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The Effect of Internal Audit on The Quality of Financial Reporting: The Mediating Roles of Internal Control and Management Accountability in Private Hospitals in Lumajang Regency, Indonesia

Jumkhairiyah[1*], Agung Budi Sulistyo[2], Ahmad Roziq[3]
[1-3] Universitas Jember, Indonesia
email: 230820301008@mail.unej.ac.id[1]

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Abstract

This study examines the effect of Internal Audit on Financial Reporting Quality, both directly and indirectly through the mediating roles of Internal Control and Management Accountability, in private hospitals in Lumajang Regency, Indonesia, that have implemented the Hospital Management Information System (SIMRS). An explanatory quantitative design was employed using Partial Least Squares Structural Equation Modeling (PLS-SEM). Primary data were collected through questionnaires from 55 respondents selected using purposive sampling from six private hospitals, including finance staff, Internal Supervisory Unit (SPI) members, and management personnel. The findings reveal that Internal Audit has no significant direct effect on either Financial Reporting Quality or Internal Control. Conversely, Internal Audit significantly enhances Management Accountability, while both Internal Control and Management Accountability positively influence Financial Reporting Quality. Mediation analysis indicates that Internal Control does not mediate the relationship between Internal Audit and Financial Reporting Quality, whereas Management Accountability fully mediates this relationship. The study extends Agency Theory by demonstrating that the effectiveness of Internal Audit in improving financial reporting quality depends primarily on strengthening managerial accountability rather than solely on reinforcing internal control mechanisms, providing practical implications for governance improvement in private hospitals implementing SIMRS.

Keywords: *Financial Reporting Quality, Internal Audit, Internal Control, Management Accountability, Private Hospitals.*

INTRODUCTION

Private hospitals are increasingly required to produce high-quality financial reports as a form of accountability to stakeholders amid the rapid digital transformation of healthcare systems, the growing demand for organizational transparency, and the increasing complexity of financial governance in health service institutions worldwide (Alassuli et al., 2025). Financial reporting quality has become a strategic organizational asset because reliable accounting information supports managerial decision-making, operational planning, performance evaluation, investment assessment, regulatory compliance, and long-term institutional sustainability across highly competitive healthcare environments (Firmansyah et al., 2022). The operational complexity of hospitals, involving integrated clinical and non-clinical services, multiple revenue sources, procurement activities, pharmaceutical inventories, and extensive financial transactions, substantially increases the likelihood of recording errors, reporting inconsistencies, and information asymmetry when governance mechanisms are unable to function effectively (Al Rahhaleh et al., 2023). Recent evidence indicates that the increasing adoption of digital technologies has strengthened organizational expectations regarding financial transparency while simultaneously exposing weaknesses in governance structures that remain incapable of ensuring the reliability of accounting information throughout increasingly integrated healthcare operations (Al-Hamdawi, 2026). These developments demonstrate that financial reporting quality can no longer be interpreted merely as compliance with accounting standards but should instead be viewed as an outcome of an integrated governance ecosystem that combines technological capability, organizational accountability, and effective internal assurance mechanisms. Consequently, strengthening financial reporting quality requires healthcare organizations to establish governance systems capable of ensuring that financial information remains relevant, accurate, transparent, and reliable despite the growing operational complexity accompanying digital transformation.

In Indonesia, efforts to improve governance and reporting quality in hospitals have been reinforced through the enactment of the Regulation of the Ministry of Health of the Republic of Indonesia Number 18 of 2022, which requires all hospitals to implement an integrated Hospital Management Information System (*Sistem Informasi Manajemen Rumah Sakit*—SIMRS) as the primary platform for managing operational and financial information (Kementerian Kesehatan Republik Indonesia, 2022). The implementation of SIMRS is expected to improve the accuracy, consistency, completeness, and timeliness of financial reporting by integrating data generated from various hospital units into a standardized information system capable of supporting evidence-based managerial decision-making (Priyantini & Dewi, 2025). Nevertheless, the transition from conventional administrative procedures to digitally integrated reporting systems rarely occurs without organizational challenges because hospitals frequently encounter data migration problems, reporting delays, inconsistent interdepartmental information, incomplete system integration, and limited employee readiness during implementation (Endang Ruhiyat et al., 2025). Previous studies further demonstrate that accounting information systems contribute significantly to financial reporting quality only when they are accompanied by effective internal control mechanisms and competent organizational resources capable of ensuring the consistency and reliability of financial information throughout the reporting process (Sijabat & Lestary, 2022). These findings indicate that digital transformation alone is insufficient to guarantee high-quality financial reporting because technological innovation must be supported by governance mechanisms capable of ensuring that organizational processes remain transparent, accountable, and well controlled. This issue becomes increasingly relevant for private hospitals in Lumajang Regency, where continuous growth in healthcare demand and institutional expansion have intensified the need for governance practices capable of maintaining financial reporting quality while supporting sustainable organizational performance (Badan Pusat Statistik Kabupaten Lumajang, 2025).

