Journal of Accounting, Ethics & Public Policy, JAEPP Vol. 27 No. 2 (2026)
e-ISSN 2956-8390; ISSN1089652X

Evaluating the Effectiveness of Integrated Financial Management Information Systems in Enhancing Financial Reporting Quality in Public Institutions

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Doi10.60154/jaepp.2026.v27n2p127
Submitted: 29 December 2025
Accepted: 21 September 2026
Published: 10 November 2026
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Cite As:
Bruce-Twum, E., (2026). Evaluating the Effectiveness of Integrated Financial Management Information Systems in Enhancing Financial Reporting Quality in Public Institutions**.** *Journal of Accounting, Ethics & Public Policy, JAEPP, 27(2), https://doi.org/10.60154/jaepp.2026.v27n2p127*

Abstract

Digital transformation has become a critical driver of efficiency and transparency in public sector accounting worldwide. In Ghana, the introduction of the Ghana Integrated Financial Management Information System (GIFMIS) represents a key step toward improving financial reporting accuracy, accountability, and resource management. However, financial discrepancies persist post-implementation. This study therefore examines sentiment toward the adoption of GIFMIS in public institutions and investigates the relationship between digital accounting and the accuracy of financial reporting in Ghana. The study adopted a mixed-method design. The study collected data from forty-four (44) accounting and finance professionals, purposively selected from twenty (20) ministries, departments, and agencies in Ghana. A structured questionnaire used a five-point Likert scale to measure constructs such as GIFMIS implementation quality, perceived usefulness, perceived ease of use, actual system usage, contextual factors, and financial reporting accuracy. Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) and thematic methods to test hypothesised relationships among the study variables.

The findings revealed fragmented and constrained GIFMIS adoption, with an implementation friction paradox indicating a complex, mediated relationship between GIFMIS and Financial Reporting Accuracy. The quality of GIFMIS implementation significantly influences financial reporting accuracy, with perceived usefulness, ease of use, and actual system usage mediating this effect. Contextual factors such as staff competence and infrastructure moderated these relationships. The results suggest that digital accounting systems improve financial reporting accuracy only when adequate training, user acceptance, and institutional capacity support adoption.

Keywords: GIFMIS; Digital transformation; Public Sector; Ghana; Financial Reporting.

Introduction

Traditional accounting practices are increasingly insufficient in today's fast-paced business environment, where stakeholders demand timely, accurate financial information to support informed decision-making (Ebirim et al., 2024). Digital accounting technologies have emerged as transformative tools in financial reporting. These innovations—ranging from cloud-based platforms and artificial intelligence (AI) to blockchain—are reshaping how financial data is processed, managed, and disclosed. By automating routine tasks, minimising errors, and delivering real-time insights, digital tools significantly enhance the speed, precision, and transparency of financial operations (Adekunle et al., 2023; Alao et al., 2024; Raguseo, 2018).

Consequently, a shift toward digitalisation is particularly crucial for public sector institutions, which are vital contributors to economic growth and job creation in Ghana. Despite their importance, many public institutions struggle to maintain high-quality financial reporting due to resource and technical expertise constraints (Dewi et al., 2019; Dimitriu & Matei, 2014). Integrating advanced accounting technologies offers businesses scalable solutions that improve reporting accuracy and strengthen financial decision-making. According to Thaher (2024), digital accounting systems that incorporate AI, blockchain, cloud computing, and analytics play a pivotal role in ensuring reliable and timely financial reports. However, while digital accounting has gained substantial traction in developed economies, its adoption remains uneven across different regions. In particular, African countries continue to face significant challenges in accessing and implementing these technologies, often due to infrastructural and financial limitations (Amankwah-Amoah, 2019). Bridging this digital divide is essential to ensure that public sector institutions in Africa can benefit from advances in financial reporting practices.

In Ghana, public sector financial reforms have been spearheaded by initiatives such as the Ghana Integrated Financial Management Information System (GIFMIS), which aims to streamline government financial operations through digitalisation (Ayakwah et al., 2021). These reforms respond to persistent challenges, including misappropriation of funds, delayed and inaccurate financial reports, and a lack of transparency in public resource management. Digital accounting systems are therefore positioned as solutions to long-standing inefficiencies and inaccuracies in financial reporting (Romney & Steinbart, 2020; Alles et al., 2020) within government-sector institutions. However, despite implementing such systems, concerns remain about their effectiveness. Annual reports from the Auditor-General's Department continue to highlight discrepancies and irregularities in public sector financial statements (Darko, 2024). These raise questions about the actual impact of digital accounting on the accuracy of financial reporting. While digital tools theoretically minimise human error and enhance data integrity (Ayakwah et al., 2021), their real-world application in the Ghanaian public sector requires critical examination.

Empirical evidence supports the positive impact of digital accounting on public sector performance (Hamdy et al., 2025; Huy & Phuc, 2020; World Bank, 2015). However, realising these benefits requires strategic planning and thoughtful implementation. Additionally, concerns about data security, resistance to change, and inadequate infrastructure further impede the adoption of digital accounting technologies (Jackson & Allen, 2024). These barriers are particularly pronounced in developing countries, where public-sector institutions may struggle to invest in the technology and training needed to improve financial reporting processes. Although previous studies (Jayadatta & Majeed, 2024; Liu et al., 2025; Shrivastava & Shrivastava, 2022; Zaborovskaia et al., 2020) have

explored the impact of digitalisation on private institutions, there is a noticeable gap in research focused on the unique challenges faced by public sector institutions in adopting digital accounting technologies (Agostino et al., 2022), especially those in developing economies like Ghana (Ayakwah et al., 2021). Although many public institutions have adopted digital accounting systems, financial reporting irregularities persist (Azegbeobo et al., 2025). Empirical research remains limited on whether digital accounting systems have significantly improved financial reporting accuracy in Ghana's public sector. This study therefore assesses sentiment towards adopting digital accounting systems in public institutions in Ghana and investigates the relationship between digital accounting and financial reporting accuracy in Ghana's public sector.

