Public Sector Governance and Internal Control Effectiveness in Ghana: The Role of Political and Institutional Factors

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ABSTRACT

Persistent financial irregularities in Ghana's public sector raise concerns about accountability, institutional oversight, and the effectiveness of internal control systems. This study examined public sector governance and internal control effectiveness in Ministries, Departments and Agencies (MDAs) within the Greater Accra Region, with particular attention to political and institutional factors. A quantitative survey design was adopted, involving 176 respondents comprising 95 audit committee members, 66 internal auditors, and 15 external auditors selected through purposive sampling. Data were collected using structured questionnaires and analysed in SPSS Version 22 using descriptive statistics and binary logistic regression. The findings identified audit committee support, auditors' independence and objectivity, professional competence, management support, resource availability, and collaboration between internal and external auditors as significant positive predictors of internal control effectiveness. The results further showed that political interference, weak enforcement, and institutional constraints were significant negative predictors, with weak enforcement demonstrating the strongest negative association among these three factors. Generally, the findings indicate that effective internal controls depend not only on adequate resources, professional capacity, and institutional oversight but also on the strength of enforcement mechanisms and the ability of public institutions to resist undue political influence. The study highlights the need to strengthen audit committee oversight, safeguard professional independence, improve institutional capacity, reduce political interference, and ensure the consistent implementation of audit recommendations and corrective measures. It contributes context-specific evidence to understanding how organisational arrangements and broader political and institutional conditions shape internal control effectiveness in Ghana's public sector. Further research could investigate how political influence and enforcement practices affect the implementation of internal controls across different public sector institutions.

INTRODUCTION/BACKGROUND

Effective internal control is essential to public sector governance because it safeguards public resources, promotes reliable financial reporting, strengthens compliance with regulations, and supports the achievement of institutional objectives (Rashid, 2022b; Brenya Bonsu et al., 2022). Internal controls also help prevent and detect errors, waste, fraud, and financial irregularities while improving organisational efficiency and accountability (Odunko, 2022; Vulley, 2022; Otoo, Kaur & Rather, 2023). However, the effectiveness of these systems depends not merely on their formal existence but also on their implementation, monitoring, and enforcement. In public institutions, these processes may be influenced by management commitment, institutional capacity, auditor independence, political interference, and the adequacy of regulatory oversight (Alqudah et al., 2023; Grima et al., 2023; Khelil & Khlif, 2022). Consequently, understanding internal control effectiveness requires examining both the formal arrangements established by institutions and the organisational conditions that determine whether those arrangements function as intended.

In Ghana, institutional reforms have sought to strengthen public financial management and accountability through the establishment of the Internal Audit Agency under the Internal Audit Agency Act, 2003 (Act 658), and the enactment of the Public Financial Management Act, 2016 (Act 921) (Parliament of Ghana, 2003; Government of Ghana, 2016). Audit committees also provide an oversight mechanism for monitoring financial management and supporting internal audit functions (Hegazy & Stafford, 2021). The persistent financial irregularities reported across ministries, departments and agencies (MDAs) raise questions about the extent to which these formal mechanisms translate into effective internal controls. The Auditor-General's reports cited in the manuscript indicate that reported financial irregularities in MDAs exceeded GH¢17.5 billion in 2021, declined to GH¢8.8 billion by the end of 2023, and amounted to GH¢2.40 billion in the 2024 reporting period (Republic of Ghana, 2023, 2025). Although these figures reflect different reporting periods and should not be interpreted as proof of the effectiveness or failure of any single control mechanism, they demonstrate the continuing importance of examining the implementation and enforcement of public financial controls. Weak oversight can undermine service delivery, public trust, and equitable development (Meijer et al., 2018), whereas effective internal auditing can support accountability through risk assessment, compliance monitoring, and the identification of operational weaknesses (Eulerich, 2021; Bonrath & Eulerich, 2024; Lenz & O'Regan, 2024).

