

Auditing Practices and Budget Implementation in State Ministries of Health: Evidence from South Western Nigeria

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Abstract—Persistent gaps between approved health budget allocations and actual expenditure outcomes in Nigerian state ministries of health reflect not only revenue shortfalls and fiscal pressures but also structural weaknesses in budget implementation, monitoring, and audit oversight. In South Western Nigeria, the six states — Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti — collectively allocate significant proportions of their annual budgets to the health sector; yet empirical evidence from budget implementation reports and independent assessments consistently reveals wide implementation deficits, high inter-budgetary variance, unauthorised expenditures, and audit findings of recurrent irregularities across state health ministries. This paper examines the relationship between auditing practices and budget implementation in state Ministries of Health in South Western Nigeria, drawing on empirical evidence from Nigerian public-sector auditing and budget implementation studies, health budget execution data, and related governance literature. The paper adopts a desk-based, literature-synthesis methodology anchored on Agency Theory (Jensen & Meckling, 1976), Institutional Theory (DiMaggio & Powell, 1983), and New Public Management Theory. The synthesised empirical and secondary data evidence establishes that robust auditing practices — encompassing internal audit independence, value-for-money audit, compliance audit, budget variance analysis, and active audit committee oversight — demonstrate statistically significant positive associations with improved budget implementation outcomes, including expenditure compliance, resource stewardship, and service delivery effectiveness, in Nigerian public-sector organisations. Secondary budget implementation data for South Western Nigerian states over the 2021–2024 period reveal that health budget release rates remain chronically low — with multiple states releasing less than 50% of approved health allocations in each fiscal year — and that audit-related governance gaps are a persistent contributing factor. The paper concludes that strengthening auditing practices within South Western Nigerian state Ministries of Health is a necessary, though not solely sufficient, condition for improved health budget implementation, and recommends structural audit reforms, mandatory value-for-money auditing, and closer

alignment of state health audit functions with IPSAS and FRC Nigeria public-sector accounting standards.

Keywords— Auditing practices, budget implementation, state Ministry of Health, South Western Nigeria, public-sector audit, value for money audit, financial accountability, budget variance

I. INTRODUCTION

1.1 Background to the Study

Budget implementation in Nigerian state Ministries of Health — understood as the translation of approved health budget allocations into actual healthcare expenditures, delivered services, and measurable health outcomes — has remained chronically deficient across most states, including those of South Western Nigeria. The Abuja Declaration of 2001 committed African Union member states to allocate at least 15% of their national budgets to health; Nigeria's federal and state governments have largely failed to sustain compliance with this benchmark. More critically, even where states have met or approximated the allocation benchmark, budget implementation gaps — the difference between approved and actually released or expended health funds — have persisted. A Dataphyte analysis of state health budget implementation data reveals that in 2021, twenty-two of Nigeria's thirty-six states released less than 50% of their approved health sector allocations by year-end; by 2024, twelve states remained below this threshold. Among South Western Nigerian states, the pattern is uneven: the region's states range from better-performing Lagos, which has a substantial internally generated revenue base enabling more consistent health fund releases, to smaller states whose health budget implementation rates are severely constrained by irregular federal transfers and limited own-source revenue.

Budget implementation deficits in state health ministries are attributable to multiple, interacting factors: revenue shortfalls arising from oil price volatility and irregular federal allocation releases; weak budget planning and unrealistic projections that set implementation up for failure at the formulation stage; inadequate expenditure control mechanisms during budget execution; limited monitoring and evaluation capacity to detect and correct implementation deviations in real time; and governance weaknesses, including inadequate internal and external audit oversight, that allow unauthorised expenditures, fund diversions, and implementation irregularities to persist without timely detection or correction. Among these factors, the role of auditing practices — including internal audit, value-for-money audit, compliance audit, and the oversight function of public accounts committees — is of particular analytical interest because it is the governance mechanism most directly amenable to institutional reform at the ministry level, independent of macro-fiscal conditions.

The relationship between auditing practices and budget implementation in Nigerian public-sector settings has attracted growing empirical attention. Studies of Nigerian state MDAs and federal ministries consistently find that robust internal audit functions, active audit committees, and compliance with audit recommendations are associated with improved budget compliance and expenditure accountability outcomes. A 2025 regression study of five Kwara State public-sector ministries found that budget preparation significantly impacted efficiency and effectiveness (rejecting H_{01}), and that budget execution and participation also showed positive associations with public-sector performance. The broader Nigerian public-sector literature on internal audit, value-for-money audit, and budgetary control similarly reports statistically significant positive relationships between audit-related governance mechanisms and budget implementation quality. South Western Nigerian state Ministries of Health, as entities with large and relatively complex budgets — encompassing recurrent personnel costs, drug and consumable procurement, capital infrastructure investment, and increasingly, health insurance programme management — represent an important institutional context in which to examine this relationship.

South Western Nigeria's health governance landscape includes six state Ministries of Health that formulate and supervise the implementation of state health sector budgets, and six sets of Hospital Management Boards, Teaching Hospital governing councils, and Primary Health Care Development Boards that are the principal implementing agencies for health budget releases. The audit oversight of health budget implementation at the state level is provided by the State Auditor-General's Office, the Ministry's internal audit unit, and, for states with active public accounts committees, the State House of Assembly's appropriation and public accounts committees. In practice, the effectiveness of these audit oversight structures varies considerably across the six South Western states, and the gap between approved health budgets and actual implemented expenditures persists as a structural constraint on health service delivery in the region.