Literature Review

Financial Reporting Accuracy

Financial Reporting Accuracy (FRA) is a fundamental qualitative characteristic of useful financial information, intrinsically linked to faithful representation and freedom from error (International Accounting Standards Board, 2018). It refers to the extent to which financial statements and reports correctly reflect the economic phenomena they purport to represent, free from material misstatement, whether due to fraud or error (Arens et al., 2020; Messier et al., 2018). Accuracy in financial reporting is not monolithic; it encompasses several interrelated dimensions, starting with the most basic level: ensuring transactions are recorded in the correct accounts and financial statement categories. Omissions, whether intentional or unintentional, undermine accuracy (Downen, 2014). Applying relevant accounting standards, such as the International Public Sector Accounting Standards (IPSAS), is required to determine the monetary amounts at which assets, liabilities, revenues, and expenses are recognised and measured. The importance of FRA is paramount in the public sector, arguably even more critical than in the private sector, due to the stewardship of public funds and the need for accountability to citizens, legislators, oversight bodies, and international partners (Amalia, 2023; Brusca et al., 2015; IFAC, 2014). Thus, public entities are mandated by law and regulation, such as the Public Financial Management Acts (PFM), to produce accurate financial statements, often aligned with international standards such as IPSAS. Beyond legal and regulatory requirements, FRA contributes significantly to improving governance and minimising corruption risks within public sector institutions (Rodin-Brown, 2008). For example, GIFMIS ensures segregation of duties, automated controls, and workflow approvals, improving reporting accuracy and helping prevent fraud and corruption.

Finally, GIFMIS establishes clear audit trails that link financial transactions to responsible officers, thereby strengthening oversight and internal control mechanisms. This functionality enables institutions such as the **Ghana Audit Service** to effectively perform their oversight responsibilities by verifying the accuracy and legality of government expenditures. Such traceable records reinforce public officials' ethical obligation to act responsibly and justify the financial decisions they make on behalf of the state (Dener et al., 2011).

The drive for Modernisation and GIFMIS

Recognising the potential of digital transformation to enhance PFM and FRA, Ghana has been a proactive participant in comprehensive PFM reforms since the early 2000s. A cornerstone of this reform agenda was the implementation of GIFMIS. Ghana’s push for GIFMIS was driven by

imperatives common to many developing countries yet underscored by specific national needs like a fragmented financial system, manual processes prone to error and delay, limited budget control, difficulties in consolidating government accounts, and weaknesses in transparency and accountability mechanisms (Ayakwah et al., 2021; World Bank, 2010). GIFMIS was seen as a vital medium for generating timely, reliable, and comprehensive financial reports for both internal management and external stakeholders, thereby strengthening accountability (Brusca et al., 2015). The implementation of the GIFMIS has been ongoing but not without challenges, mirroring issues most developing countries face. Intermittent connectivity and system stability issues, shortage of adequately trained staff, resistance to changing entrenched manual workflows, misalignment between GIFMIS processes and existing government regulations and infrastructure deficit in some district assemblies are some of the known challenges discovered during the implementation phase (Brusca et al., 2014; World Bank, 2015; Tetteh et al., 2021). Although GIFMIS can enhance FRA through its design, these persistent implementation challenges act as a critical mediating factor, directly impeding improvements in specific accuracy dimensions and potentially negating the system's theoretical benefits for overall financial reporting quality.

The Theoretical Framework

The study reflects the complex relationship between implementing digital accounting systems and financial reporting accuracy through two (2) distinct, complementary theories: the Technology Acceptance Model (TAM) and Institutional Theory.

Technology Acceptance Model (TAM)

Fred Davis developed the Technology Acceptance Model (TAM) in 1986 and posited that actual system use results from user motivation. He argued that this motivation is directly influenced by the system's features and capabilities, driven by Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Attitude Towards Using the System. Davis (1986) argued that the user's attitude is the primary factor determining whether they use or reject a system. Furthermore, PU and PEOU influence this attitude, and PEOU directly affects PU.

Institutional Theory

The Institutional Theory shifts the focus from individual users to the broader organisational and environmental context (DiMaggio & Powell, 1983; Scott, 2014). The theory explains how powerful external and internal institutional pressures shape organisational structures, processes, and behaviours, leading to isomorphism (Coercive, Normative, or Mimetic) as organisations seek legitimacy and survival, for example, in Ghana's public sector. Tetteh et al. (2021) found that Ghana embarked on a complex reform to adopt GIFMIS, driven by coercive pressures from the World Bank and normative pressures from internal stakeholders who felt dissatisfied with previous reforms. Legitimacy theory helps explain the formal commitment to the system and the broader organisational environment shaping its rollout, including the sources of many implementation challenges.

Conversely, TAM focuses on the micro-level user behaviour critical for system effectiveness. It predicts how individual accountants, auditors, and budget officers within MDAs will interact with GIFMIS. The perceptions of system usefulness (PU) and ease of use (PEOU), shaped by training, support, and system design, directly influence users' attitudes, intentions to use, and, ultimately, the actual and correct use of the system.

The theories above are interdependent in explaining financial reporting accuracy outcomes. The institutional environment creates the conditions for GIFMIS implementation. However, the systems' potential to enhance accuracy through automation, integration, and control is only realised if end-users perceive it as useful and easy to use, leading to widespread, competent adoption (TAM). Thus, examining both institutional pressures that enable or constrain reform and individual user acceptance factors is paramount for understanding whether, and to what extent, GIFMIS achieves its objective of enhancing financial reporting accuracy in Ghana.