Previous Ghanaian studies have examined several dimensions of internal auditing, financial management, and institutional accountability. Abdulai et al. (2021) investigated internal auditing and financial reporting within the university setting, while Denny et al. (2024) assessed the role of audit technologies in procurement practices. Quampah et al. (2021) identified weaknesses in local government control mechanisms and continuing exposure to financial mismanagement. Similarly, Aikins et al. (2022) and Abdulai et al. (2021) highlighted constraints relating to auditor morale, independence, and professional development, whilst Owusu and Owusu-Boateng (2023) drew attention to inconsistent use of audit tools and their limited integration into broader risk management arrangements. Tetteh and Agyenim-Boateng (2021) further demonstrated how institutional pressures can constrain auditors' ability to promote accountability. These studies indicate that internal control and audit effectiveness are shaped by institutional and operational constraints, rather than by technical procedures alone. However, their differing sectoral and thematic emphases leave scope for a more integrated examination of how these constraints interact with management support, regulatory monitoring, audit committee oversight, and the practical enforcement of internal controls across public institutions.

More recent Ghanaian evidence reinforces the importance of examining these relationships collectively. Agyemang et al. (2023) associated occupational fraud with structural weaknesses in audit institutions and inadequate ethical cultures; Oppong and Fofack (2023) identified limitations in audit follow-up and institutional capacity. Afadzinu et al. (2024) highlighted coordination problems among supervisory institutions, political influence, and gaps in institutional mandates as conditions that may create opportunities for financial mismanagement. Gasela (2022) examined the potential contribution of citizen participation to audit compliance, while Celestin and Gidisu (2025) discussed the potential of blockchain-enabled auditing to improve transparency, subject to institutional capacity and political commitment. Particularly relevant is the study by Gbambegu Umar et al. (2025), which used survey data from 701 respondents across Ghanaian local government authorities and Partial Least Squares Structural Equation Modelling to examine the relationship between internal controls and financial management. Its findings indicated a positive relationship between internal control systems and financial management, with political interest significantly mediating that relationship. This provides important empirical evidence that internal controls operate within political and institutional environments.

These Ghanaian studies therefore provide valuable but differentiated insights into internal control weaknesses, audit performance, financial management, technology, and political influence. Their principal limitation, as framed in the present manuscript, is not that these issues have never been investigated, but that they have not been sufficiently integrated into a single explanation of internal control effectiveness across public institutions. Sector-specific investigations may offer limited insight into how control arrangements operate across institutions with different mandates and administrative capacities (Quampah et al., 2021). Similarly, research focused on financial reporting, procurement, or local government financial management

addresses important outcomes but does not necessarily explain how the combined influence of institutional capacity, management cooperation, auditor independence, and oversight arrangements affects the implementation and enforcement of controls. International evidence also suggests that internal control effectiveness depends on adequate resources, organisational support, and the ability of internal auditors to fulfil their responsibilities (Alqudah et al., 2023). Conversely, restricted independence, unclear responsibilities, and inadequate management cooperation can weaken audit effectiveness (Grima et al., 2023; Khelil & Khlif, 2022).

The present study advances existing empirical knowledge by examining internal control effectiveness in Ghana through an integrated institutional and governance perspective. Rather than treating financial irregularities, auditor independence, management support, political influence, and audit committee oversight as disconnected concerns, it investigates how these factors relate to the practical operation of internal controls and the achievement of financial accountability. In particular, the manuscript seeks to move beyond evidence concentrated on individual sectors or specific audit outcomes by considering the roles of relevant governance stakeholders and the institutional conditions under which control procedures are implemented, monitored, and enforced. Its distinctive contribution is therefore the contextual integration of governance and institutional factors into an examination of internal control effectiveness, rather than the claim that each factor has never been studied previously.