1.2 Statement of the Problem

Despite constitutional and statutory mandates for annual budget preparation, implementation, and audit oversight in Nigerian state Ministries of Health, the gap between approved health budget allocations and actual expenditure outcomes remains wide across South Western Nigerian states. Available budget implementation data indicate that multiple South Western Nigerian states have consistently released less than half of their approved health sector allocations in each year from 2021 to 2024. Where health funds are released, audit reports of State Auditors-General regularly document unauthorised expenditures, unretired advances, procurement irregularities, and weak expenditure control mechanisms. These audit findings point to systemic weaknesses in both budget implementation practice and audit oversight effectiveness that, taken together, erode the capacity of state health ministries to translate budget allocations into healthcare service delivery. The specific relationship between auditing practices — internal audit quality, value-for-money audit application, compliance audit rigour, and audit committee effectiveness — and health budget implementation outcomes in South Western Nigerian state Ministries of Health has not been systematically examined in the empirical literature, constituting the problem this paper addresses.

1.3 Objectives of the Study

The broad objective of this study is to examine the relationship between auditing practices and budget

implementation in state Ministries of Health in South Western Nigeria. The specific objectives are to: (i) examine the effect of internal audit independence and quality on health budget implementation in South Western Nigerian state Ministries of Health; (ii) assess the effect of value-for-money audit on health budget implementation outcomes; (iii) evaluate the role of compliance audit and budget variance analysis in improving health budget implementation; and (iv) proffer evidence-based recommendations for strengthening audit oversight of health budget implementation in South Western Nigerian state health ministries.

1.4 Research Questions

(i) What is the effect of internal audit independence and quality on health budget implementation in South Western Nigerian state Ministries of Health? (ii) What is the effect of value-for-money audit on health budget implementation outcomes in state health ministries? (iii) What role do compliance audit and budget variance analysis play in improving health budget implementation in South Western Nigerian state health ministries?

1.5 Research Hypotheses

The study is guided by the following null hypotheses: H₀₁: Internal audit independence and quality have no significant effect on budget implementation in state Ministries of Health in South Western Nigeria. H₀₂: Value-for-money audit has no significant effect on budget implementation outcomes in state Ministries of Health in South Western Nigeria. H₀₃: Compliance audit and budget variance analysis have no significant effect on health budget implementation in South Western Nigerian state Ministries of Health.

1.6 Significance of the Study

This study is of value to several stakeholders. For state Ministries of Health and their internal audit units in South Western Nigeria, the paper clarifies which specific auditing practices are most strongly associated with improved health budget implementation, enabling evidence-based prioritisation of audit function reform. For State Auditors-General and public accounts committees, the paper provides an empirical basis for assessing and strengthening the oversight frameworks applicable to state health ministry budget implementation. For state governments and their budget planning and monitoring offices, the paper establishes the contribution of audit oversight quality

to health expenditure compliance and service delivery effectiveness. For the Financial Reporting Council of Nigeria and the Office of the Auditor-General for the Federation, the paper offers comparative evidence from South Western Nigerian state health ministries for informing public-sector audit standards and guidelines. Finally, the paper contributes to the Nigerian public-sector accounting literature by extending the growing body of research on auditing and budget implementation to the specific, practically important context of state-level health sector governance in South Western Nigeria.

1.7 Scope of the Study

The study focuses on auditing practices and health budget implementation, and institutionally on the state Ministries of Health of South Western Nigeria's six states — Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti — as its primary institutional frame. The review draws on empirical literature published between 2017 and 2026, with priority given to studies of Nigerian state-level public-sector auditing and budget implementation, supplemented by federal-level and comparable state MDA evidence where state health ministry-specific evidence is limited. Secondary budget implementation data from Dataphyte's health budget analysis (2021–2025) and comparable budget implementation reports are incorporated into the data analysis section.

II. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Auditing Practices in Nigerian Public-Sector Health Ministries

Auditing practices in the context of Nigerian state Ministries of Health encompass the full range of independent assurance and monitoring activities applied to the ministry's financial operations and budget implementation. These include: internal audit, conducted by the ministry's internal audit unit and responsible for pre-payment audit, compliance review, and post-expenditure verification of health programme activities; external audit, conducted by the State Auditor-General's Office on the annual financial statements of the Ministry and its implementation agencies; value-for-money (VFM) audit, which assesses the economy, efficiency, and effectiveness of health expenditure — including whether funds released achieved intended health service outputs — beyond mere financial

compliance; compliance audit, which verifies that expenditures conform to approved budget lines, procurement regulations, and statutory requirements; and budget variance analysis, which tracks and explains deviations between approved health budget lines and actual expenditure to enable timely corrective action. In the public health sector, audit effectiveness is additionally shaped by the coordination between internal audit, the State Auditor-General's Office, development partner audit requirements (particularly for donor-funded health programmes), and the National Health Insurance Authority's oversight of state health insurance fund management.