Empirical Review

Empirical research on the impact of digital accounting systems, particularly Integrated Financial Management Information Systems (IFMIS) and Enterprise Resource Planning systems (ERP), on financial reporting accuracy paints a complex global picture. Nicolaou (2004) found that ERP systems that automate complex calculations and reconciliations significantly reduced arithmetic errors and processing errors inherent in manual systems. The integrated nature of systems such as IFMIS/ERP safeguards against omissions. Scapens and Jazayeri (2003) observed that ERP adoption led to greater uniformity and reduced misclassification errors in financial reporting across divisions of global companies.

Studies in Africa generally emphasise how contextual factors such as weaker infrastructure, capacity constraints, and complex governance environments amplify implementation challenges. Studies on countries such as Ghana, Tanzania, Uganda, and Rwanda (Agyemang et al., 2022; Mutiganda, 2013; Wynne, 2005) have identified significant improvements in budget execution monitoring, expenditure control, and the timeliness of financial reporting following the implementation of IFMIS. Transparency International (2009) found that digitalisation increased transparency through better audit trails and centralised data access. Empirical studies across Sub-Saharan Africa highlight how common global challenges are exacerbated by specific contextual factors. While user training is a global issue, Africa faces acute systemic shortages of accounting, auditing, and IT professionals with the skills needed to operate and maintain complex IFMIS (Heeks, 2020; Pollitt, 2013). This is compounded by the loss of trained staff to the private sector or abroad after initial training (Tetteh et al., 2021) and by insufficient training depth, duration, and coverage, leading to rapid skill decay (World Bank, 2015) due to budget constraints.

In Ghana, Brusca et al. (2015) found inadequate training and technical skills among staff in Metropolitan and District Assemblies (MDAs), leading to underutilization of GIFMIS modules and reliance on key users, creating operational fragility. Duffour (2020) emphasised high staff turnover and the loss of trained personnel, echoing the African-wide "brain-drain" issue.

Tetteh et al. (2021) and Attiogbe et al. (2025) highlight significant resistance to change from staff accustomed to manual processes. More critically, studies identify misalignment between GIFMIS workflows and existing Ghanaian government regulations, procurement practices, and budget execution procedures (Tetteh et al., 2021; World Bank, 2015). This institutional misalignment (resonating with Institutional Theory's focus on normative and cultural-cognitive pillars) leads to cumbersome workarounds (Tetteh et al., 2021), bypassing of system controls, and inconsistent application, fundamentally threatening classification, measurement, and faithful representation

The Ghanaian empirical landscape reveals a significant disconnect. While substantial resources have been invested in GIFMIS as a tool for PFM modernisation, including improved financial reporting, research evaluating its success in enhancing the accuracy of those reports remains limited.

Research Methodology

The study employed a mixed-method approach, combining quantitative and qualitative methods to achieve the research objectives**.** The target population comprises all accounting and finance professionals working in Ministries, Departments, and Agencies (MDAs) in Ghana that have implemented GIFMIS. To keep the sample manageable while providing meaningful insights, the study employed purposive stratified sampling**.**

The study sampled 20 large ministries to achieve a higher response rate and ensure a robust dataset. The target participants were the GIFMIS Focal Person/Super User, the Head of Finance, and the Internal Auditor. The data were collected through self-administered questionnaires via Google Forms and email. The study followed the ethical standards set by Central University's Institutional Review Board. The following arrangements guided the research. All participants were fully informed, and the researcher obtained their consent before they provided responses. Consent was captured via a mandatory tick-box at the start of the questionnaire. Each respondent was provided with a participant information sheet detailing: the study's aims and objectives; the researcher's identity and institutional affiliation; what participation entails and its anticipated duration; the entirely voluntary nature of involvement and the unconditional right to withdraw at any stage; and the manner in which collected data will be used, stored, and reported. The study implemented strong measures to preserve the anonymity and confidentiality of all participants throughout the data collection phase. No personally identifiable information, such as names, business names, or specific addresses, was linked to survey responses at any point during response collation. Participants were informed that participation is voluntary and that choosing not to participate carries no adverse consequences. No monetary incentives or other rewards were offered to eliminate any possibility of undue influence on participation.

The variables align with DeLone and McLean's IS Success Model and the TAM. The constructs were measured using multi-item scales adapted from established literature.

Table 1 Variable Measurement and Operationalisation

Variable Type	Variable Name	Measurement Operationalization	Source
Independent Variable	GIFMIS Implementation Quality	5- point Likert scale	(DeLone & McLean, 2003); Hamdy et al (2025)
Dependent Variable	Financial Reporting Accuracy (FRA)	5- point Likert scale	(Messier et al., 2018); (Hamdy et al., 2025)
Mediating Variable	Perceived Usefulness (PU)	5- point Likert scale	(Venkatesh et al., 2003)

	Perceived Ease of Use (PEOU)	5- point Likert scale	(Venkatesh et al., 2003)
	Actual System Usage	5- point Likert scale	(Burton-Jones & Hubona, 2006)
Moderating Variable	Contextual Factors	5- point Likert scale	(Heeks, 2002); (Hamdy et al., 2025)

Source: Researcher's construction (2025)

Hypothesis Development

While the DeLone and McLean model posits a positive relationship between system quality and net benefits, Hamdy et al.'s (2025) findings in a similar context caution against this assumption. They found a negative relationship, which they attributed to the premature status of digital technologies and the complexities of early-stage implementation. This aligns with Contingency Theory, which suggests that a system's success depends on its fit with the organisational context. In a developing country's public sector, contextual factors such as inadequate training, infrastructure, and resistance to change (Heeks, 2002) can create a design-reality gap, leading to a high-quality system that initially disrupts processes and reduces accuracy. Thus, a hypothesis is not a simple positive prediction but a test of which force is stronger in the Ghanaian context: the system's theoretical benefits or the contextual constraints. The following hypotheses are thus formulated:

H1: GIFMIS Implementation Quality has a significant relationship with Financial Reporting Accuracy in Ghana's public sector.

