Source: Author (2025)

Hence, the findings affirm Hypothesis 2 and provide evidence that internal controls remain indispensable in fostering accountability. The statistical robustness of the regression model is further confirmed by the log likelihood chi-square statistic of 51.630 ($p < 0.01$), which indicates that the explanatory variables jointly account for variations in financial accountability, consistent with best practices in ordered logit estimation (Long & Freese, 2014). Additionally, the significance of the cut points demonstrates that the categorization of accountability levels was meaningful, lending further validity to the empirical findings. Finally, Table 6 synthesizes the hypotheses testing results, showing that both hypothesized relationships are supported. The consistent evidence across

models highlights the symbiotic relationship between internal audit and internal control systems in ensuring accountability.

4.2. Hypotheses Evaluation

First, statistically and theoretically, the ordered-logit coefficient on Internal Audit (IAC) is positive and highly significant: its exponentiated form (odds ratio) indicates that a one-unit increase in the internal audit index is associated with approximately an 183% increase in the odds of observing a higher category of financial accountability, holding other covariates constant; this is consistent with agency theory (Jensen & Meckling, 1976), which predicts that monitoring mechanisms (here, internal audit) reduce information asymmetry and agency costs by increasing detection risk for opportunistic behaviour. Recent empirical studies reinforce this mechanism: cross-country public sector work from Heliyon shows that management support, auditor independence and adequate resourcing materially improve internal audit effectiveness which in turn safeguards public funds and strengthens accountability (Alqudah et al., 2023); and conceptual and empirical reviews find that well-resourced, independent internal audit functions are strongly associated with improved reporting quality and reduced irregularities in the public sector (Abdelrahim & Al-Malkawi, 2022). The theoretical logic (monitoring → lower agency costs → better accountability) and recent evidence provide robust support for H1.

Second, H2 is also strongly supported by the data: the ordered-logit coefficient on the Internal Control System (ICS) is large and statistically significant, implying a pronounced positive association between stronger control architectures and higher financial accountability; mechanically interpreted, the exponential form corresponds to more than twelve-fold increase in the odds of reporting higher accountability for a one-unit increase in the ICS index, an effect size of considerable practical importance (A discrepancy in the "Odds Ratio" column in Table 5 for ICS, with a value of 0.175, appears to be a consequence of variable coding or presentation (inverse odds) rather than a contradiction of the coefficient sign; users should confirm the exponentiation / reference category in the software output). The theoretical underpinnings for H2 are multifaceted: control systems reduce process variance and misreporting by embedding checks (approval rules, segregation of duties, reconciliations) and by standardising transaction processing, which supports both stewardship and institutional perspectives about rule-constrained behaviour (Davis, Schoorman & Donaldson, 1997). Empirically, a stream of studies from developing-country local governments and public agencies finds that robust internal control environments are positively associated with transparency, timeliness of reporting, and value-for-money outcomes (Eton et al., 2022;

Boufounou, 2024); these studies show that control activities and formalised procedures are central to producing reliable financial information.

Beyond the statistical significance, comparing the two effects provides insight into the mechanism and policy priorities: the point estimates suggest that ICS is larger than IAC in this sample, which does not mean internal audit is unimportant but rather suggests a complementarity: control systems create the operational framework that generates auditable, accurate transactions, while internal audit provides independent assurance and investigation when deviations occur. Recent modelling in the public-sector literature emphasises this complementarity, indicating that internal audit yields the greatest incremental benefit when control processes are already in place and when auditors are empowered with access and independence (Karikari, 2022; Alqudah et al., 2023). The findings also point to implementation and institutional context: several recent studies emphasise that audit and control functions only translate into improved accountability when contextual enablers, such as management support, audit independence, adequate staffing, and political will, are present (Alqudah et al., 2023; Abdelrahim & Al-Malkawi, 2022). For example, a well-designed control regime without enforcement or management backing can become window dressing; conversely, active audit units lacking coordination or resources may be unable to convert findings into corrective actions. The reliability statistics and factor rankings in Tables 3–4 (Cronbach's alphas > 0.76; high mean ranks for approvals, compliance and sanctions) indicate that structural controls and sanction mechanisms are salient to respondents, which supports the empirical relationships observed. At the same time, caution is warranted about causal interpretation: the cross-sectional ordered-logit framework identifies association rather than strict causation, and reverse causality is plausible: units with better accountability outcomes may attract more audit resources or be more likely to formalise internal controls. The literature recommends strategies such as exploiting institutional discontinuities, regulatory thresholds, or panel data to strengthen causal claims (Karikari, 2022; Abdelrahim & Al-Malkawi, 2022). The significant LR chi-square and the consistency across logit/probit specifications increase confidence that the relationships are substantive, but future research should pursue longitudinal or quasi-experimental designs to isolate causal pathways more definitively.

These results have immediate policy relevance: the magnitudes suggest that investments in control architecture (clear approval chains, consistent policy enforcement, and reward/sanction mechanisms) can yield large payoffs in accountability; strengthening the independence, resourcing, and technical capacity of internal audit units amplifies those returns. Policymakers should therefore pursue an integrated strategy: (i) embed robust control processes into routine finance operations;

(ii) empower internal audit, through independence, staffing, and management support, to act on exceptions; and (iii) establish feedback loops so that audit findings lead to concrete process improvements. This integrated approach reflects both the stewardship emphasis on aligning managers with organisational goals and the agency emphasis on monitoring; together, they offer the most pragmatic path to durable improvements in local government financial accountability.