2.1.2 Budget Implementation in State Ministries of Health

Budget implementation in a state Ministry of Health refers to the process through which approved health budget allocations are translated into actual health expenditures and delivered services. It encompasses four primary phases: warrant release and cash management (the release of approved funds by the state Ministry of Finance to the health ministry's vote); commitment and expenditure (the engagement of suppliers, staff, and service providers and the processing of payments within the released funds); monitoring and reporting (the tracking of expenditure against budget lines and the preparation of implementation reports); and evaluation and audit (the post-expenditure review of whether funds were spent as approved and whether intended outputs were achieved). Effective budget implementation requires not only adequate fund releases from the Ministry of Finance but also institutional capacity within the health ministry to plan expenditures realistically, process payments in a timely manner, monitor programme implementation in real time, and respond to audit findings with corrective action.

2.1.3 Health Budget Implementation Context in South Western Nigeria

South Western Nigerian state Ministries of Health prepare annual health sector budgets that encompass the recurrent and capital expenditure of the Ministry itself, the Hospitals Management Board, the State Primary Health Care Development Board, and affiliated teaching and specialist hospitals. These budgets are presented to the State House of Assembly for appropriation as part of the state's annual Appropriation Law, and their implementation is subject to oversight by the State Auditor-General's

Office and the House of Assembly Public Accounts Committee. In practice, health budget implementation in South Western Nigeria is constrained by: the mismatch between approved budget allocations and actual fund releases from the Ministry of Finance, which is driven by the state's revenue performance; the capacity of health ministry spending units to process timely expenditures even when funds are released; weak monitoring and variance reporting systems that delay detection of implementation shortfalls; and governance weaknesses — including limited internal audit coverage of health programme activities at facility and local government level — that allow irregularities to accumulate. The result, as documented by Dataphyte's multi-year health budget analysis, is that multiple South Western Nigerian states have repeatedly failed to release even half of their approved health allocations by fiscal year-end over the 2021–2025 period.

2.2 Theoretical Framework

2.2.1 Agency Theory

Agency Theory (Jensen & Meckling, 1976) provides the primary analytical lens for the relationship between auditing practices and health budget implementation in this paper. The principal-agent relationship in this context involves state governments (and citizens as ultimate principals), state Ministries of Finance as allocation principals, and state Ministries of Health and their implementing agencies as agents responsible for deploying health funds. Information asymmetry between principals and agents — state governments cannot directly observe how health ministry agents use released funds — creates opportunities for opportunistic behaviour including diversion, misapplication, and under-implementation of health budgets. Auditing practices function as monitoring mechanisms that reduce this information asymmetry: internal audit tracks and reports expenditure compliance in real time; external audit provides independent assurance on the accuracy of financial reports; value-for-money audit assesses whether agents have deployed funds in pursuit of principals' health outcome objectives; and audit committee oversight ensures that audit findings are acted upon by management.

2.2.2 Institutional Theory

Institutional Theory (DiMaggio & Powell, 1983) explains the adoption of formal audit structures and

budget implementation frameworks in state health ministries partly as isomorphic compliance with statutory requirements — including the Nigerian Constitution's provisions for budget appropriation and audit, the Fiscal Responsibility Act, the Public Finance Management Act, and FRC Nigeria's public-sector accounting standards — rather than necessarily as substantively effective governance. This theoretical lens is particularly relevant to understanding why formal budget implementation and audit structures may exist in South Western Nigerian state health ministries without consistently producing high implementation rates or addressing recurrent audit findings: the form of compliance is present, but the substance of effective governance may be weak. Evidence from the ten-year internal control indicators panel study (2025) in the manufacturing sector — finding formal audit committee variables insignificant despite widespread adoption — provides a methodological parallel applicable to the public health sector context.

2.2.3 New Public Management Theory

New Public Management (NPM) Theory, associated with Hood (1991), prescribes results-orientation, performance measurement, and value-for-money accountability as alternatives to purely rule-based compliance in public-sector management. Applied to state health ministry budget implementation, NPM theory argues for a shift from compliance-focused audit — verifying that expenditures conform to approved budget lines — toward performance- and outcome-oriented audit that evaluates whether health funds achieved intended outputs: numbers of patients treated, immunisation coverage rates, drug availability indicators, and infrastructure completed. The gap between compliance-based auditing (predominant in most South Western Nigerian state health ministries) and NPM-aligned value-for-money auditing (mandated by the Auditor-General's standards but rarely applied in practice at state health ministry level) is itself a structural explanation for the persistence of implementation deficits: auditors verify procedural compliance without assessing whether health funds are achieving health outcomes.

2.3 Empirical Review

A growing body of Nigerian empirical literature examines the relationship between auditing practices and budget implementation or financial accountability outcomes in public-sector organisations. Adeyemi and Olarewaju (2023)

concluded that robust internal audit practices directly improve efficiency, accountability, and service delivery in Nigerian public institutions, a finding that is applicable to the health ministry context given the direct link between budget implementation quality and service delivery capacity in state hospitals and primary health care programmes. Joseph and Onyeonu (2022) found that both fiscal and performance audits considerably improved accountability and transparency in Nigerian public-sector organisations, providing empirical support for the role of both compliance-focused and performance-oriented audit in improving budget implementation governance.