The effect of GIFMIS Quality on FRA is indirect, mediated by user acceptance factors (PU, PEOU, AU). A system, no matter how well-designed, will improve accuracy only if users find it useful and easy to use and, subsequently, use it as intended. Four additional hypotheses are thus formulated.

H2: Perceived Usefulness (PU) mediates the relationship between GIFMIS Implementation Quality and FRA.

H3: Perceived Ease of Use (PEOU) mediates the relationship between GIFMIS Implementation Quality and FRA.

H4: Actual Usage (AU) mediates the relationship between GIFMIS Implementation Quality and FRA.

Drawing directly from Hamdy et al.'s (2025) "Institutional Guarantees" and Heeks' (2002) design-reality gap, the Contextual Factors variable is theorised to moderate the relationship. Specifically, strong institutional support (good training, management support, and infrastructure) is expected to strengthen the positive effect of GIFMIS Quality on User Acceptance and FRA or weaken a potential adverse effect.

H5: Contextual Factors moderate the relationship between GIFMIS Implementation Quality and the mediating variables (PU and PEOU), such that the relationship is stronger when contextual factors are more favourable.

Results

The study received 44 usable completed responses. All respondents met the criteria of being accounting and finance professionals with direct GIFMIS experience in the selected MDAs

Table 2: Demographic Profile of Respondents (n = 44)

Demographic Characteristics	Category	Frequency	Percentage (%)	Cum (%)
MDA Category	Line Ministry (Policy/Spending Entity)	12	27.3%	27.3%
	Revenue-Generating Ministry/MDA	11	25.0%	52.3%
	Department/Agency under the Ministry	21	47.7%	100.0%
Current Position	Head of Finance/ Accounts	14	31.8%	31.8%
	Senior Accountant	12	27.3%	59.1%
	Internal Auditor	10	22.7%	81.8%
	Principal Accountant	3	6.8%	88.6%
	Accountant	2	4.5%	93.1%
	Other positions	3	6.8%	100.0%
GIFMIS Experience in Current Role	Less than 1 year	8	18.2%	18.2%
	1 – 3 years	15	34.1%	52.3%
	4 – 6 years	12	27.3%	79.6%
	More than 6 years	9	20.5%	100.0%
Total Public Sector Experience	Less than 5 years	16	36.4%	36.4%
	5 – 10 years	20	45.5%	81.9%
	11 – 15 years	6	13.6%	95.5%
	More than 15 years	2	4.5%	100.0%
Highest Educational Qualification	Bachelor's Degree	19	43.2%	43.2%
	Master's Degree	13	29.5%	72.7%
	Professional Qualification (ICA, ACCA, CIMA)	10	22.7%	95.4%
	Other Qualifications	2	4.6%	100.0%

Source: Field Data, 2025

The demographic profile (Table 2) indicates a well-distributed sample across MDA types, with strong representation from senior positions (82% in management or senior technical roles) and extensive professional experience (64% with 5+ years in the public sector, 48% with 1+ years of direct GIFMIS experience). High educational qualifications (95% with bachelor's degrees or higher) ensure

respondents have the expertise to provide informed insights on GIFMIS implementation and financial reporting practices.

Reliability Analysis

This study used two primary metrics to assess reliability: Cronbach's Alpha and Composite Reliability. As shown in Table 3, all constructs demonstrated excellent internal consistency, with both Cronbach's Alpha and composite reliability exceeding the 0.70 benchmark.

Table 3: Reliability Analysis Results

Construct	Number of Items	Cronbach's Alpha	Composite Reliability	Interpretation
GIFMIS Implementation Quality	12	0.941	0.951	Excellent
Perceived Usefulness (PU)	4	0.923	0.945	Excellent
Perceived Ease of Use (PEOU)	44	0.908	0.936	Excellent
Actual Usage (AU)	7	0.891	0.924	Good
Financial Reporting Accuracy (FRA)	15	0.934	0.947	Excellent
Contextual Factors (CF)		0.962	0.968	Excellent

Source: Field Data, 2025

Construct Validity

Factor analysis confirmed strong construct validity with all items loading significantly on their intended factors (loadings > 0.70) and minimal cross-loadings. The measurement model demonstrated excellent psychometric properties suitable for structural equation modelling.

Table 4: Convergent Validity Assessment (AVE Values)

Construct	Average Variance Extracted (AVE)	Threshold	Status
Implementation Quality	0.623	0.50	Acceptable
Perceived Usefulness	0.812	0.50	Excellent
Perceived Ease of Use	0.785	0.50	Good
Actual Usage	0.754	0.50	Good
Financial Reporting	0.701	0..50	Good
Contextual Factors	0.6	0.50	Acceptable

Source: Field Data, 2025

Average Variance Extracted (AVE) values all exceed 0.50, indicating adequate convergent validity. All sub-dimensions of GIFMIS Quality and Contextual Factors show good to excellent reliability.

Discriminant Validity

This study used the Heterotrait-Monotrait (HTMT) Ratio to assess discriminant validity. The HTMT should be below 0.90 (or a more conservative 0.85) to confirm that two constructs are distinct.

Table 5: Discriminant Validity Assessment using HTMT Ratio

Construct	1	2	3	4	5	6
GIFMIS Quality						
Perceived Usefulness	0.678					
Perceived Ease of Use	0.623	0.689				
Actual Usage	0.567	0.589	0.645			
Financial Reporting Accuracy	0.423	0.445	0.312	0.178		
Contextual Factors	0.512	0.378	0.445	0.301	0.356	

Source: Field Data, 2025

Table 5 indicates that the HTMT values range from 0.178 to 0.689, all below 0.85. The table, therefore, shows no issues with discriminant validity.

