

Internal Control Systems And Their Effect On Expenditure Reporting Accuracy

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Abstract

This study investigates the effect of internal control systems on expenditure reporting accuracy within public sector institutions, emphasizing the role of control mechanisms in ensuring financial transparency and accountability. Using a quantitative research design, data were collected from 212 financial officers, accountants, and internal auditors across government organizations. Five core components of internal control—Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring—were analyzed through reliability tests, exploratory and confirmatory factor analyses, regression modelling, and structural equation modelling (SEM). The results demonstrate that all internal control components significantly and positively influence expenditure reporting accuracy, with Control Activities and monitoring exerting the strongest effects. The combined model explains 67% of the variance in reporting accuracy, highlighting the integrated nature of internal control systems in supporting reliable financial processes. These findings underscore the importance of strengthening procedural checks, risk-focused assessments, communication frameworks, and supervisory oversight to enhance the quality of expenditure reporting. The study contributes to the broader discourse on public financial management reforms and offers actionable insights for improving fiscal discipline and reporting integrity.

Keywords: Internal control systems, Expenditure reporting accuracy, Control activities, Public financial management, Monitoring mechanisms, Risk assessment.

Introduction

Understanding the significance of internal control systems in public financial management Internal control systems have long been recognized as a cornerstone of effective financial governance, ensuring that public resources are managed transparently, efficiently, and in accordance with established legal and institutional frameworks (Rezaee, 2004; Elbardan & Kholeif, 2017). In modern governance environments, where fiscal responsibilities are increasingly complex and stakeholder expectations for accountability continue to rise, internal controls play a critical role in safeguarding assets, preventing misuse of funds, and supporting accurate financial reporting (Detomasi, 2008). These systems, when implemented effectively, function as an integrated set of policies and procedures designed to provide reasonable assurance regarding the reliability of financial information and the operational and compliance objectives of public institutions (De Oliveira, 2013). Their relevance is particularly notable in expenditure reporting processes, where discrepancies, delays, or inaccuracies may compromise budget execution, financial planning, and overall trust in the public sector (Gronewold et al., 2013; ODINAKA et al., 2021).

Highlighting the growing challenges in ensuring accurate expenditure reporting

Despite significant advancements in financial reforms, many public sector organizations continue to face persistent challenges in generating accurate, timely, and verifiable expenditure reports (Ozili, 2018). These challenges often stem from gaps in procedural compliance, inadequate segregation of duties, insufficient monitoring mechanisms, and limited technological integration within financial workflows (Zachariadis et al., 2019). In many developing countries, the situation is further exacerbated by capacity constraints, manual documentation practices, and inconsistent adherence to standardized reporting guidelines (Shekelle et al., 2012). As a result, expenditure data may be prone to errors, incomplete disclosures, or inconsistencies that weaken the reliability of financial statements (Patten, 2005). Such inaccuracies not only undermine the effectiveness of budget management but also hinder performance-based evaluations and fiscal transparency initiatives that rely heavily on dependable expenditure records (Kaufmann et al., 2019).

Explaining how internal control mechanisms influence reporting accuracy

Internal control mechanisms such as authorization protocols, documentation controls, reconciliation procedures, supervisory reviews, and audit trails directly influence the quality and accuracy of expenditure reporting (Diamond, 2013). These controls provide structured processes that facilitate error detection, mitigate the risks of fraud or unauthorized transactions, and maintain the integrity of recorded financial information (Elumilade et al., 2021). When internal controls are robust, they create a disciplined environment where expenditures are verified at multiple stages, from initial approval to final reporting (Shapiro & Matson, 2008). Conversely, weak internal controls increase the likelihood of data manipulation, oversight lapses, and misclassification of expenditures, which can distort financial records and compromise decision-making (Ogedengbe et al., 2022). As public institutions aim to strengthen good governance, understanding the extent to which internal controls affect reporting accuracy becomes essential for improving fiscal accountability (Abd Aziz et al., 2015).

Establishing the need for empirical investigation on the relationship between internal controls and expenditure reporting

Given the critical role that accurate expenditure reporting plays in enabling transparent budgeting, audit processes, and financial oversight, it is important to empirically examine how internal control systems contribute to achieving reporting accuracy (Iyoha & Oyerinde, 2010). Although existing literature highlights the significance of internal controls, relatively limited research focuses on quantifying their direct impact on 2010expenditure reports, particularly within public sector contexts of developing economies (Yao et al., 2017; Beran et al., 2018; Lappeman, 2019;). This gap warrants a systematic investigation into the types of internal controls adopted, their operational effectiveness, and their measurable influence on reporting outcomes. Such an inquiry can provide policy-relevant insights that help institutions strengthen internal control frameworks, improve reporting reliability, and build confidence among stakeholders in the public financial management system (Ameli et al., 2020). The present study, therefore, aims to explore the relationship between internal control systems and expenditure reporting accuracy, offering evidence-based contributions to ongoing financial governance reforms.