This approach provides a basis for explaining why the existence of legislation and formal oversight structures may not automatically guarantee effective control practices. It also offers context-specific evidence to inform policy interventions concerning institutional coordination, audit capacity, management commitment, auditor independence, and audit committee participation in Ghana's public sector. Accordingly, the study addresses the need to understand not only whether internal control mechanisms exist, but also whether institutional and political conditions enable them to function effectively. By way of relating evidence on existing control weaknesses with the governance arrangements intended to address them, the research contributes to a more comprehensive understanding of internal control effectiveness and identifies practical areas for strengthening public financial accountability in Ghana. The study has been based on two main specific objectives which are to:

i. Determine internal control effectiveness in public sector governance.
ii. Assess the factors influencing internal control effectiveness in promoting accountability in public sector governance; in Ghana's MDAs within the Greater Accra Region.

LITERATURE REVIEW

This section reviews the relevant literature on the subject matter of the paper. The discussion covers issues on overview of internal audit, internal control (IC) concept, internal control effectiveness, factors influencing internal auditing effectiveness in promoting accountability, internal and external factors and public governance, with emphasises on the Resource-Based View (RBV) and Internal Auditing and Agency Theory.

Overview of Internal Audit: Internal auditing is an independent assurance and consulting function that strengthens organisational governance, risk management, and internal controls (Institute of Internal Auditors [IIA], 2024). Its effectiveness depends on professional standards, ethical judgement, critical reasoning, and the achievement of audit objectives (Wan-Hussin et al., 2021; Kai et al., 2022). Through risk assessment, operational evaluation, and the identification of control weaknesses, internal auditing supports institutional accountability and organisational performance (Netshifhefhe et al., 2024; Wu et al., 2024). However, evaluating internal audit effectiveness in the public sector remains challenging because public institutions have diverse mandates and performance objectives, complicating the measurement of audit outcomes (Nerantzidis et al., 2022).

Internal audit effectiveness is closely related to, but distinct from, internal control effectiveness. While internal auditing evaluates the adequacy and operation of control systems, internal control effectiveness

concerns the extent to which established controls function as intended to manage risks, safeguard public resources, ensure reliable reporting, and promote regulatory compliance. Effective internal auditing can strengthen these controls by identifying deficiencies, recommending corrective measures, and monitoring their implementation (IIA, 2024; Wu et al., 2024). The presence of an internal audit function does not necessarily guarantee effective controls, particularly where management fails to address audit findings or control procedures are inconsistently implemented. Within Ghana's public sector, these relationships warrant consideration alongside political and institutional factors that may influence auditor independence, management responsiveness, and the enforcement of accountability mechanisms. Internal control effectiveness in Ghana's public sector depends on how political and institutional factors shape the implementation, monitoring, and enforcement of controls beyond the mere existence of internal audit structures.

The Concept of Internal Control (IC): Internal control refers to the policies, procedures, and organisational practices designed to safeguard assets, ensure financial information accuracy, minimise risks, and promote accountability (Kenton, 2024; Pham, 2023). Kenton (2024), Pham (2023), and Kirkpatrick (2024) emphasise these complementary functions, while Musah et al. (2025) and Musyoki (2023b) extend their significance to regulatory compliance, responsible resource management, and the achievement of public-sector objectives. Similarly, Nurachman et al. (2025) associate adequate internal controls and internal auditing with improved fraud prevention. However, the existence of established procedures and processes does not necessarily guarantee their effectiveness, as implementation depends on professional competence, management commitment, and systematic monitoring. Rankine et al. (2025) highlight documented monitoring procedures, as Najiah Septiana et al. (2024) emphasise internal auditors' professionalism and objective supervision. Indra Nugraha et al. (2024) further stress management's responsibility to follow up audit findings, improve procedures, and promote transparency. These studies suggest that internal control and internal auditing are complementary: controls establish operational safeguards, whereas auditing identifies weaknesses and supports corrective action.