The most comprehensive regression-based evidence on auditing and budget implementation in a South Western Nigerian context comes from a 2023 study of public-sector budget implementation across the six South Western states (Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti) over the 2012–2021 period, which used descriptive and inferential statistical analysis including ANOVA on secondary financial data. This study found that budgetary performance in South Western Nigerian states was significantly affected by budget implementation quality, with the capacity of spending units and governance structures identified as critical determinants of implementation effectiveness. The UMYU Journal of Accounting and Finance Research study (2025) — a regression analysis of five Kwara State public-sector ministries examining budget compliance across preparation, execution, and participation dimensions — found that budget preparation had a significant positive effect on efficiency and effectiveness in public organisations (rejecting H_{01} based on regression results), providing a directly methodologically comparable study to the present paper.

A value-for-money audit study of Nigerian public-sector organisations — assessing internal control quality, internal control implementation, and internal control process as VFM audit components — found statistically significant positive effects of VFM audit on public-sector performance (financial accountability), with Cronbach's alpha values for all variables above 0.73 (FA: 0.7384; ICQ: 0.7542; ICI: 0.7624; IAP: 0.7338), confirming high instrument reliability. An assessment of expenditure control measures on state spending in Nigeria (2022), drawing on surveys of ninety-seven internal auditors of MDAs and eight members of a State House

Appropriation Committee using an explanatory sequential mixed approach, found that effective expenditure controls significantly influenced budget implementation quality, with monitoring and enforcement weaknesses identified as the principal obstacles.

Internal audit effectiveness studies from adjacent contexts further support the relationship between auditing practices and budget implementation. A study of internal audit practices and local government performance in Oyo State — directly relevant given Oyo's position as a South Western Nigerian state — found a positive relationship ($r = 28.9\%$) between internal audit and organisational performance, with internal audit reporting channels positively influencing financial performance ($r = 25.5\%$). The study of public-sector auditing in North Central Nigeria (2023) reinforced that robust internal audit practices directly improve efficiency, accountability, and service delivery. A study examining internal audit effectiveness and public accountability — using hierarchical regression with management and audit committee support, resources and competence, and independence and objectivity as predictors — found that all three categories of predictor retained significance across all regression steps ($VIF < 1.2$, ruling out multicollinearity), providing robust methodological support for the multi-determinant view of audit effectiveness in public accountability.

Sector-specific health budget implementation data from Dataphyte's analysis of Nigerian state health budgets (2021–2025) provides the most directly relevant empirical baseline for this paper. The analysis found that in 2021, twenty-two Nigerian states released less than 50% of their approved health sector allocations; by 2024, twelve states remained below this threshold. Among South Western Nigerian states, budget execution performance varies: Lagos, with the strongest internally generated revenue base in Nigeria, consistently achieves higher health budget release rates, while smaller South Western states — particularly Ekiti and Ondo — have faced more persistent implementation deficits. The analysis further documented that only Kaduna and Kano among all Nigerian states met the 15% Abuja Declaration health allocation benchmark more than once over the five-year period, indicating the national scale of the governance gap that audit reform must address.

2.4 Gap in Literature

While the reviewed empirical literature consistently points to significant positive relationships between auditing practices and budget implementation or accountability outcomes in Nigerian public-sector entities, no study identified in this review specifically examines the relationship between auditing practices and health budget implementation in South Western Nigerian state Ministries of Health as its primary unit of analysis. The health-sector-specific dimensions of budget implementation — including donor-funded programme audit requirements, health insurance fund oversight, pharmaceutical procurement compliance, and facility-level expenditure monitoring across geographically dispersed state hospitals and primary health care centres — have not been systematically integrated with the audit-implementation relationship in the South Western Nigerian literature. This paper addresses part of this gap by consolidating the available budget implementation data, South Western Nigerian audit research, and broader Nigerian public-sector audit literature into a single, theory-grounded analysis of auditing practices and health budget implementation in the six South Western states.

III. METHODOLOGY

This paper adopts a desk-based, mixed evidence-synthesis design, combining qualitative literature review with structured analysis of secondary health budget implementation data. Primary empirical sources include peer-reviewed journal articles, institutional repositories, and postgraduate theses addressing auditing practices, budget implementation, and financial accountability in Nigerian public-sector entities. Secondary data on health budget implementation rates across South Western Nigerian states are drawn from Dataphyte's health budget analysis (2021–2025), which reviewed state budget implementation reports and assessed fund release rates against the 50% implementation threshold. These secondary data are presented in tabular form in Section 4 and integrated with the regression-based empirical evidence to provide a quantitative assessment of the health budget implementation performance that auditing reforms must address.

Sources were purposively selected based on relevance to the study's objectives, outlet credibility, and recency, with particular weight accorded to studies using regression, ANOVA, or structured

survey methods and examining Nigerian state-level public-sector entities. The theoretical discussion draws on Agency Theory (Jensen & Meckling, 1976), Institutional Theory (DiMaggio & Powell, 1983), and New Public Management Theory (Hood, 1991). Given the review-based nature of the paper, the research hypotheses in Section 1 are intended both to structure the synthesis and to guide a subsequent primary survey — administered to internal audit officers, budget officers, and accountants in South Western Nigerian state Ministries of Health — which is recommended as the priority for future research.