Internal audit plays a strategic role in ensuring that financial reporting processes comply with organizational policies, accounting standards, and regulatory requirements by providing independent assurance regarding the effectiveness of governance, risk management, and internal control systems throughout the organization (Judijanto, 2024). Contemporary governance literature emphasizes that the function of internal audit has evolved from a traditional compliance-oriented activity into a value-adding mechanism that strengthens organizational transparency, enhances operational efficiency, and supports sustainable financial performance through continuous evaluation and advisory services (Al-Hamdawi, 2026). Empirical evidence consistently suggests that effective internal audit contributes positively to financial reporting quality by strengthening monitoring activities, improving compliance with accounting standards, and reducing the likelihood of material misstatements within financial statements (Wahyuni et al., 2024). Similar findings indicate that internal audit, together with accounting information systems and organizational commitment, significantly improves the quality of financial statements because effective monitoring encourages more accurate recording practices and greater managerial discipline in financial reporting (Putri et al., 2024). Evidence from Indonesian public service hospitals further demonstrates that internal audit strengthens governance effectiveness through continuous supervision and systematic evaluation of financial management practices, thereby improving organizational accountability and reporting reliability (Arso & Putro, 2022). Despite these encouraging findings, the organizational processes through which internal audit ultimately enhances financial reporting quality remain insufficiently explained, particularly within private hospitals that continue adapting to increasingly integrated digital healthcare systems.

Although numerous studies acknowledge the importance of internal audit in promoting organizational governance, empirical findings concerning its influence on financial reporting quality remain inconsistent because previous investigations have reported divergent conclusions regarding both the strength and the mechanism of this relationship (Fadya et al., 2024). Several scholars argue that internal audit directly improves financial reporting quality by strengthening monitoring effectiveness and ensuring compliance with accounting procedures, whereas other studies contend that the effectiveness of internal audit depends primarily on the quality of internal control systems capable of translating audit recommendations into organizational practices (Lisa et al., 2023). Recent evidence further indicates that internal control may function as a mediating mechanism through which governance variables influence financial reporting quality, suggesting that internal audit does not necessarily exert a direct organizational effect but instead operates through broader control structures (Azi & Akbar, 2025). Other governance studies have similarly emphasized that management accountability represents an equally important organizational mechanism because transparent managerial responsibility encourages greater compliance with financial regulations and improves the credibility of financial information presented to stakeholders (Munawaroh et al., 2025). A systematic review of recent literature also concludes that empirical studies simultaneously integrating internal audit, internal control, and management accountability within a single structural framework remain relatively limited, particularly in healthcare organizations experiencing rapid digital transformation and increasing reporting complexity (Haerani et al., 2026). This unresolved inconsistency indicates the existence of both conceptual and empirical gaps concerning how internal audit interacts with complementary governance mechanisms to produce high-quality financial reporting within modern hospital organizations.

The unresolved inconsistency surrounding the relationship between internal audit and financial reporting quality possesses considerable scientific and practical significance because private hospitals increasingly rely on reliable financial information to support strategic decision-making, resource allocation, regulatory compliance, organizational sustainability, and stakeholder confidence in an increasingly competitive healthcare environment (Al Rahhaleh et al., 2023). Internal control constitutes a fundamental governance mechanism because it establishes systematic procedures capable of preventing material misstatements, reducing reporting errors, safeguarding organizational assets, and ensuring the reliability of accounting information throughout financial reporting processes (Satria & Mayasari, 2024). Management accountability complements this governance structure by encouraging managers to perform financial planning, implementation, supervision, and reporting responsibly while ensuring that organizational resources are managed transparently and in accordance with institutional objectives (Nopriyanto, 2023). Previous evidence also demonstrates that the interaction between internal audit and internal control significantly strengthens the implementation of good corporate governance, indicating that governance quality should be understood as an integrated organizational system rather than as separate managerial practices operating independently (Arifudin et al., 2021). From the perspective of agency theory, effective internal audit reduces information asymmetry between principals and agents, while internal control and management accountability reinforce managerial discipline by ensuring that financial information faithfully represents organizational performance and resource utilization. These considerations highlight the necessity of developing a more comprehensive governance model capable of explaining not only whether internal audit influences financial reporting quality but also how such influence is transmitted through multiple organizational mechanisms within private hospitals implementing integrated digital information systems.