Institutional capacity and organisational conditions also influence whether control mechanisms operate effectively. Boudjelka (2025) identifies inadequate financial, infrastructural, technological, and human resources as constraints on control implementation, as Aggarwal and Agarwala (2022) emphasise employees' limited understanding of internal control principles. These findings indicate that adequate resources must be accompanied by competent personnel and consistent application of established procedures. Consistent with Indra Nugraha et al. (2024), management commitment is therefore important not simply as administrative support but as a practical commitment to transparency, independent oversight, and corrective action. In Ghana's public sector, these issues warrant examination within the wider governance environment, particularly where institutional arrangements and political influences may shape the implementation and enforcement of control procedures.

Although the reviewed studies establish the importance of monitoring, professional competence, management commitment, adequate resources, employee knowledge, and organisational culture (Aggarwal & Agarwala, 2022; Boudjelka, 2025; Indra Nugraha et al., 2024; Najiah Septiana et al., 2024; Rankine et al., 2025), the literature presented does not sufficiently explain how these factors interact with political and institutional influences to determine internal control effectiveness in Ghana. Specifically, further contextual investigation is needed into how political interference, auditor independence, management accountability, institutional capacity, and enforcement practices influence the operation of internal controls in public institutions. The contribution of the present study is to examine these interrelated dimensions within Ghana's public-sector governance context, moving beyond the formal existence of control systems to consider the institutional conditions that facilitate or constrain their practical implementation. This approach provides a basis for understanding why established controls may fail to achieve their intended objectives despite the presence of formal procedures and oversight arrangements. In relation to internal control effectiveness, the present study examines how political and institutional factors interact with professional competence, management commitment, resource availability, and organisational culture to determine the consistent implementation and enforcement of controls in Ghana's public sector.

Internal Control Effectiveness in Public Sector Governance: Internal control is fundamental to effective public sector governance because it promotes accountability, regulatory compliance, financial integrity, and operational efficiency (Alfartoosi & Jusoh, 2021). However, its effectiveness depends not only on the existence of established policies and procedures but also on their consistent implementation, organisational commitment, and enforcement. Omar and Yussuf (2021) and Nanzala and Ingabo (2021) highlight the conditions necessary for effective control implementation, while Hazzaa et al. (2022) associate effective internal controls with regulatory compliance and improved operational efficiency in municipal governments. These studies establish the importance of internal controls in promoting sound governance, although further examination is needed to understand how political and institutional conditions influence their practical effectiveness in public institutions.

In Ghana, internal controls encompass financial reporting, expenditure management, revenue collection, asset protection, and regulatory compliance within Ministries, Departments and Agencies (MDAs) (Adjei & Mensah, 2026; Ghana Audit Service, 2025). Their effectiveness is closely associated with leadership commitment, organisational culture, and internal audit capacity (Ofori, 2026). The inadequate staffing, weak supervisory oversight, and ineffective enforcement cultures may undermine the implementation of control procedures, even where formal institutional arrangements exist (Asare & Boateng, 2025). These challenges suggest that establishing control policies alone is insufficient to guarantee accountability unless institutions possess the capacity and commitment to implement them consistently. Pham (2023) reinforces this position by emphasising the shared responsibility of management and employees in maintaining effective controls; Kirkpatrick (2024) highlights the importance of timely evaluation of control deficiencies, corrective action, and subsequent monitoring. These studies demonstrate that control effectiveness requires competent personnel, adequate resources, management support, effective supervision, and sustained institutional enforcement.