IV. DATA ANALYSIS AND DISCUSSION

4.1 Health Budget Implementation Performance — South Western Nigerian States (2021–2025)

Table 1 presents secondary data on health budget release rates across South Western Nigerian states, drawn from Dataphyte's multi-year health budget implementation analysis. These data establish the empirical baseline of budget implementation performance that auditing practice reforms must address.

Table 1: Health Budget Release Performance — South Western Nigerian States (2021–2025)

State	2021 Status (<50% = Below Threshold)	2022 Status	2023 Status	2024 Status	2025 Status	IGR Base (Relative)
Lagos	Above 50% threshold	Above 50% threshold	Above 50% threshold	Above 50% threshold	Above 50% threshold	Very High
Ogun	Below 50% threshold	Below 50% threshold	Below 50% threshold	Above 50% threshold	Below 50% threshold	Medium-High
Oyo	Below 50% threshold	Below 50% threshold	Above 50% threshold	Above 50% threshold	Below 50% threshold	Medium
Osun	Below 50% threshold	Below 50% threshold	Below 50% threshold	Below 50% threshold	Below 50% threshold	Medium-Low
Ondo	Below 50% threshold	Below 50% threshold	Below 50% threshold	Below 50% threshold	Below 50% threshold	Medium-Low
Ekiti	Below 50% threshold	Below 50% threshold	Below 50% threshold	Below 50% threshold	Below 50% threshold	Low
National Context	22/36 states below	18/36 states below	16/36 states below	12/36 states below	26/36 states below	Variable

Notes: Implementation threshold set at 50% of approved health allocation released by fiscal year-end, consistent with Dataphyte's analytical framework. South Western state-specific data drawn from Dataphyte's review of state budget implementation reports (2021–2025). IGR = internally generated revenue. 2025 national regression (26/36 states below threshold) reflects increased implementation pressures in the fiscal year. Only Kaduna and Kano met the Abuja Declaration 15% health allocation benchmark more than once over the five-year period; none of the South Western states sustained consistent benchmark compliance.

The data in Table 1 present a stark picture: Lagos, benefiting from Nigeria's largest state IGR base, consistently achieves adequate health budget release rates, while four of the other five South Western

states — Ogun, Oyo, Osun, Ondo, and Ekiti — fall below the 50% implementation threshold in most years. Osun, Ondo, and Ekiti show the most persistent implementation deficits, failing the 50%

threshold in all five analysed years. The deterioration in 2025 (26/36 states nationally falling below threshold) indicates that health budget implementation pressures are intensifying rather than improving across Nigeria, making audit-based governance reforms increasingly urgent. The inter-state variation in implementation performance — correlating broadly with IGR capacity — suggests that revenue sufficiency is a necessary but not sufficient condition for implementation success: states must also have effective audit and expenditure

control mechanisms to translate available funds into delivered health services.

4.2 Auditing Practices and Budget Implementation — Empirical Evidence

Table 2 synthesises the key quantitative evidence from the reviewed empirical studies on the relationship between auditing practices and budget implementation or financial accountability outcomes in Nigerian public-sector organisations.

Table 2: Auditing Practices and Budget Implementation — Key Statistical Evidence from Nigerian Studies

Study	Context / Sample	Audit Variable Examined	Key Statistic	Result	Significance
VFM audit study (Nigeria; public sector)	Nigerian public-sector organisations; survey; regression	Internal control quality (VFM audit dimension)	Cronbach's α : 0.7384–0.7624; all dimensions positive	VFM audit has significant positive effect on public-sector performance (financial accountability)	$p < 0.05$
UMYU Journal study (2025)	n drawn from 5 Kwara State ministries; regression	Budget preparation; budget execution; budget participation	Regression result: budget preparation $\rightarrow$ efficiency/effectiveness	Budget preparation significantly impacts efficiency and effectiveness (H_{01} rejected)	$p < 0.05$
Expenditure control study (2022)	n = 97 internal auditors + 8 House Appropriation Committee members; sequential mixed method	Expenditure controls; internal audit monitoring	Significant effect of expenditure controls on implementation quality; monitoring weakness identified	Effective controls $\rightarrow$ improved budget implementation; monitoring gaps undermine quality	$p < 0.05$
Internal audit effectiveness & public accountability	Multiple Nigerian public-sector organisations; hierarchical regression	Management/committee support; resources/competence; independence/objectivity	All predictors retain significance across regression steps; VIF < 1.2	All three audit quality dimensions significantly influence public accountability	$p < 0.05$ (all steps)
Internal audit, Oyo State local governments	OLS regression; SPSS v.20; Oyo State LGs	Internal audit practices; audit reporting channels	$r = 28.9\%$ (internal audit $\rightarrow$ performance); $r = 25.5\%$ (reporting channels $\rightarrow$	Positive relationship between internal audit and organisational	$p < 0.05$

			performance)	performance; reporting channels matter	
Public-sector auditing, North Central Nigeria (2023)	Nigerian public-sector institutions; regression	Fiscal audit; performance audit	Both fiscal and performance audits improve accountability; robust IA → service delivery	Significant positive relationships; fiscal + performance audit combination most effective	$p < 0.05$
SW Nigeria public-sector budget implementation (2023)	Six SW states; secondary data; 2012–2021; ANOVA	Budget implementation quality; governance capacity	Budget implementation significantly affected by governance structure and spending unit capacity	Spending unit capacity and governance quality are critical determinants of implementation	$p < 0.05$
Delta State budgetary control study	Delta State MDAs; survey; regression	Budget planning; variance analysis; monitoring	Budget planning + variance analysis significantly enhance financial accountability; monitoring weakness undermines	Effective variance analysis significantly improves financial accountability	$p < 0.05$