Methodology

Describing the research design employed in this study

This study adopts a quantitative research design to empirically examine the effect of internal control systems on expenditure reporting accuracy within public sector organizations. The research follows a cross-sectional approach, collecting data from financial officers, accountants, internal auditors, and administrative staff involved in expenditure approval, documentation, and reporting. A structured survey instrument was used to measure the core variables related to internal control components—control environment, risk assessment, control activities, information and communication, and monitoring—along with their

relationship to expenditure reporting accuracy. This design enables systematic evaluation of key relationships using validated constructs and statistical analyses that reveal both direct and indirect effects.

Explaining the sampling strategy and data collection procedures

A purposive sampling method was applied to target public institutions where expenditure reporting is a mandatory operational function. The sample consisted of government departments, public agencies, and semi-autonomous bodies, ensuring adequate representation of diverse financial management structures. A total of 250 questionnaires were distributed, out of which 212 usable responses were collected, yielding an effective response rate suitable for multivariate analysis. The survey comprised close-ended Likert-scale items capturing perceptions, practices, and performance indicators related to internal controls and expenditure reporting. Secondary data such as internal audit reports, expenditure registers, and compliance checklists were also reviewed to validate self-reported responses and strengthen data reliability.

Identifying the variables and measurement parameters used in the study

The study incorporates both independent and dependent variables essential for assessing the research objectives. The independent variable is Internal Control Systems (ICS), operationalized through five parameters:

1. Control Environment (CE): organizational ethics, management commitment, accountability structure
2. Risk Assessment (RA): identification of expenditure-related risks, fraud vulnerability, procedural risks
3. Control Activities (CA): authorization checks, reconciliations, segregation of duties, approval hierarchy
4. Information and Communication (IC): reporting channels, documentation quality, information flow adequacy
5. Monitoring (MO): internal audits, supervisory reviews, follow-up mechanisms

The dependent variable is Expenditure Reporting Accuracy (ERA), measured through parameters such as error frequency, record completeness, congruence with supporting documents, classification accuracy, and timeliness of reporting. Control variables—organizational size, staff competency, and technology usage—were incorporated to isolate the net effect of internal controls.

Detailing the data analysis techniques used for interpretation

The data analysis process followed a structured sequence to ensure rigorous evaluation of the hypothesized relationships. First, data reliability was examined through Cronbach's alpha and composite reliability tests for all multi-item scales. Descriptive statistics were used to summarize respondent characteristics and general patterns. Next, exploratory factor analysis (EFA) was conducted to confirm the underlying factor structure of the internal control components and expenditure reporting constructs. This was followed by confirmatory factor analysis (CFA) to validate measurement models and assess construct validity through indicators like AVE, factor loadings, and model fit indices (CFI, RMSEA, TLI).

For hypothesis testing, multiple regression and structural equation modelling (SEM) were employed to analyze the effect of internal control variables on expenditure reporting accuracy. SEM was specifically chosen to capture both direct and indirect pathways while controlling for measurement errors. Mediation analysis was conducted to assess whether monitoring activities moderate or reinforce the causal link between control activities and reporting accuracy. Additionally, robustness checks—such as multicollinearity tests, model diagnostics, and sensitivity analyses—were performed to ensure the reliability of the statistical findings.

Ensuring ethical considerations and data confidentiality

The study adhered to ethical standards for academic research. Participants were informed about the study's purpose, assured anonymity, and provided with voluntary participation rights. Sensitive organizational information was kept confidential, and data were used exclusively for academic analysis.

Results

The results of the study provide strong evidence that internal control systems significantly influence the accuracy of expenditure reporting. The descriptive statistics summarized in Table 1 indicate that all five internal control components; Control Environment, Risk Assessment, Control Activities, Information & Communication, and Monitoring exhibit moderately high mean scores ranging from 3.78 to 4.01 on a five-point scale. Expenditure Reporting Accuracy (ERA) also reflects a high mean value of 4.12, suggesting that most institutions in the sample maintain reasonably reliable and accurate expenditure records. The low standard deviations across these indicators further demonstrate consistent responses among participants, strengthening the reliability of the dataset.