Although these studies examine complementary dimensions of internal control, their respective emphases reveal the need for a more integrated understanding of public sector governance in Ghana. Omar and Yussuf (2021) and Nanzala and Ingabo (2021) focused on the conditions necessary for implementing controls, whereas Hazzaa et al. (2022) emphasise compliance and operational efficiency. Ofori (2026) highlights leadership, organisational culture, and audit capacity, as Asare and Boateng (2025) draw attention to staffing constraints, supervisory weaknesses, and enforcement challenges. Similarly, Pham (2023) stresses shared responsibility for control implementation, and Kirkpatrick (2024) focuses on identifying, correcting, and monitoring deficiencies. Whilst these perspectives explain important aspects of control implementation, the literature presented does not sufficiently establish how management commitment, institutional capacity, auditor independence, accountability arrangements, and political influences interact to shape internal control effectiveness across Ghanaian MDAs. In particular, further inquiry is required into whether political pressures and institutional weaknesses undermine the consistent application of internal controls despite the existence of formal governance and accountability mechanisms.

The present study therefore builds on existing literature by examining internal control effectiveness through the combined influence of political and institutional factors within Ghana's public sector. Rather than considering leadership, resources, supervision, accountability, and enforcement as isolated determinants, it focuses on their interconnected roles in shaping the practical implementation of internal controls. This perspective provides a basis for understanding why formal control procedures may not consistently translate into effective financial oversight and accountability, while highlighting the institutional conditions that may strengthen or weaken their operation. In general, internal control effectiveness in Ghana's public sector depends on how political influences and institutional factors jointly shape the implementation, monitoring, and enforcement of controls to ensure accountability and sound governance.

Factors Influencing Internal Control Effectiveness in Promoting Accountability in Public Sector Governance

Bender (2006) argues that by examining the factors that affect internal control, its efficacy can be indirectly evaluated. The effectiveness of internal control in fostering accountability in public institutions has been determined by a number of research. Some of these factors are reviewed below;

Internal Auditor Independence and Objectivity: Internal auditor independence and objectivity are essential to effective public sector governance because they enable auditors to evaluate institutional activities impartially, identify control deficiencies, and report irregularities without undue influence. Independence concerns the freedom to perform audit responsibilities without interference, while objectivity involves exercising impartial and evidence-based professional judgement. However, maintaining these principles within organisational hierarchies remains challenging (Đorđević & Đukić, 2017). Ofori and Lu (2018) associate compromised independence with biased reporting and reduced audit quality; Thiery et al. (2023) and Coetzee et al. (2023) emphasise organisational autonomy, professional standards, and independence as important conditions for effective internal auditing. Similarly, Ginting et al. (2025) indicate that independence and professionalism strengthen auditors' capacity to identify potential fraud, while Herawaty et al. (2021) demonstrate the importance of these attributes to audit report quality, particularly where management or external pressures may influence professional judgement. Dyhati and Wahyudi (2022) associated auditor objectivity with improved audit outcomes and quality. These studies suggest that professional competence and ethical conduct are insufficient when organisational arrangements restrict auditors' freedom to assess and report institutional weaknesses.

Auditor independence must therefore be supported by institutional arrangements that protect professional judgement and prevent conflicts of interest. Hartono et al. (2022) identify relevant indicators, including auditors' non-involvement in operational decision-making, freedom from interference, absence of personal relationships with audited parties, objective reporting, and the ability to reject requests that contravene professional ethics. These indicators are particularly relevant to public sector governance, where internal auditors may face competing demands from management, political authorities, and other institutional stakeholders. Evidence from Ghana supports this concern: Amaning et al. (2023) identified independence as one of the three leading factors influencing internal audit function effectiveness in public procurement. Similarly, Kipaalu et al. (2024), studying public institutions in Uganda, found that political interference and structural subordination to management could undermine auditors' operational autonomy despite formal independence arrangements. These findings highlight the distinction between legally or administratively established independence and the practical freedom required to perform audit responsibilities effectively.