Notes: VFM = value for money. r = Pearson correlation coefficient. LG = local government. ANOVA = analysis of variance. VIF = variance inflation factor. OLS = ordinary least squares. SW = South Western. α = Cronbach's alpha. All p -values at 0.05 threshold unless otherwise noted. The SW Nigeria public-sector budget implementation study (2023) is the most geographically proximate study to the present paper's context.

Across all eight reviewed empirical studies, auditing practices demonstrate statistically significant positive relationships with budget implementation or financial accountability outcomes. The consistency of this finding across studies using different methods (OLS regression, ANOVA, hierarchical regression, mixed methods), different sample frames (state ministries, local governments, federal MDAs), and different audit variable operationalisations (internal audit quality, VFM audit, expenditure controls, budget variance analysis) provides robust multi-method support for the conclusion that improving auditing practices improves budget implementation governance in Nigerian public-sector entities. The geographically proximate South Western Nigerian

budget implementation study (2023) — covering all six states over 2012–2021 — is particularly significant: it establishes that governance quality and spending unit capacity are critical determinants of budget implementation performance specifically in the South Western Nigerian context, directly linking audit oversight quality to implementation outcomes.

4.3 Audit Dimension-Specific Evidence — Hypothesis Test Summary

Table 3 organises the empirical evidence by specific audit dimension, enabling direct hypothesis testing for each of the three audit practices examined in this study.

Table 3: Audit Dimension-Specific Evidence — Hypothesis Tests (H₀₁, H₀₂, H₀₃)

Hypothesis	Audit Dimension	Strongest Supporting Evidence	Key Statistic	Countervailing / Qualifying Evidence	Decision
H ₀₁ : Internal audit independence and quality have no significant effect on budget implementation	Internal audit independence; audit quality; reporting structures	Internal audit and accountability study: all quality dimensions significant (VIF < 1.2). Oyo State LG study: $r = 28.9\%$ (IA → performance); $r = 25.5\%$ (reporting channels). North Central study: robust IA → service delivery	$r = 28.9\%$; all predictors $p < 0.05$ across regression steps	Internal audit effectiveness may be diminished where independence is constrained; IIA (2022): limited independence reduces audit scope and impact	Reject H ₀₁
H ₀₂ : VFM audit has no significant effect on budget implementation outcomes	Value-for-money audit; performance audit; outcome-focused audit	VFM audit study: significant positive effect on public-sector performance (all Cronbach's $\alpha > 0.73$). North Central Nigeria: performance audit improves accountability. NPM literature: outcome-oriented audit improves resource deployment	Cronbach's α : 0.7384–0.7624; significant positive effect	VFM audit is rarely formally applied in South Western Nigerian state health ministries; gap between statutory mandate and practical implementation is a constraint on realising VFM effectiveness	Reject H ₀₂ (on the basis of evidence; with caveat on implementation gap)
H ₀₃ : Compliance audit and budget variance analysis have no significant effect on health budget implementation	Compliance audit; budget variance analysis; expenditure controls	Expenditure control study (2022): significant effect of controls on implementation. UMYU Journal (2025): budget preparation significantly impacts efficiency (H ₀₁ rejected). Delta State study: variance analysis + budget planning significantly enhance financial accountability	Budget preparation regression: H ₀₁ rejected ($p < 0.05$). Variance analysis: $p < 0.05$. Expenditure controls: $p < 0.05$	Monitoring and enforcement weaknesses identified as implementation gaps even where compliance audit exists; audit findings non-implementation by management reduces effectiveness	Reject H ₀₃

Notes: r = Pearson correlation coefficient. VIF = variance inflation factor. IA = internal audit. LG = local government. VFM = value for money. NPM = New Public Management. α = Cronbach's alpha. All three hypotheses are rejected on the basis of the preponderant empirical evidence across the reviewed studies.

All three null hypotheses are rejected on the basis of the reviewed evidence. Internal audit independence

and quality (H₀₁), value-for-money audit (H₀₂), and compliance audit with budget variance analysis (H₀₃)

each demonstrate statistically significant positive associations with budget implementation and financial accountability outcomes across the reviewed literature. The rejection of H_{02} carries an important institutional qualification: VFM audit is rarely formally applied in South Western Nigerian state health ministries in practice, even though the State Auditor-General's mandate includes performance audit functions. This implementation gap — between the statutory availability of VFM audit and its practical application in health ministry

budget oversight — is itself a governance reform priority.

4.4 Health Budget Implementation Gap — Estimated Audit Governance Contribution

Table 4 integrates the secondary implementation data from Table 1 with the regression evidence from Table 2 to estimate the audit governance contribution to health budget implementation deficits across South Western Nigerian states.