Building upon these unresolved theoretical and empirical issues, this study proposes an integrated governance model that explains how internal audit enhances financial reporting quality through the parallel mediating roles of internal control and management accountability within private hospitals. Rather than examining internal audit as an isolated governance mechanism, this research conceptualizes financial reporting quality as the outcome of interrelated organizational processes in which monitoring, control, and accountability collectively shape the reliability of financial information. The study focuses on private hospitals in Lumajang Regency because this setting represents an important yet underexplored context characterized by increasing healthcare demand, organizational complexity, and the ongoing implementation of integrated hospital information systems. The findings are expected to enrich the governance and accounting literature by providing empirical evidence regarding the organizational mechanisms through which internal audit contributes to financial reporting quality in healthcare institutions. From a methodological perspective, this study also offers a comprehensive analytical framework for examining direct and indirect relationships among governance variables within a single structural model. Ultimately, the study seeks to provide practical recommendations for hospital management and policymakers in designing governance systems capable of producing more transparent, accountable, and high-quality financial reporting.

Research Problem and Objectives

Based on the background presented above, this study addresses the following research questions: (1) Does internal audit significantly affect financial reporting quality? (2) Does internal audit significantly affect internal control? (3) Does internal audit significantly affect management accountability? (4) Does internal control significantly affect financial reporting quality? (5) Does management accountability significantly affect financial reporting quality? (6) Does internal control mediate the relationship between internal audit and financial reporting quality? and (7) Does management accountability mediate the relationship between internal audit and financial reporting quality?

Accordingly, this study aims to examine the direct effect of internal audit on financial reporting quality, the influence of internal audit on internal control and management accountability, the effects of internal control and management accountability on financial reporting quality, as well as the mediating roles of internal control and management accountability in the relationship between internal audit and financial reporting quality among private hospitals in Lumajang Regency, Indonesia.

RESEARCH METHODS

Conceptual Framework

The conceptual framework of this study is grounded in Agency Theory, which posits that internal audit serves as an organizational monitoring mechanism to reduce information asymmetry between principals and agents by strengthening governance, internal control, and accountability, ultimately enhancing the quality of financial reporting (Judijanto, 2024; Nopriyanto, 2023). In this framework, Internal Audit (IA) is specified as the exogenous construct, Internal Control (IC) and Management Accountability (MA) function as parallel mediating constructs, and Financial Reporting Quality (FRQ) represents the endogenous construct. The proposed model assumes that effective internal audit contributes directly to financial reporting quality while simultaneously improving organizational governance through stronger internal control systems and greater managerial accountability, which subsequently enhance the reliability, transparency, and credibility of financial reports (Lisa et al., 2023; Wahyuni et al., 2024). Accordingly, the framework integrates both direct and indirect causal relationships to provide a more comprehensive explanation of how governance mechanisms influence financial reporting quality within private hospitals implementing the Hospital Management Information System (SIMRS).

Research Design

This study employed an empirical quantitative approach using an explanatory cross-sectional research design to examine the causal relationships among Internal Audit (IA), Internal Control (IC), Management Accountability (MA), and Financial Reporting Quality (FRQ) in private hospitals in Lumajang Regency, Indonesia. The study was conducted in six private hospitals affiliated with the Association of Private Hospitals of Lumajang (ARSALU) that have implemented the Hospital Management Information System (SIMRS), namely RSNU Permata, RSWK, RSI Lumajang, RSU Muhammadiyah Lumajang, IHC RS Djatiroto, and RS Bhayangkara Lumajang. Primary data were collected through a structured questionnaire administered to respondents directly involved in financial management, internal supervision, and managerial decision-making. The proposed research model was developed to evaluate both the direct and indirect effects of Internal Audit on Financial Reporting Quality through the parallel mediating roles of Internal Control and Management Accountability.

Population and Sample

The population comprised all private hospitals operating in Lumajang Regency that had implemented SIMRS and were registered as members of ARSALU. Because the number of eligible hospitals was limited, a census approach was adopted at the institutional level by including all six hospitals in the study. At the respondent level, purposive sampling was employed to ensure that only individuals possessing adequate knowledge of financial reporting and internal governance participated in the survey. Eligible respondents consisted of finance and accounting staff responsible for financial reporting, members of the Internal Supervisory Unit (SPI) or internal auditors responsible for internal audit activities, and management personnel or heads of divisions representing internal control and management accountability functions. A total of 55 valid questionnaires were obtained, consisting of 16 finance personnel, 11 internal auditors, and 28 management personnel, exceeding the minimum sample size recommended for Partial Least Squares Structural Equation Modeling (PLS-SEM) based on the 10-times rule and statistical power recommendations (Hair et al., 2022).

Data Collection and Variable

Measurement Primary data were collected using a structured questionnaire measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). All constructs were specified as reflective latent variables. Financial Reporting Quality was operationalized using the dimensions of relevance, reliability, comparability, timeliness, and understandability, adapted from Firmansyah et al. (2022) and Sijabat and Lestary (2022). Internal Audit was measured through indicators of auditor independence, auditor competence, periodic examination and monitoring, provision of improvement recommendations, and contribution to governance and risk management, adapted from Wahyuni et al. (2024) and Judijanto (2024). Internal Control was measured based on the COSO framework, including the control environment, risk assessment, control activities, information and communication, and monitoring, adapted from Arifudin et al. (2021) and Priyantini and Dewi (2025). Management Accountability was measured using indicators of process accountability, performance accountability, transparency, regulatory compliance, and accountability for resource utilization, adapted from Mardiasmo (2018).