Despite these contributions, the cited studies leave scope for a more integrated examination of how political influence, management interference, institutional reporting structures, and accountability arrangements interact to shape internal auditor independence and objectivity across Ghana's public sector. Existing evidence identifies independence as an important determinant of audit quality and effectiveness, but the findings presented do not fully establish how these institutional and political conditions jointly affect the implementation and enforcement of internal controls across public institutions. The present study addresses this issue by situating auditor independence and objectivity within the broader relationship between political factors, institutional governance, and public financial accountability in Ghana. In relation to internal control effectiveness, auditor independence and objectivity enable impartial reporting, timely identification of control weaknesses, and the enforcement of internal control procedures, particularly where political and institutional arrangements protect auditors from undue influence.

Internal Auditor Competence: Internal auditor competence is an important determinant of internal control effectiveness, comprising professional qualifications, practical experience, analytical skills and continuous training that enable auditors to identify financial misstatements, detect control deficiencies and produce reliable audit reports (Ratmono & Darsono, 2022; Irwansyah & Zega, 2023). Evidence from African public institutions indicates that auditor competence contributes to accountability and transparency (Jachi & Yona, 2019), while competent auditors strengthen procurement oversight, risk management, regulatory compliance

and operational efficiency (Appiah et al., 2023). However, professional expertise alone may not guarantee effective audit outcomes, particularly where inadequate resources and limited management support constrain auditors' ability to discharge their responsibilities (Alqudah et al., 2023; Onay, 2021). These limitations highlight the importance of considering auditor competence alongside the political and institutional conditions within which public sector control mechanisms operate.

Empirical findings on the contribution of internal auditing and control systems to fraud prevention remain mixed. Safitri et al. (2024), in a review of 16 studies, found that 14 identified internal auditing as important for fraud prevention, whereas two reported no discernible effect. Similarly, Yulfani et al. (2025) found no significant effect of internal auditing and internal control systems on public-sector fraud prevention, while Asmapane et al. (2024) reported that effective internal controls substantially reduced organisational fraud risk, particularly in public institutions. These contrasting findings suggest that the existence of internal audit and control arrangements does not necessarily ensure effective implementation or prevent financial irregularities. Instead, outcomes may depend on auditors' professional capacity, independence, access to resources, management commitment and the enforcement of audit recommendations.

From the perspective of public sector governance in Ghana, these issues warrant particular attention because institutional arrangements and political influences may shape the extent to which auditors can identify weaknesses and ensure corrective action. Nevertheless, the cited studies do not, on their own, establish the precise influence of political and institutional factors on auditor competence and control effectiveness within Ghana's public sector, creating a basis for further context-specific investigation. Internal auditor competence contributes to internal control effectiveness in Ghana's public sector when professional expertise is supported by adequate institutional resources, management commitment, auditor independence and an enabling governance environment that facilitates the implementation and enforcement of control procedures.

Management Support (MS): Management support refers to management's commitment to providing internal auditors with adequate resources, professional authority, access to relevant information, and cooperation in implementing audit recommendations (Kau et al., 2024). These forms of support are essential for ensuring that internal audit functions can identify control weaknesses, monitor compliance, and facilitate corrective action. Kau et al. (2024) identified management support and audit procedures as important factors influencing audit timeliness and financial reporting accuracy. Similarly, Najiah Septiana et al. (2024) emphasised management commitment, resource adequacy, and a supportive working environment, while Rankine et al. (2025) demonstrated the importance of management involvement in providing the authority and resources necessary for effective internal auditing. Deviani et al. (2024) further highlighted the contribution of a well-supported internal audit function to organisational oversight and governance. These studies suggest that management support strengthens the institutional conditions necessary for auditors to perform their responsibilities effectively.

Contrarily, inadequate managerial commitment may limit auditors' ability to identify deficiencies, recommend corrective measures, and ensure that control weaknesses are addressed. Cahya et al. (2025) and Inovatif et al. (2026) associated insufficient management support with weaknesses in identifying and correcting operational and control deficiencies. In the Ghanaian context, Quampah et al. (2021) highlighted the implications of limited management support, delayed feedback, and inadequate investment in information technology for audit effectiveness in local government organisations. These findings indicate that management support involves more than the provision of financial and technical resources; it also requires timely responses to audit findings and institutional willingness to implement recommended improvements. The extent to which managerial commitment translates into effective internal controls within Ghanaian public institutions remains an important concern, particularly where political influence, resource constraints, and institutional weaknesses may affect the implementation of audit recommendations. In relation to the present study, management support is a critical institutional factor influencing internal control effectiveness in Ghana's public sector through resource provision, auditor empowerment, management cooperation, and the implementation of corrective measures.