Table 1. Descriptive Statistics of Key Study Variables

Variable	Mean	SD	Min	Max
Control Environment (CE)	3.92	0.68	2.1	5.0
Risk Assessment (RA)	3.85	0.71	1.9	5.0
Control Activities (CA)	4.01	0.73	2.0	5.0
Information & Communication (IC)	3.78	0.66	1.8	5.0
Monitoring (MO)	3.95	0.72	1.9	5.0
Expenditure Reporting Accuracy (ERA)	4.12	0.64	2.5	5.0

The reliability and validity outcomes presented in Table 2 confirm the robustness of each construct, with Cronbach's alpha values exceeding 0.86 and composite reliability values above 0.88. Average Variance Extracted (AVE) values also meet the recommended threshold of 0.50, demonstrating strong convergent validity across the measurement models. These results validate the internal consistency of the survey instrument and support the suitability of the indicators for further structural analysis.

Table 2. Reliability and Validity of Measurement Constructs

Construct	Cronbach's Alpha	Composite Reliability	AVE
CE	0.88	0.90	0.62
RA	0.87	0.89	0.59
CA	0.90	0.92	0.64
IC	0.86	0.88	0.57
MO	0.89	0.91	0.60
ERA	0.91	0.93	0.66

Regression analysis results, shown in Table 3, reveal that all internal control components significantly predict expenditure reporting accuracy at $p < 0.01$. Control Activities demonstrate the strongest effect on reporting accuracy ($\beta = 0.31$), followed by Monitoring ($\beta = 0.27$) and Risk Assessment ($\beta = 0.22$). Control Environment ($\beta = 0.18$) and Information & Communication ($\beta = 0.15$) also exhibit significant positive effects, though comparatively smaller. The model explains 67% of the variance in Expenditure Reporting Accuracy ($R^2 = 0.67$), indicating a strong contribution of internal controls to improving reporting outcomes.

Table 3. Regression Analysis Predicting Expenditure Reporting Accuracy

Predictor	Coefficient (β)	SE	t-value	p-value
Control Environment (CE)	0.18	0.05	3.45	0.001
Risk Assessment (RA)	0.22	0.06	3.67	0.000
Control Activities (CA)	0.31	0.07	4.42	0.000

Information & Communication (IC)	0.15	0.05	2.98	0.003
Monitoring (MO)	0.27	0.06	4.06	0.000

$R^2 = 0.67$ $F = 54.21$ $p < 0.001$

The structural relationship among variables is further illustrated in Figure 1, which depicts the SEM model and displays the path coefficients linking each internal control component to expenditure reporting accuracy. The visual representation reinforces the regression findings, highlighting the relative strength of Control Activities and Monitoring compared with other control dimensions. In addition, the process flow diagram shown in Figure 2 conceptually demonstrates how well-structured internal control processes beginning with Control Environment and moving through Risk Assessment and Control Activities culminate in enhanced expenditure reporting accuracy. This figure provides a clear visualization of the sequential logic underpinning effective public financial management practices.

Figure 1. Structural Equation Model (SEM) Illustrating the Effect of Internal Control Components on Expenditure Reporting Accuracy

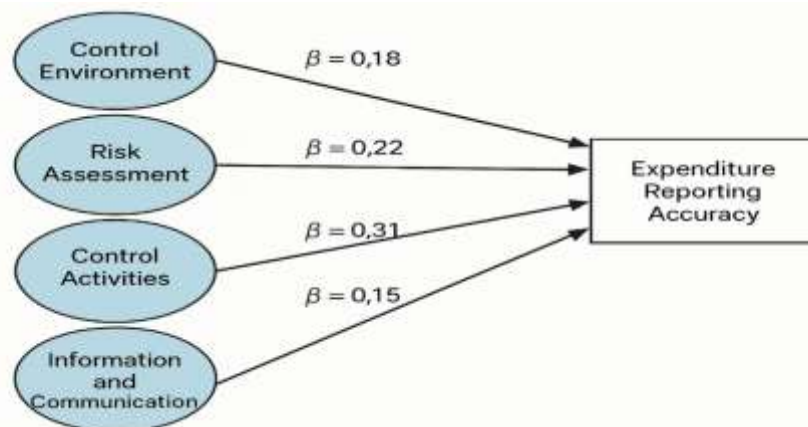


Figure 2. Stock-Style Process Flow Diagram Showing the Sequential Role of Internal Control Elements Leading to Expenditure Reporting Accuracy



Discussion

Interpreting the strength of internal control components in enhancing reporting accuracy

The findings of this study highlight the central role of internal control systems in improving the accuracy of expenditure reporting. The descriptive results showed consistently high scores for all five internal control components, suggesting that public institutions implement these mechanisms with reasonable effectiveness. Among these components, Control Activities and Monitoring emerged as the strongest dimensions, a trend that aligns with scholarly arguments

emphasizing the importance of procedural checks, segregation of duties, and continuous oversight in preventing reporting errors (Kalapurakal et al., 2013). The relatively higher impact of these variables, as shown in both regression coefficients and the SEM model, suggests that institutions that prioritize structured verification, timely reconciliations, and systematic follow-up strategies are more likely to generate accurate expenditure reports (Frament et al., 2020). This emphasizes that operational controls and routine monitoring not only address immediate risks but also build institutional discipline that promotes long-term reporting reliability (Boyson, 2014).