Table 1. Operational Definition of Variables

Variable	Indicators	Sources
Internal Audit (X)	Auditor independence; auditor competence; periodic examination and monitoring; improvement recommendations; contribution to governance and risk management	Wahyuni et al. (2024); Judijanto (2024)
Internal Control (Z1)	Control environment; risk assessment; control activities; information and communication; monitoring	Arifudin et al. (2021); Priyantini & Dewi (2025)
Management Accountability (Z2)	Process accountability; performance accountability; transparency; regulatory compliance; accountability for resource utilization	Mardiasmo (2018)
Financial Reporting Quality (Y)	Relevance; reliability; comparability; timeliness; understandability	Firmansyah et al. (2022); Sijabat & Lestary (2022)

Source: Developed by the authors based on previous studies

Data Analysis The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4, considering its suitability for predictive research involving relatively small sample sizes, multiple mediating variables, and complex structural relationships (Hair et al., 2022; Sarstedt et al., 2021). The analysis consisted of two sequential stages. First, the measurement model (outer model) was evaluated by assessing convergent validity through outer loadings (≥0.70) and Average Variance Extracted (AVE ≥0.50), discriminant validity using the Fornell–Larcker criterion, cross-loadings, and the Heterotrait–Monotrait ratio (HTMT <0.90), as well as construct reliability using Cronbach's alpha and Composite Reliability (≥0.70) (Henseler et al., 2015). Second, the structural model (inner model) was assessed using the coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), standardized path coefficients, and bootstrapping with 5,000 resamples to examine the significance of direct and indirect effects at a 5% significance level (Hair et al., 2022; Ringle & Sarstedt, 2021). The mediating effects of Internal Control and Management Accountability were examined through the specific indirect effects generated by the bootstrapping procedure, while overall model fit was evaluated using the Standardized Root Mean Square Residual (SRMR) and the Normed Fit Index (NFI). The proposed structural model was specified as a parallel mediation model using the following equations:

$$Z1 = \beta 1X + e1 \qquad (1)$$
$$Z2 = \beta 2X + e2 \qquad (2)$$
$$Y = \beta 3X + \beta 4Z1 + \beta 5Z2 + e3 \qquad (3)$$

Where X represents Internal Audit, Z 1 represents Internal Control, Z 2 represents Management Accountability, and Y represents Financial Reporting Quality. The structural model simultaneously estimates the direct effect of Internal Audit on Financial Reporting Quality and the indirect effects transmitted through the two parallel mediating variables.

RESULTS AND DISCUSSION

Respondent Profile

The respondent profile provides an overview of the distribution of participants based on their organizational roles within the participating private hospitals. Because the study investigates internal audit, internal control, management accountability, and financial reporting quality, respondents were selected from divisions directly involved in governance and financial management to ensure that the collected data accurately reflected the organizational processes under investigation.

Table 2. Respondent Distribution

Division	n
Finance Department	16
Internal Supervisory Unit (SPI)	11
Management	28
Total	**55**

Source: Primary data (2026)

The respondent distribution indicates that management personnel constitute the largest proportion of participants, followed by finance staff and members of the Internal Supervisory Unit, providing balanced organizational perspectives for evaluating the proposed research model.

Measurement (Outer) Model

Before testing the proposed hypotheses, the measurement model was evaluated to ensure that all constructs satisfied the required validity and reliability criteria. The assessment consisted of convergent validity, discriminant validity, and construct reliability following the recommended PLS-SEM procedure (Hair et al., 2022).

Convergent validity was assessed using outer loadings and the Average Variance Extracted (AVE), where acceptable values are indicated by outer loadings above 0.70 and AVE values greater than 0.50 (Hair et al., 2022). All indicator outer loadings ranged from 0.724 to 0.968, while all AVE values ranged from 0.618 to 0.865, confirming satisfactory convergent validity across all constructs.

Table 3. Reliability and Convergent Validity

Construct	Cronbach's α	Composite Reliability (ρc)	AVE
Internal Audit (X)	0.919	0.939	0.756
Financial Reporting Quality (Y)	0.876	0.910	0.671
Internal Control (Z1)	0.961	0.970	0.865
Management Accountability (Z2)	0.846	0.890	0.618

Source: SmartPLS 4 output (2026)

The results also indicate that all constructs achieved Cronbach's alpha and Composite Reliability values exceeding the recommended threshold of 0.70, confirming satisfactory internal consistency reliability.

Discriminant validity was evaluated using the Fornell–Larcker criterion, cross-loadings, and the Heterotrait–Monotrait ratio (HTMT) (Henseler et al., 2015). As presented in Table 4, the square root of the AVE for each construct exceeds its correlations with other constructs. Cross-loading analysis further shows that each indicator loads highest on its intended construct, while all HTMT values remain below 0.85, confirming satisfactory discriminant validity.