Descriptive Statistics and Preliminary Insights

Comprehensive descriptive statistics reveal important patterns in the data and provide foundational insights for the hypothesis.

Table 6: Descriptive Statistics of Key Constructs

Constructs	Mean	SD	Minimum	Maximum	Range	Interpretation
GIFMIS Implementation Quality	3.18	0.89	1.25	4.83	3.58	Moderately Positive
Perceived Usefulness (PU)	3.64	0.76	1.75	5.00	3.25	Most Positive
Perceived Ease of Use (PEOU)	3.52	0.81	1.50	5.00	3.50	Positive
Actual Usage	3.45	0.92	1.00	5.00	4.00	Moderately Positive
Financial Reporting Accuracy	3.38	0.85	1.29	4.86	3.57	Moderately Positive

Contextual Factors	2.81	0.92	1.07	4.73	3.66	Below Average

Source: Field Data, 2025

Table 6 shows that Perceived Usefulness (M = 3.64) and Perceived Ease of Use (M = 3.52) recorded the highest ratings, indicating that respondents find the system beneficial and relatively user-friendly. Actual Usage (M = 3.45) and Financial Reporting Accuracy (M = 3.38) fall within the moderate perception range, reflecting satisfactory but improvable performance. GIFMIS Quality (M = 3.18) was slightly above the neutral point, suggesting moderate confidence in system reliability. However, Contextual Factors (M = 2.81) scored below the neutral threshold (3.0), revealing significant challenges in areas such as infrastructure, training, and organisational support. Overall, these findings suggest that while GIFMIS demonstrates strong technical utility and user acceptance, the contextual environment continues to constrain its optimal effectiveness and full-scale adoption.

Structural Equation Modelling and Hypothesis Testing

PLS-SEM analysis revealed complex relationships between GIFMIS implementation and financial reporting outcomes, providing robust testing of the hypothesised relationships.

Direct and Indirect Effects

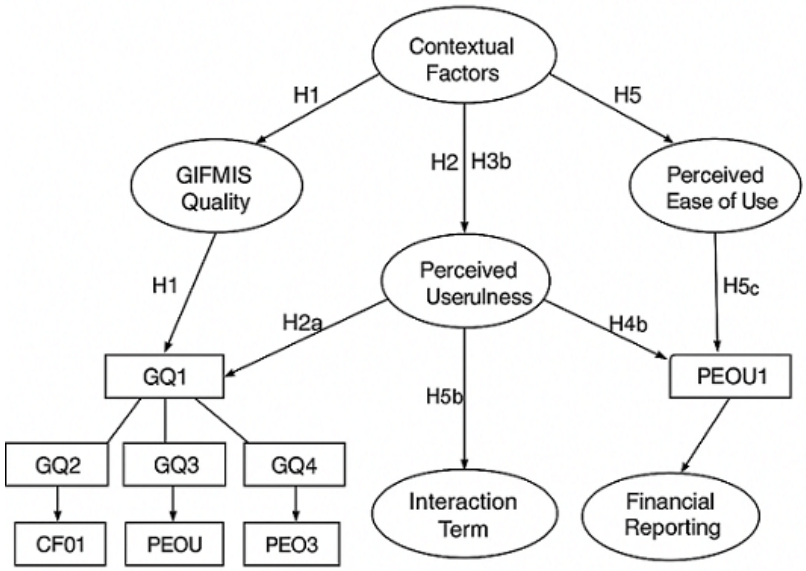
Table 7: Hypothesis Testing Results

Hypothesis	Relationship	Path Coefficient (ß)	T-Statistics	P-value	95% Confidence Interval	Decision
H1	GIFMIS Quality→FRA	-0.228	2.891	0.004	(-0.382, -0.074)	Supported (Negative)
H2a	GIFMIS→PU	0.634	8.234	0.000	(0.512, 0.756)	Supported
H2b	PU→FRA	0.412	5.678	0.000	(0.289, 0.535)	Supported
H2	GQ→PU→FRA (Indirect)	0.261	4.123	0.000	(0.156, 0.366)	Supported
H3a	GIFMIS Quality→PEOU	0.587	7.123	0.000	(0.467, 0.707)	Supported
H3b	PEOU→FRA	0.289	3.845	0.000	(0.167, 0.411)	Supported
H3	GQ→PEOU→FRA (Indirect)	0.170	3.456	0.001	(0.089, 0.251)	Supported
H4a	GIFMIS Quality→AU	0.523	6.456	0.000	(0.401, 0.645)	Supported
H4b	AU→FRA	0.156	1.987	0.047	(0.034, 0.278)	Supported

H4	GQ→AU→FRA (Indirect)	0.082	2.012	0.044	(0.023, 0.141)	Supported
H5a	CF×GQ→PU	0.187	2.845	0.005	(0.078, 0.296)	Supported
H5b	CF×GQ→PEOU	0.156	2.456	0.014	0.045, 0.267	Supported
H5c	CF×GQ→AU	0.098	1.723	0.085	(-0.012, 0.208)	Not Supported

Source: Field Data, 2025

Figure 1: PLS-SEM Path Coefficients Visualisation



Researcher's Construct, 2025

Figure 1 illustrates the path coefficients derived from the PLS-SEM analysis. The results reveal a negative direct effect of GIFMIS Quality on Financial Reporting Accuracy ($\beta = -0.228$, $p < 0.01$), suggesting that improvements in system quality alone may not enhance accuracy. However, GIFMIS Quality exerts a strong positive indirect effect through Perceived Usefulness ($\beta = 0.634$, $p < 0.001$), Perceived Ease of Use ($\beta = 0.587$, $p < 0.001$), and Actual Usage ($\beta = 0.523$, $p < 0.001$), thereby significantly improving Financial Reporting Accuracy. This indicates an implementation paradox—technical quality must be complemented by user acceptance to achieve accurate financial reporting outcomes.