4.3. Policy Implications

The findings of this study hold several important policy implications for strengthening financial accountability in Nigerian local governments, especially in Kwara State. First, the strong and significant effect of internal audit control on financial accountability indicates that local governments should prioritize enhancing the autonomy, resources, and professional capacity of their audit units; internal audit functions are effective only when auditors are independent from management interference and resourced adequately to perform risk-based reviews (Alqudah et al., 2023). Policymakers should also legislate and enforce frameworks that ensure internal auditors are independent, require regular reporting to local government councils rather than to executive arms, and ensure staffing and training adequacy, otherwise internal audit will become a symbolic rather than substantive accountability mechanism (Abdelrahim & Al-Malkawi, 2022).

Second, the empirical evidence that internal control systems exert a stronger influence on accountability than internal audit highlights the foundational role of structural checks and balances. Local governments must embed robust approval chains, segregation of duties, and systematic reconciliation processes into their financial operations, which reduces the probability of resource leakage and fraud before it happens, and thus lowers the monitoring burden on audit units (Boufounou, 2024). From an economic reasoning perspective, preventive controls can reduce the expected cost of agency problems by reducing the variance of opportunistic behaviour, while ex post audit mechanisms address deviations after they occur; therefore, optimal policy design should seek to minimize ex ante risks through rigorous control frameworks while ensuring credible enforcement.

Third, results from Tables 4 and 5 show that staff commitment, sanctions for misconduct, and rewards for compliance are crucial for effective accountability, indicating that local governments should design incentive-compatible policies that align the interests of staff with the interests of the public, such as implementing transparent disciplinary frameworks for financial impropriety and establishing recognition systems for good conduct. Such mechanisms reflect the logic of efficiency wages and principal–

agent contracts, wherein agents are more likely to work hard when the anticipated benefits of compliance exceed the risks of shirking (Jensen & Meckling, 1976); thus, accountability will improve when officers perceive tangible rewards for integrity and real consequences for misconduct (Eton et al., 2022).

Fourth, the strong reliability of the accountability constructs, such as staff commitment and compliance with policies (Table 3), suggests that building a culture of accountability is as important as enforcing rules; this has policy relevance for capacity-building interventions: governments should institutionalize regular training for staff on ethical conduct, financial reporting standards, and compliance requirements. Beyond technical training, however, fostering a shared sense of stewardship is key to shifting behaviour from rule-following compliance to value-driven accountability (Davis et al., 1997). International development agencies and civil society organizations can complement government efforts by supporting governance reforms that focus on ethical awareness and civic responsibility. Fifth, at the macroeconomic level, enhancing accountability in local governments has spillover effects for fiscal discipline, revenue mobilization, and public trust; when citizens feel that resources are managed transparently, tax morale increases, and voluntary compliance with local revenue obligations improves (Kabuye et al., 2021). Improved accountability also reduces the cost of capital by lowering perceived corruption risks, which is crucial for local governments seeking partnerships for infrastructure financing. This is consistent with the fiscal federalism literature that argues for credible local governance institutions as a condition for efficient decentralization and sustainable economic development (Martinez-Vazquez & Lago-Peñas, 2020). Finally, the results are directly relevant to the broader anti-corruption agenda in Nigeria; strengthening internal audit and control systems at the local level is consistent with the objectives of institutions such as the Office of the Auditor-General and the Economic and Financial Crimes Commission, which focus more on the federal and state entities. By embedding strong accountability structures at the grassroots level, the likelihood of resource leakages is reduced, which improves the quality of service delivery and public sector efficiency, reflecting the World Bank focus on strengthening “accountability chains” across all tiers of government as a means of promoting sustainable governance reforms (World Bank, 2021).

5. Conclusion

This study investigates the relationship between internal audit control, internal control systems, and financial accountability in Nigerian local governments with particular evidence from Kwara State. The results provide robust evidence that both internal audit

control and internal control systems significantly and positively influence financial accountability, with the latter exerting a stronger effect. The demographic analysis suggested that the respondents were mostly experienced professionals with strong educational backgrounds, indicating that the findings were based on credible practitioner insights. The reliability statistics further supported the constructs of the measurement, while the ordered logit estimates confirmed the hypothesised relationships, and are consistent with the wider governance literature that suggests institutional checks and balances reduce the agency problem and enhances fiscal discipline (Alqudah et al., 2023; Boufounou, 2024).

Theoretically, the results are consistent with both agency theory and stewardship theory. Agency theory predicts that internal audit mechanisms and control systems reduce information asymmetry and constrain opportunistic behaviour, thereby safeguarding public resources (Jensen & Meckling, 1976). In contrast, stewardship theory posits that accountability mechanisms also encourage value-driven behaviours and organisational trust, especially when backed up by incentives and ethical norms (Davis et al., 1997). The empirical confirmation of both hypotheses underscores the interplay between structural and behavioural approaches to financial accountability, suggesting that policies integrating both perspectives are necessary.

Based on these insights, the following recommendations emerge. First, the independence, resourcing, and training of internal audit units in local governments should be strengthened. Institutional autonomy protects audit findings, while internal control frameworks prevent financial mismanagement (Abdelrahim & Al-Malkawi, 2022). Second, local governments should institutionalise comprehensive internal control systems, including segregation of duties, approval processes, and compliance monitoring (Eton et al., 2022). Third, policymakers should design incentive-compatible strategies that couple sanctions for misconduct with rewards for compliance (Kabuye et al., 2021). Fourth, capacity-building and shared values of stewardship through regular training and sensitisation programs are also important to transform compliance-driven accountability into a value-based practice (Davis et al., 1997). Finally, enhanced accountability in local governments can enhance fiscal federalism and citizens' trust in governance (Martinez-Vazquez & Lago-Peñas, 2020), making strengthening accountability at the grassroots level not only a governance priority but also a macroeconomic imperative for sustainable development.

Declarations

Conflict of Interest

The author declare no conflict of interest.

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