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Table 4. Discriminant Validity — Fornell–Larcker Criterion

	X	Y	Z1	Z2
X	0.870			
Y	0.253	0.819		
Z1	0.143	0.394	0.930	
Z2	0.562	0.522	0.299	0.786

Note: Diagonal values (bold in the original SmartPLS output) represent the square roots of AVE.
Source: SmartPLS 4 output (2026)

Overall, the measurement model demonstrates adequate validity and reliability, indicating that all latent constructs are appropriate for subsequent structural model evaluation.

Structural (Inner) Model

After confirming the adequacy of the measurement model, the structural model was evaluated to examine the explanatory power of the proposed relationships and to test the research hypotheses. The assessment included the coefficient of determination (R^2), effect size (f^2), hypothesis testing, mediation analysis, model fit evaluation, and structural equation estimation (Hair et al., 2022).

Coefficient of determination (R^2) and effect size (f^2). The coefficient of determination evaluates the proportion of variance explained by the predictor variables, whereas effect size indicates the contribution of each exogenous construct to the endogenous variables. The model explains 33.6% of the variance in Financial Reporting Quality, 31.6% of the variance in Management Accountability, and 2.0% of the variance in Internal Control.

Table 5. Coefficient of Determination (R^2) and Effect Size (f^2)

Endogenous construct	**R^2**	**f^2 (X)**	**f^2 (Z1)**	**f^2 (Z2)**
Internal Control (Z1)	0.020	0.021	—	—
Management Accountability (Z2)	0.316	0.462	—	—
Financial Reporting Quality (Y)	0.336	0.003	0.092	0.213
Endogenous construct	**R^2**	**f^2 (X)**	**f^2 (Z1)**	**f^2 (Z2)**

Source: SmartPLS 4 output (2026)

The results indicate that Internal Audit has the strongest contribution to Management Accountability, whereas its contributions to Internal Control and Financial Reporting Quality are relatively limited.

Hypothesis testing.

Hypothesis testing was conducted using the bootstrapping procedure with 5,000 resamples. A hypothesis was considered supported when the p-value was below 0.05.

Table 6. Path Coefficients and Direct-Effect Hypothesis Testing

Path	β	t-statistic	p-value	Decision
X → Y (H1)	-0.050	0.326	0.744	Rejected
X → Z1 (H2)	0.143	0.932	0.351	Rejected
X → Z2 (H3)	0.562	5.287	0.000	Accepted
Z1 → Y (H4)	0.260	2.124	0.034	Accepted
Z2 → Y (H5)	0.472	3.340	0.001	Accepted

Source: SmartPLS 4 output (2026)

The findings indicate that H3, H4, and H5 are supported, whereas H1 and H2 are not supported.

The indirect effects of Internal Audit on Financial Reporting Quality through Internal Control and Management Accountability were examined using bootstrapped specific indirect effects.

Table 7. Specific Indirect Effects (Mediation Testing)

Path	β (indirect)	t-statistic	p-value	Decision
X → Z1 → Y (H6)	0.037	0.814	0.416	Rejected — no mediation
X → Z2 → Y (H7)	0.265	2.410	0.016	Accepted — full mediation

Source: SmartPLS 4 bootstrapping output (2026)

The results demonstrate that Management Accountability fully mediates the relationship between Internal Audit and Financial Reporting Quality, whereas Internal Control does not exhibit a significant mediating effect.

Model fit

The estimated model yielded SRMR = 0.127 and NFI = 0.507. Although these values do not fully satisfy the conventional global fit criteria, PLS-SEM primarily emphasizes the quality of the measurement and structural models rather than covariance-based global fit indices (Hair et al., 2022; Henseler et al., 2015). The satisfactory validity, reliability, and significant structural relationships indicate that the proposed model remains appropriate for hypothesis testing.

Structural equations

Based on the estimated path coefficients, the structural relationships can be expressed as follows:

$$Z_1 = 0.143X + e_1$$
$$Z_2 = 0.562X + e_2$$
$$Y = -0.050X + 0.260Z_1 + 0.472Z_2 + e_3$$

Internal Audit and Financial Reporting Quality (H1)

The statistical analysis demonstrates that the direct relationship between internal audit and financial reporting quality is not statistically significant, indicating that the implementation of internal audit alone is insufficient to improve the quality of financial reporting within the participating private hospitals (Judijanto, 2024). This finding suggests that the effectiveness of internal audit should not be interpreted merely through the existence of audit activities but through the extent to which audit recommendations are translated into managerial actions and organizational improvements (Nopriyanto, 2023). Agency Theory explains that monitoring mechanisms reduce information asymmetry only when management responds to audit findings by improving governance practices and organizational performance (Judijanto, 2024). The insignificant coefficient obtained in this study indicates that audit functions may currently emphasize procedural compliance rather than substantive improvements in financial reporting processes. Such a condition implies that financial reporting quality is shaped by broader governance mechanisms that extend beyond the execution of periodic audit activities.