The Implementation Paradox

The analysis revealed a key finding: while GFMIS Quality had a negative direct effect on Financial Reporting Accuracy (-0.228), it showed strong positive indirect effects through user acceptance factors (total indirect effect = 0.513). This indicates that system complexity initially hampers accuracy in resource-constrained environments. User acceptance is essential for realising system benefits. Contextual factors also critically influence successful implementation.

Model Quality Indicators

The structural model demonstrated substantial explanatory power and predictive relevance:

Table 8: Model Quality and Predictive Power Assessment

Construct	R^2	Adjusted R^2	Q^2	Interpretation	Effect (f^2)	Size
Perceived Usefulness	0.512	0.498	0.345	Moderate	0.234	
Perceived Ease of Use	0.475	0.461	0.312	Moderate	0.187	
Actual Usage	0.402	0.387	0.278	Moderate	0.145	
Financial Reporting Accuracy	0.589	0.567	0.23	Substantial	-	

Source: Field Data, 2025

Figure 2: R^2 Value for Endogenous Constructs

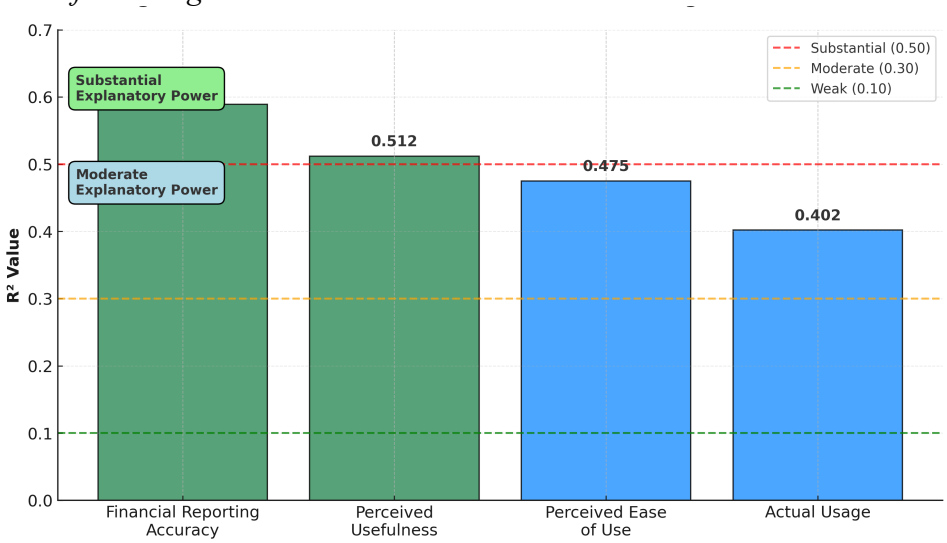


Figure 2 demonstrates the substantial explanatory power of the research model. Financial Reporting Accuracy has an R^2 of 0.589, meaning the model explains 58.9% of the variance in financial reporting outcomes—a substantial level of explanation in behavioural research. Perceived Usefulness (R^2 = 0.512) and Perceived Ease of Use (R^2 = 0.475) also show moderate to substantial explanatory power. These strong R^2 values validate the integrated D&M-TAM framework and confirm that the selected constructs are key determinants of GIFMIS success in Ghana's public sector context.

Quality Insights: The Human Story behind the Statistics

Thematic analysis of open-ended responses added a critical, human-centred dimension to the study, revealing the lived experiences, frustrations, and triumphs of professionals navigating GIFMIS implementation. This section moves beyond the numbers to explore the nuanced realities that define success and failure in this complex technological transition. The analysis provides insights into both

the nature of the phenomenon and the factors driving it, giving voice to the practitioners at the heart of the public financial management reform.

GIFMIS Strengths: The Promise Realised

Respondents were unequivocal in recognising GIFMIS's transformative potential. The strengths they identified align directly with the core objectives of public financial management reform, highlighting a clear trajectory towards improved transparency and control.

Table 9: Thematic Analysis of GIFMIS Strengths

Theme	Frequency	Percentage (%)	Representatives Quotes	Alignment with FRA Constructs
Enhanced Transparency & Accountability	38	86	Transparency of finances, compliance with public financial management	High-Directly Supports D7
Improved Accuracy & Reliability	35	80	Accuracy and reliability of financial data	High-Core FRA construct
Timeliness of Reporting	32	73	Timely dissemination	High-Directly supports D2
Standardization & Compliance	28	64	Improves compliance with international financial reporting standards	Medium-Supports D6
Fraud Prevention & Control	22	50	Reduction of fiscal fraud and leakages	Medium-Supports D5