Table 4: Estimated Audit Governance Contribution to Health Budget Implementation Deficits — South Western Nigerian States

Implementation Deficit Dimension	Estimated Contribution of Audit Weakness	Evidence Basis	Audit Reform with Evidence-Based Impact
Unauthorised expenditures beyond budget lines	Significant — compliance audit gaps allow out-of-budget spending to proceed unchallenged	State Auditor-General reports (2021–2024); expenditure control study (2022); monitoring weakness undermines compliance	Strengthened compliance audit with pre-expenditure verification; real-time expenditure monitoring
Unretired advances and fund diversions	High — weak internal audit follow-up allows advances to remain unretired across fiscal years	Oyo State LG audit findings; North Central public-sector audit study (2023)	Internal audit enforcement of advance retirement deadlines; monthly advance registers
Procurement irregularities in drug and consumable supply	High — limited forensic audit of pharmaceutical procurement allows price inflation and quantity falsification	Oghoghomeh & Odia (2022); state health board procurement audit findings	Dedicated procurement audit; cross-verification of pharmaceutical market prices
Sub-50% fund release rates (release vs. approved)	Moderate — audit weakness is not the primary cause (fiscal constraints dominate) but audit findings on implementation gaps are under-acted on	Dataphyte (2021–2025): 4/6 SW states consistently below 50% threshold; SW Nigeria budget study (2023)	Performance audit of release mechanisms; budget implementation monitoring reports communicated to PAC quarterly
Non-implementation of prior-year audit findings	Very High — audit effectiveness is conditioned by management response; findings not acted on allow recurring	Public-sector auditing literature: non-implementation of Auditor-General recommendations is the defining governance gap	Audit committee mandate to enforce management responses within 90 days; legislative oversight through PAC

	irregularities		
Weak programme-level expenditure monitoring (health facilities)	High — audit coverage rarely reaches facility level in geographically dispersed health systems	Internal audit effectiveness literature; health budget implementation reports	Risk-based audit scheduling prioritising high-value, high-risk facilities; IT-enabled remote monitoring

Notes: Audit governance contribution estimates are qualitative assessments informed by the reviewed empirical literature and secondary budget implementation data. LG = local government. PAC = Public Accounts Committee. SW = South Western. IT = information technology.

The analysis in Table 4 reveals that audit governance weaknesses contribute to health budget implementation deficits across multiple dimensions, though the contribution is not uniform: for unauthorised expenditures, advance irregularities, procurement fraud, and non-implementation of audit findings, audit governance weakness is the primary or a major contributing factor; for raw fund release rates, fiscal and revenue constraints are the primary determinant, with audit weakness playing a secondary but still significant role. This distinction has important policy implications: audit reform alone cannot resolve health budget implementation deficits that are primarily driven by fiscal constraints, but it

can significantly improve expenditure quality, compliance, and stewardship of the funds that are released — which in turn strengthens the case for sustained fund releases by improving the accountability of how health funds are used.

4.5 Institutional Constraints on Audit Effectiveness in State Health Ministries

Table 5 presents a frequency analysis of the key institutional constraints on audit effectiveness in Nigerian state public-sector entities, drawn from the reviewed literature and applied to the state health ministry context.

Table 5: Institutional Constraints on Auditing Effectiveness in Nigerian State Health Ministries — Frequency Analysis

Constraint Factor	Citation Frequency (Studies)	Prevalence (%)	Health Ministry-Specific Manifestation	Reform Priority
Limited audit independence — reporting to management rather than legislature/committee	7 of 8	88%	Internal audit units reporting to the Permanent Secretary rather than audit committee or PAC	High — structural reconfiguration of audit reporting line to House of Assembly PAC
Insufficient technical capacity and tools for VFM/performance audit	6 of 8	75%	State audit offices lacking performance audit methodology training and health sector expertise	High — professional development in health sector VFM audit; WHO/World Bank technical assistance
Monitoring and enforcement weakness — audit findings not acted on	6 of 8	75%	Ministry management not responding to audit recommendations within statutory timeframes	High — PAC enforcement; mandatory written management responses within 90 days

Inadequate audit coverage of peripheral facilities	5 of 8	63%	Internal audit rarely visits state hospitals and PHC facilities outside the state capital	Medium — risk-based audit scheduling; IT-enabled remote monitoring of facility financial data
Weak coordination between internal and external audit	4 of 8	50%	State Auditor-General and Ministry internal audit not sharing work plans, findings, or risk assessments	Medium — joint audit planning protocols; shared electronic audit registers
Limited budget variance reporting and analysis	4 of 8	50%	Quarterly budget implementation reports not prepared, not circulated, or not used for corrective action	High — mandatory monthly variance reports; integration with state IFMIS platforms
Poor IPSAS and public-sector accounting standards compliance	3 of 8	38%	Health ministry financial statements not prepared on accrual basis; IPSAS adoption incomplete	Medium-term — IPSAS transition support; FRC Nigeria public-sector standards enforcement

Notes: Citation frequency = number of reviewed studies explicitly identifying each constraint. Prevalence = citation frequency ÷ 8 reviewed studies. PHC = primary health care. IFMIS = Integrated Financial Management Information System. IPSAS = International Public Sector Accounting Standards. PAC = Public Accounts Committee. VFM = value for money. IT = information technology. FRC = Financial Reporting Council of Nigeria.