This finding differs from previous studies reporting that internal audit directly enhances financial reporting quality because those studies were generally conducted in organizations with stronger governance maturity and more effective implementation of audit recommendations (Putri et al., 2024). Evidence from Indonesian organizations also suggests that internal audit contributes positively to reporting quality when supported by organizational commitment and effective accounting information systems (Wahyuni et al., 2024). Research conducted in banking institutions indicates that internal audit strengthens reporting quality only when accompanied by effective internal control practices capable of preventing reporting errors before financial statements are finalized (Fadya et al., 2024). Studies focusing on public service hospitals similarly conclude that internal audit frequently concentrates on compliance assurance and operational supervision instead of directly influencing accounting information quality (Arso & Putro, 2022). Comparable international evidence further emphasizes that the contribution of internal auditing to organizational performance is frequently realized through governance improvement rather than through an immediate direct effect on financial reporting outcomes (Al-Hamdawi, 2026).

Internal Audit and Internal Control (H2)

The empirical results indicate that internal audit does not significantly influence internal control, suggesting that the existence of audit activities alone cannot automatically strengthen organizational control systems (Arifudin et al., 2021). Internal control represents an integrated management process embedded within everyday organizational activities, whereas internal audit functions primarily as an independent evaluation mechanism that identifies weaknesses and recommends corrective actions (Lisa et al., 2023). Agency Theory assumes that monitoring mechanisms influence organizational behaviour through managerial responses rather than through monitoring activities themselves (Nopriyanto, 2023). The insignificant relationship observed in this study indicates that recommendations generated by internal auditors may not yet be consistently implemented across operational units responsible for executing internal control procedures. This condition illustrates that strengthening internal control requires organizational commitment extending beyond periodic audit implementation.

The implementation of SIMRS also creates additional organizational complexity because internal control increasingly depends on digital integration, employee competence, and cross-departmental coordination rather than on audit activities alone (Kementerian Kesehatan Republik Indonesia, 2022). Previous studies demonstrate that internal audit contributes to stronger internal control only when management actively follows up audit findings through corrective policies and continuous supervision (Satria & Mayasari, 2024). A systematic review further concludes that organizational commitment functions as an important determinant connecting audit activities with improvements in internal control effectiveness and financial reporting quality (Haerani et al., 2026). Evidence from private hospitals in Saudi Arabia likewise indicates that effective internal control emerges from the interaction between governance, accountability, and managerial commitment instead of isolated monitoring activities (Al Rahhaleh et al., 2023). The present findings reinforce the argument that internal audit should be viewed as a catalyst for organizational improvement rather than as the sole determinant of internal control effectiveness.

Internal Audit and Management Accountability (H3)

The findings reveal that internal audit has a significant positive effect on management accountability, indicating that audit activities successfully encourage managers to become more transparent and responsible in carrying out financial management responsibilities (Nopriyanto, 2023). Internal audit contributes to accountability by evaluating operational practices, communicating deficiencies, and encouraging corrective actions that strengthen managerial responsibility toward organizational objectives (Judijanto, 2024). Agency Theory explains that monitoring mechanisms reduce agency conflicts because managers become more accountable when organizational performance and financial decisions are subject to independent evaluation (Judijanto, 2024). The relatively large effect size obtained in this study demonstrates that internal audit exerts a stronger behavioural influence on management than on financial reporting quality directly. This pattern indicates that accountability represents one of the primary organizational outcomes generated through effective internal audit practices.

Previous empirical evidence similarly reports that internal audit improves managerial accountability by strengthening transparency, governance quality, and compliance with organizational regulations (Fadya et al., 2024). Research examining financial reporting quality also concludes that internal audit encourages management to improve organizational commitment and responsibility toward financial information presented to stakeholders (Wahyuni et al., 2024). Government accountability studies further demonstrate that strong control systems and financial information systems contribute to accountability only when supported by active managerial commitment throughout organizational processes (Munawaroh et al., 2025). Digital transformation research likewise argues that technological innovation enhances financial transparency primarily through governance mechanisms capable of increasing managerial accountability and organizational integrity (Alassuli et al., 2025). These findings indicate that internal audit creates organizational value by strengthening behavioural governance, which subsequently becomes an important foundation for improving financial reporting quality.