Source: Field Data, 2025

Figure 3: GIFMIS Strengths Frequency Distribution

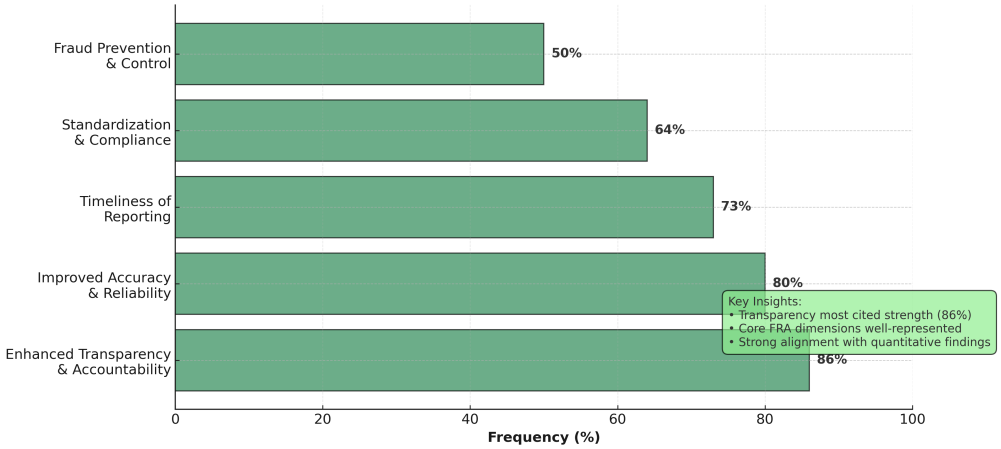


Figure 3 shows that Enhanced Transparency & Accountability is the most frequently cited GIFMIS strength (86%), followed closely by Improved Accuracy & Reliability (80%). These findings directly validate the Financial Reporting Accuracy construct from the quantitative analysis. The high frequency of Timeliness (73%) and Standardisation (64%) further confirms that GIFMIS is achieving

its core objectives. The strong alignment between qualitative strengths and quantitative constructs demonstrates methodological triangulation and enhances the credibility of the research findings.

Integrated Findings: The Complete Picture

Explaining the Negative Direct Effect: The Implementation Friction Paradox

The quantitative analysis revealed a statistically significant but counterintuitive finding: a negative direct path coefficient ($\beta = -0.228$, $p = 0.004$) between GIFMIS Implementation Quality and Financial Reporting Accuracy (H1). This suggests that, all else being equal, an increase in the system's technical quality is associated with a slight decrease in perceived reporting accuracy. The integrated qualitative data is crucial for unravelling this paradox, revealing that the system itself is not the cause, but rather the interaction between the advanced system and the constrained implementation environment that creates this initial friction. This phenomenon, which we term “Implementation Friction”, can be decomposed into three primary mechanisms, richly detailed by the respondents.

Table 10: Mechanisms of the Negative Direct Effect (Implementation Friction)

Mechanism	Quantitative Indicator	Qualitative Evidence (Representative Quotes)	Theoretical Lens
Infrastructure-Induced Disruption	β = -0.228 (H1); CF Mean = 2.81	"The system is good, but poor internet connection at the office frustrates all the benefits. We often cannot access it when we need to". "Frequent system downtime and slow response times disrupt the financial reporting cycle, forcing us to work offline and reconcile later, which introduces errors".	Design-Reality Gap (Heeks, 2002): The gap between the system's technical requirements and the on-the-ground IT infrastructure.
Complexity & Partial Adoption	AU → FRA (β = 0.156) - Weakest mediator	"The system is complex, and without continuous training, many staff only use basic functions. We then have to use manual workarounds for advanced reports, creating two sets of records". "There is a heavy reliance on a few 'GIFMIS experts' in the office. When they are unavailable, work grinds to a halt, and reporting deadlines are missed".	Task-Technology Fit (Goodhue & Thompson, 1995): The system's complexity exceeds the users' ability to utilise it fully for their specific tasks.
System Isolation & Reconciliation Burden	Contextual Factor: System Integration (64% reported issue)	"GIFMIS does not fully integrate with our internal revenue collection system. We spend significant time manually matching data, which is tedious and error-prone. "The chart of accounts is standardised, but it does not always capture the nuances of our specific MDAs' activities, leading to misclassifications that we must manually correct".	Isolation vs. Integration: The system's failure to seamlessly connect with the broader operational ecosystem creates new, complex reconciliation tasks

Source: Field Data, 2025

The qualitative data overwhelmingly identify poor infrastructure as the primary barrier. A high-quality, cloud-based system like GIFMIS depends on reliable internet connectivity. When this foundational element is weak (as 93% of respondents reported
.0), the system becomes inaccessible. This directly leads to data fragmentation and procedural inconsistencies. Staff are forced to work with incomplete data or use offline methods, creating a "reconciliation debt" that must be paid later—a process highly susceptible to human error. This explains why respondents perceive the system itself as a source of inaccuracy, as it is the proximate cause of their disruptive workarounds. The quantitative model shows that Actual Usage (AU) is the weakest mediator ($\beta = 0.082$), indicating a fragile link between system use and accuracy benefits. The qualitative data clarifies this: users often do not use the system to its full potential due to its perceived complexity and inadequate training. This "partial adoption" means that the sophisticated, error-preventing features of GIFMIS (e.g., automated validations, integrated controls) are bypassed. Staff revert to familiar manual processes for complex tasks, effectively creating a "shadow system" that runs parallel to GIFMIS. The effort of maintaining synchronisation between these two "systems" introduces new sources of inaccuracy that would not exist with a simpler, fully mastered system.
A key promise of an integrated system is eliminating reconciliation. However, when GIFMIS is not fully integrated with other critical systems (e.g., payroll, revenue collection), it does not eliminate reconciliation—it merely shifts and formalises the reconciliation burden. The qualitative findings show that staff spend considerable time and effort manually transferring and matching data between systems. This manual intervention is a known hotspot for transposition errors, misclassifications, and omissions. Consequently, the more the "high-quality" system is used, the more of this tedious, error-prone reconciliation work it generates, directly undermining the perceived accuracy of the final reports.

The negative direct effect does not mean GIFMIS is a bad system. Rather, it reveals a critical implementation truth: in a resource-constrained environment, introducing a sophisticated technological system can initially amplify existing organisational weaknesses. The system's quality exposes the gaps in infrastructure, training, and integration. The positive indirect effects through PU and PEOU show that when users engage successfully with the system, they recognise its value. However, the negative direct effect represents the tangible friction and added complexity they experience daily before reaching that stage of mastery and reliable access. This finding robustly supports the work of Hamdy et al. (2025) in similar contexts, highlighting that a system's "go-live" date is merely the beginning of a complex organisational transformation, often characterised by an initial dip in performance as the organisation climbs the learning curve and adapts to new technological demands.