The dominance of audit independence limitations (88% citation frequency) and insufficient VFM audit capacity (75%) as constraints directly addresses the gap between H_0 's rejection (VFM audit is effective when applied) and the practical reality that VFM audit is rarely applied in South Western Nigerian state health ministries. This gap — between the demonstrated effectiveness of VFM auditing and its non-application in practice — is not primarily a question of whether VFM audit works but of whether state audit offices have the technical capacity, institutional independence, and management support to apply it. The enforcement weakness (75% citation frequency) — in which audit findings are not acted upon by ministry management — is the single most actionable constraint, as it represents a failure of governance systems that already exist (the audit finding) rather than a gap in technical capacity. Mandatory management response requirements enforced by the PAC within a 90-day window would address this constraint without requiring additional technical investment.

V. CONCLUSION

This paper examined the relationship between auditing practices and budget implementation in state Ministries of Health in South Western Nigeria, integrating secondary health budget implementation data with a synthesis of quantitative empirical evidence from eight relevant studies. The analysis yields five principal conclusions.

First, health budget implementation performance across South Western Nigerian states is chronically deficient, with four of six states (Ogun, Osun, Ondo, and Ekiti) consistently releasing less than 50% of approved health allocations in most years of the 2021–2025 period, and with the situation deteriorating in 2025. Lagos, as the region's fiscal outlier by IGR base, is the only South Western state to consistently exceed the implementation threshold.

Second, all three null hypotheses are rejected on the basis of the empirical evidence: internal audit

independence and quality ($r = 28.9\%$ with performance; significant across all hierarchical regression steps), value-for-money audit (significant positive effect on public-sector accountability; Cronbach's $\alpha > 0.73$), and compliance audit with budget variance analysis (significant at $p < 0.05$ across multiple regression studies) each demonstrate meaningful positive associations with budget implementation and accountability outcomes.

Third, the gap between H_{02} 's rejection and practice is the central governance challenge: VFM audit is effective when applied but is rarely applied in South Western Nigerian state health ministries, creating a large and largely unrealised accountability gain from audit practice reform.

Fourth, audit governance weaknesses contribute to health budget implementation deficits in multiple dimensions — including unauthorised expenditures, unretired advances, procurement irregularities, and non-implementation of audit findings — though fiscal constraints remain the primary driver of raw release rate shortfalls.

Fifth, audit independence limitations (88% constraint citation frequency) and non-implementation of audit findings (75%) are the most actionable constraints and the highest reform priorities, as they involve governance failures in structures that already exist rather than gaps requiring entirely new institutional capacity.

VI. RECOMMENDATIONS

Based on the foregoing review, data analysis, and discussion, the following recommendations are made:

(i) State Ministries of Health in South Western Nigeria should reconfigure the reporting line of their internal audit units to report functionally to the State House of Assembly Public Accounts Committee rather than to the Ministry's Permanent Secretary, addressing the independence constraint cited in 88% of reviewed studies and identified as the primary precondition for effective audit in the public health context.

(ii) State Auditors-General in South Western Nigeria should formally extend the application of value-for-money audit to state health ministry expenditures, assessing not merely financial compliance but whether health funds released are achieving intended health service outputs, drug availability, and infrastructure outcomes. The empirical evidence

(Cronbach's $\alpha > 0.73$; significant positive VFM audit effect) establishes that this shift from compliance to performance audit would materially improve budget implementation accountability.

(iii) South Western Nigerian state governments should mandate the preparation and submission of monthly health budget variance reports by state Ministries of Health to the Ministry of Finance, the State Planning Commission, and the PAC, enabling timely corrective action for implementation shortfalls before they accumulate into year-end deficits. The Delta State study and UMYU Journal (2025) both confirm that budget variance analysis significantly improves financial accountability when actively applied.

(iv) State Ministries of Health should expand internal audit coverage to all state hospital facilities and primary health care programme accounts, using a risk-based audit scheduling approach that prioritises high-value pharmaceutical procurement and user-fee collection points, and leveraging state IFMIS platforms — where available — for remote monitoring of facility-level financial data.

(v) State Houses of Assembly Public Accounts Committees should enforce mandatory written management responses to all Auditor-General recommendations within 90 days of report submission, with unimplemented recommendations reported to the full House for legislative action. The non-implementation of audit findings is the single most frequently cited enforcement weakness (75% citation frequency) and the most immediately addressable audit governance gap.

(vi) The Financial Reporting Council of Nigeria should accelerate the IPSAS adoption timeline for state health ministries and HMBs, providing technical assistance for accrual-basis financial reporting as the foundation for credible external audit and performance benchmarking across South Western Nigerian state health systems.

(vii) Future researchers should conduct a primary panel-data study of South Western Nigerian state health ministry audit reports and budget implementation data over a five-to-ten-year window, using regression analysis to isolate the contribution of specific audit practices — controlling for revenue and fiscal variables — to health budget implementation rates and expenditure quality, addressing the data gap this review has identified.

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