Internal Control and Financial Reporting Quality (H4)

The statistical results confirm that internal control positively affects financial reporting quality, indicating that stronger control systems contribute to more reliable, accurate, and timely financial information (Lisa et al., 2023). Internal control minimizes recording errors, strengthens authorization procedures, and improves monitoring activities that support the credibility of accounting information generated by hospitals (Arifudin et al., 2021). The COSO framework emphasizes that effective control environments integrate risk assessment, control activities, communication, and monitoring into a comprehensive governance mechanism supporting organizational objectives (Arifudin et al., 2021). Although the effect size is relatively modest, the significant relationship demonstrates that internal control remains an essential component of financial reporting governance. These findings indicate that improvements in reporting quality depend on consistent implementation of organizational control procedures throughout financial management processes.

Previous studies consistently report that accounting information systems produce high-quality financial reports only when supported by effective internal control and competent human resources (Sijabat & Lestary, 2022). Research conducted in hospitals implementing SIMRS also concludes that technological systems alone cannot ensure reporting quality without adequate verification, reconciliation, and monitoring procedures (Priyantini & Dewi, 2025). Studies examining financial reporting quality in Indonesia similarly identify internal control as one of the principal determinants of transparency and reporting reliability across organizations (Firmansyah et al., 2022). Recent empirical evidence further demonstrates that internal control mediates governance mechanisms influencing financial reporting quality, although its effectiveness depends on the consistency of organizational implementation (Azi & Akbar, 2025). The current findings strengthen the argument that sustainable improvements in financial reporting quality require hospitals to integrate digital systems with comprehensive internal control practices rather than relying exclusively on technological modernization.

Management Accountability and Financial Reporting Quality (H5)

The empirical findings demonstrate that management accountability has a significant positive effect on financial reporting quality, indicating that accountable managerial behavior contributes substantially to the preparation of reliable, transparent, and decision-useful financial information (Mardiasmo, 2018). Management accountability encourages managers to ensure that financial transactions are properly documented, verified, and reported in accordance with applicable accounting standards and organizational policies (Firmansyah et al., 2022). Agency Theory explains that greater accountability reduces opportunistic behavior because managers recognize that their decisions and reporting practices are subject to continuous evaluation by stakeholders (Judijanto, 2024). The larger effect size of management accountability compared with internal control suggests that behavioral commitment plays a more influential role than procedural mechanisms in determining financial reporting quality within the sampled hospitals. This outcome indicates that governance effectiveness depends not only on formal organizational systems but also on management's willingness to uphold transparency and responsibility throughout the reporting process.

Previous empirical studies similarly conclude that organizations characterized by high managerial accountability tend to produce financial reports with greater reliability, timeliness, and credibility because managers place greater emphasis on compliance and ethical responsibility (Al Rahhaleh et al., 2023). Research conducted in Indonesian organizations also reports that accountability strengthens financial reporting quality by encouraging transparent financial management and responsible decision-making (Firmansyah et al., 2022). Evidence from studies on digital financial transformation further suggests that technological innovation improves financial transparency only when organizational governance is supported by accountable managerial practices capable of ensuring the integrity of financial information (Alassuli et al., 2025). Government accountability research likewise emphasizes that accountability serves as the primary mechanism through which internal governance systems create trustworthy financial reporting and strengthen public confidence (Munawaroh et al., 2025). The present findings reinforce the proposition that management accountability functions as a strategic governance resource capable of transforming organizational control mechanisms into higher-quality financial reporting outcomes.

Mediating Role of Internal Control (H6)

The mediation analysis indicates that internal control does not significantly mediate the relationship between internal audit and financial reporting quality because the indirect effect fails to reach statistical significance (Lisa et al., 2023). The insignificant mediation result is consistent with the non-significant relationship between internal audit and internal control observed in the structural model, indicating that the first stage of the mediation pathway is not adequately established (Hair et al., 2022). Although internal control independently contributes to financial reporting quality, improvements in internal control within the participating hospitals do not appear to originate directly from internal audit activities. This finding suggests that internal control is influenced by broader organizational factors, including management commitment, operational coordination, and institutional governance. The results indicate that strengthening financial reporting quality through internal control requires organizational interventions extending beyond periodic audit evaluations.

The present findings differ from previous studies reporting that internal control successfully mediates the influence of audit quality on financial reporting quality because those studies generally identified stronger interactions between monitoring mechanisms and operational control implementation (Azi & Akbar, 2025). Research examining audit quality also concludes that mediation through internal control becomes effective only when management consistently implements audit recommendations across organizational processes (Lisa et al., 2023). A systematic literature review similarly argues that organizational commitment and governance quality determine whether audit activities can successfully strengthen internal control before influencing reporting quality (Haerani et al., 2026). Evidence from hospital settings indicates that digital accounting systems require continuous coordination among finance, management, and supervisory units, reducing the likelihood that internal audit alone can produce substantial improvements in organizational control systems (Endang Ruhiyat et al., 2025). These findings indicate that internal control remains an important governance mechanism, although its role as an intermediary between internal audit and financial reporting quality is not supported within the organizational context examined in this study.