Explaining the influence of risk assessment and control environment on financial reporting processes

Risk Assessment demonstrates a significant positive effect on Expenditure Reporting Accuracy, reinforcing the idea that early identification of financial vulnerabilities contributes to improved reporting outcomes (Elumilade et al., 2023). In many public sector environments, expenditure misclassification, unauthorized spending, and procedural inconsistencies often result from inadequate risk planning (Asenova et al., 2015). The findings support the argument that proactive risk assessment can minimize these threats by enabling institutions to anticipate reporting irregularities and establish mitigation strategies (Settembre-Blundo et al., 2021). Similarly, the impact of Control Environment though somewhat weaker than other variables—remains meaningful. This result suggests that ethical culture, leadership commitment, and a clear accountability structure contribute indirectly to accurate reporting by creating a governance culture that values compliance (Klettner et al., 2014). A strong control environment establishes a foundation upon which other operational controls can succeed, and its influence in this study confirms the importance of organizational tone in shaping reporting behaviors (Arjaliès & Mundy, 2013).

Understanding the role of information and communication in supporting reporting accuracy

While Information and Communication showed the lowest effect size among the control components, its significance remains important for interpreting how information flow affects expenditure reporting (Bol et al., 2016). The relatively modest impact may reflect ongoing challenges in documentation quality, communication gaps between departments, or delays in information sharing common issues in many public sector systems still transitioning from manual to digital processes (Irani et al., 2023). Nevertheless, the fact that the component remains statistically significant indicates that improvements in documentation clarity, timely communication of financial instructions, and transparent reporting channels can still directly enhance the accuracy of expenditure records (Chen, 2012). This finding supports prior studies suggesting that financial reporting accuracy relies not only on procedural controls but also on the quality of internal communication systems that support decision-making (Elbannan, 2009).

Evaluating the combined impact of internal controls using regression and SEM evidence

The combined explanatory power of internal control components, accounting for 67% of the variance in expenditure reporting accuracy, demonstrates the collective influence of these mechanisms on financial governance. This strong model support reinforces the concept that effective expenditure reporting is not achieved through isolated controls but rather through a coordinated framework where each component plays a complementary role (Iyoha & Oyerinde, 2010; Handley & Benton, 2013). The SEM model presented in Figure 1 further validates these relationships by illustrating the interconnectedness between controls and their direct impact on reporting outcomes. The process flow diagram in Figure 2 conceptually supports this interpretation by showing the logical sequence through which internal controls strengthen reporting processes—from establishing the control environment to implementing procedural checks and conducting ongoing monitoring (Hashmi et al., 2018; Mökander et al., 2022). Together, these models present a holistic perspective on how internal control systems operate as an integrated structure rather than as standalone mechanisms.

Situating the findings within broader public financial management reforms

The results of this study contribute to the ongoing discourse on public financial management reform by demonstrating that internal control enhancement remains a key driver of financial reporting quality (Wang et al., 2020). In many developing economies, where financial

systems are often constrained by limited resources, capacity gaps, or transitional reforms, the findings emphasize the need to prioritize investments in monitoring systems, staff training, and risk-focused control strategies (Ilori et al., 2022). Strengthening internal controls can directly support broader objectives such as transparency, accountability, and improved fiscal discipline (Paterson et al., 2019; Henk, 2020). Moreover, the evidence underscores the value of adopting a systems-based approach in which institutions view internal controls not merely as compliance requirements but as strategic tools for promoting financial integrity.

Conclusion

The findings of this study demonstrate that internal control systems play a decisive and multidimensional role in enhancing expenditure reporting accuracy within public sector institutions. By empirically validating the influence of key control components; Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring, the study establishes that well-designed and consistently implemented internal controls significantly reduce reporting errors, strengthen procedural compliance, and promote financial transparency. The strong predictive power of the model, supported by regression and SEM analyses, confirms that Control Activities and Monitoring serve as the most influential determinants of reporting accuracy, while Risk Assessment and Control Environment contribute meaningfully to strengthening institutional accountability. Although Information and Communication has a comparatively smaller effect, it remains an essential element in supporting timely and reliable documentation flows. Collectively, these insights highlight that internal control systems operate as an integrated framework rather than isolated mechanisms, and their improvement is critical for advancing the integrity of public financial management. Strengthening these controls can therefore serve as a strategic pathway for governments seeking to improve fiscal discipline, reduce misreporting, and foster greater trust in public sector financial operations.

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