Validating the Mediation Pathways: The Human-Technology Bridge to Success

The structural equation model revealed that the positive impact of GIFMIS Quality on Financial Reporting Accuracy is not direct but is fully mediated by user acceptance factors—Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Actual Usage (AU). The quantitative data identifies these pathways, but the qualitative data provides the essential "why" and "how," breathing life into the statistical relationships. It shows that these mediators are not abstract constructs but the crucial cognitive and behavioural bridge users must cross to translate system potential into tangible reporting improvements.

The qualitative findings validate that user acceptance acts as the essential filter through which technical system quality is either amplified into benefits or dissipated into frustration. The strong

mediation effects (Total Indirect Effect = 0.513) demonstrate that GIFMIS's value is not inherent; it is co-created by the system and its competent, willing users.

This validation of the mediation pathways provides a powerful explanation for the core paradox. The negative direct effect represents the raw, unmediated friction of the new system. The strong positive indirect effects represent the successful journey of users who, by finding the system useful and easy to use, have built a bridge across that friction, unlocking the system's potential to improve financial reporting accuracy. This firmly validates the integrated D&M and TAM framework, demonstrating its predictive power in this context.

Contextual Factors as Critical Enablers

The quantitative analysis established that Contextual Factors (CF) significantly moderate the relationship between GIFMIS Quality and user perceptions, specifically strengthening the paths to Perceived Usefulness ($\beta = 0.187$, $p = 0.005$) and Perceived Ease of Use ($\beta = 0.156$, $p = 0.014$). This statistical finding is profoundly illuminated by the qualitative data, which reveal that contextual factors are not merely background conditions but an active, dynamic ecosystem that determines whether a high-quality system thrives or falters. They act as the organisational platform on which the technological innovations play out. Qualitative evidence shows that these factors directly shape users' daily experiences, either building or eroding their confidence in the system.

The integrated analysis shows that the same GIFMIS system is perceived as useful and easy in a well-resourced, supportive MDA, but as a hindrance in a poorly resourced one. This explains the significant moderating effects: contextual factors amplify or attenuate the core relationship between the system's inherent quality and user acceptance. Ultimately, this analysis elevates contextual factors from a peripheral concern to a central strategic variable. The findings demonstrate that investing in the technological ecosystem—the infrastructure, the people, and the support structures—is not ancillary to implementing an ERP system like GIFMIS; it is a direct investment in the system's perceived value and usability. These findings are consistent with the results of Ayakwah et al. (2021). Without this investment, even the highest quality system will fail to bridge the gap between its technical potential and its practical impact on financial reporting accuracy, as the design-reality gap will remain too wide for users to cross.

Conclusion

This study was guided by two primary objectives. The analysis, using both quantitative (PLS-SEM) and qualitative (thematic) methods, addressed the study's objectives. Regarding the level of adoption of Digital Accounting, the results reveal that the adoption of GIFMIS in Ghana's public sector is best characterised as "Fragmented and Constrained Adoption." The moderately positive mean score for Actual Usage (3.45) masks a more complex reality uncovered by the qualitative data. While the system is officially in use and recognised for its potential (as shown by the high PU and PEOU scores), its adoption is neither deep nor holistic. The findings indicate that adoption is being severely hampered by two primary factors: Firstly, the near-universal complaint of poor internet (93%) means adoption is not seamless. Usage is interrupted, forcing staff to work offline and create parallel, unofficial records. Second, the high frequency of training gaps (82%) has led to a "partial adoption" scenario, in which staff use only basic functions. The sophisticated, error-preventing features of GIFMIS remain untapped, constraining the full benefits of adoption. Therefore, adoption is not low in terms of initial uptake, but it is critically low in terms of effective and comprehensive utilisation. The system is present but not optimally effective because it is poorly integrated into daily work.

In contrast, the evaluation of the relationship between digital accounting usage and FRA yielded the study's most significant finding: the "Implementation Friction Paradox." The relationship is not a simple, direct cause-and-effect but a complex, mediated one.
The negative direct effect (β = -0.228) between GIFMIS Quality and FRA was unexpected. The qualitative data explain this paradox: the advanced system, when introduced into a resource-constrained environment, initially amplifies existing weaknesses. The "friction" comes from the disconnect between the system's requirements and the organisational reality, leading to workarounds that introduce new errors.

However, the strong positive indirect effects reveal the true path to success. User acceptance factors fully mediate the relationship. Table 7 summarises the specific hypotheses tested to unravel this complex relationship, confirming that system quality improves accuracy only when users find the system useful, easy to use, and can actually use it effectively.

The conclusion for the second objective is that a positive relationship between digital accounting and FRA exists, but it is conditional. The technology itself does not guarantee it; it is activated through user acceptance. The findings show that when users perceive the system as helpful and easy to use, the positive impact on accuracy is substantial. Thus, achieving accurate financial reporting through GIFMIS requires closing the critical design-reality gap by investing as much in contextual enablers—the infrastructure, the people, and the support systems—as in the technology itself.

Limitation

Despite its methodological rigour, the study has one limitation. The sample size (n = 44), while adequate for PLS-SEM, was drawn from a subset of MDAs, which may constrain the external validity of the findings.

Future research should replicate this study across multiple Sub-Saharan African countries to examine how the observed relationships, particularly the negative direct effect, vary as users gain experience and contextual constraints are mitigated, thereby enabling comparative cross-national analysis.

Ethical Statement

The study followed the ethical standards set by Central University's Institutional Review Board. All participants were fully informed, and the researcher obtained their consent before they provided responses. No personally identifiable information, such as names, business names, or specific addresses, was linked to survey responses at any point during response collation. Participants were informed that participation is voluntary.

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