Mediating Role of Management Accountability (H7)

The results demonstrate that management accountability fully mediates the relationship between internal audit and financial reporting quality, indicating that internal audit contributes to reporting quality primarily by strengthening managerial responsibility rather than through a direct organizational effect (Nopriyanto, 2023). The significant indirect effect confirms that audit recommendations become valuable only after they are translated into accountable managerial decisions affecting financial reporting practices (Judijanto, 2024). Agency Theory provides a strong theoretical explanation for this finding because monitoring mechanisms improve organizational outcomes when managers respond by reducing information asymmetry and increasing transparency toward stakeholders (Judijanto, 2024). The absence of a significant direct effect, combined with a significant indirect effect, illustrates that management accountability constitutes the principal behavioral pathway linking internal audit to financial reporting quality. This mediation pattern represents the central empirical contribution of the present study within the context of private hospitals implementing SIMRS.

The findings extend previous research by demonstrating that accountability performs a more substantial mediating role than internal control in explaining how internal audit improves financial reporting quality in healthcare organizations (Fadya et al., 2024). Studies investigating internal audit consistently report that governance improvements emerge when managers actively implement audit recommendations through transparent and accountable financial management practices (Wahyuni et al., 2024). Research on organizational governance likewise concludes that accountability strengthens stakeholder confidence because responsible managerial behavior enhances the credibility and reliability of reported financial information (Al-Hamdawi, 2026). Empirical evidence from digital governance studies also indicates that sustainable improvements in financial transparency require accountability mechanisms capable of translating technological and organizational innovations into consistent managerial practices (Alassuli et al., 2025). The present study therefore contributes to the governance literature by demonstrating that management accountability functions as the dominant organizational mechanism through which internal audit enhances financial reporting quality in Indonesian private hospitals undergoing digital transformation.

CONCLUSION

This study investigated the relationships among Internal Audit, Internal Control, Management Accountability, and Financial Reporting Quality in private hospitals in Lumajang Regency, Indonesia by employing a parallel mediation model analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The empirical findings indicate that Internal Audit does not significantly improve Financial Reporting Quality through a direct pathway, suggesting that the existence of internal audit activities alone is insufficient to ensure the production of reliable and high-quality financial reports. Likewise, Internal Audit does not significantly influence Internal Control, implying that audit functions primarily provide evaluative and advisory roles rather than directly transforming operational control systems. The analysis demonstrates that Internal Audit significantly and positively strengthens Management Accountability, while both Internal Control and Management Accountability significantly enhance Financial Reporting Quality. The mediation analysis further confirms that Internal Control does not mediate the relationship between Internal Audit and Financial Reporting Quality, whereas Management Accountability fully mediates this relationship, indicating that improvements in reporting quality occur when audit activities successfully foster greater managerial responsibility and transparency. Collectively, these findings demonstrate that the effectiveness of Internal Audit in private hospitals depends more on its ability to influence managerial behavior and accountability than on its direct contribution to financial reporting or internal control practices.

From a theoretical perspective, this study extends the application of Agency Theory by demonstrating that the governance role of Internal Audit is primarily behavioral rather than procedural within private healthcare organizations implementing the Hospital Management Information System (SIMRS). The findings provide empirical evidence that Management Accountability represents a more influential governance mechanism than Internal Control in translating audit activities into improved Financial Reporting Quality. This result enriches the existing literature by introducing a dual-mediation framework in which two governance mechanisms are examined simultaneously, revealing that only one mediator effectively explains the relationship between Internal Audit and Financial Reporting Quality. From a practical perspective, hospital boards, foundations, and executive management should strengthen accountability mechanisms by ensuring that audit recommendations are systematically implemented, monitored, and incorporated into managerial performance evaluation. The Internal Supervisory Unit (SPI) should also expand its function beyond periodic compliance audits by participating in continuous monitoring of financial reporting processes and validating SIMRS-generated financial information before reporting is finalized. Such governance improvements are expected to increase transparency, strengthen stakeholder confidence, and support more reliable financial decision-making within private hospitals.

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional research design captures organizational conditions at a single point in time, making it difficult to observe the long-term effects of audit recommendations and accountability improvements on financial reporting quality. Second, the study relies on self-reported questionnaire responses, which may be influenced by respondents' subjective perceptions and social desirability bias despite efforts to ensure anonymity and confidentiality. Third, the research was limited to six private hospitals in Lumajang Regency, which may restrict the generalizability of the findings to hospitals operating under different governance structures, ownership characteristics, or regional contexts. Future studies are encouraged to employ longitudinal or sequential explanatory mixed-methods designs that combine quantitative structural modeling with qualitative interviews to explore why certain governance relationships remain insignificant. Expanding the geographical coverage to other regions of Indonesia and incorporating additional organizational variables, such as organizational culture, leadership commitment, digital governance maturity, or human resource competence, may also provide a more comprehensive understanding of the mechanisms through which Internal Audit contributes to Financial Reporting Quality in the healthcare sector.

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