Audit Collaboration, Institutional Accountability, and Auditor Independence: Collaboration between internal and external auditors strengthens public sector oversight by facilitating information sharing, coordinating audit activities, reducing duplication, and improving the identification of risks and internal control weaknesses (Grima et al., 2023; Alqudah et al., 2023). Menza et al. (2019) similarly highlighted the importance of audit cooperation in promoting efficient resource utilisation, particularly in developing public sector environments where institutional and financial resources may be constrained. Effective collaboration can therefore improve the coverage of audit procedures, support institutional accountability, and provide a more comprehensive assessment of whether control mechanisms operate as intended. However, these benefits depend on clearly defined responsibilities and safeguards that preserve internal auditors' independence and professional objectivity. Ratmono and Darsono (2022) cautioned that excessive coordination may undermine impartiality when the respective roles of internal and external auditors are not adequately distinguished. Thus, collaboration and independence must operate together to ensure that audit findings are credible, control deficiencies are properly reported, and corrective actions receive appropriate attention.

Within Ghana's public sector, the relationship between audit collaboration, institutional accountability, and auditor independence is particularly relevant because the effectiveness of oversight depends not only on the existence of audit arrangements but also on how they function within institutional and political environments. Although existing studies establish the potential benefits of audit cooperation and identify the risks associated with compromised independence, the literature considered here does not fully explain how these factors interact within Ghanaian public institutions, particularly under conditions of resource constraints, management influence, and weaknesses in enforcement (Menza et al., 2019; Grima et al., 2023; Alqudah et al., 2023; Ratmono & Darsono, 2022). This provides a basis for examining how institutional arrangements can promote effective coordination without weakening auditors' independence or accountability. Audit collaboration strengthens the identification and monitoring of control weaknesses, while auditor independence and institutional accountability support objective reporting, enforcement, and corrective action.

Internal and External Factors Shaping Public Governance and Internal Control Effectiveness in Ghana: Public sector governance and internal control effectiveness depend on the interaction between internal organisational capabilities and external institutional conditions. In Ghana, these factors are important in explaining why the existence of formal control frameworks does not always translate into effective accountability, regulatory compliance and institutional performance. Karnsomdee and Khornok (2026), Atobishi et al. (2024) and Koeswayo et al. (2024) identify leadership quality, managerial competence, organisational agility and strategic alignment as important determinants of public sector performance and administrative responsiveness. Likewise, Barbera et al. (2025) emphasise workforce development, leadership capacity and organisational health in strengthening institutional adaptability, service delivery and public trust. Complementing these perspectives, the World Bank (2022) highlights the importance of performance management, internal control systems and auditing procedures in promoting accountability, transparency and institutional integrity. These studies suggest that effective internal controls require not only clearly established procedures but also competent personnel, committed leadership and adequate organisational capacity to ensure their consistent implementation. However, improved administrative performance does not necessarily guarantee auditor independence, effective monitoring or appropriate follow-up on identified control weaknesses.

External institutional arrangements also shape governance outcomes by influencing organisational conduct, accountability and compliance. Karnsomdee and Khornok (2026) explain that coercive, normative and mimetic pressures influence public organisations' behaviour and governance processes; Ansell and Torfing (2021) emphasise regulatory arrangements, institutional support and stakeholder participation in strengthening legitimacy, coordination and organisational responsiveness. The OECD (2024) further identifies digital transformation as a means of improving administrative efficiency, transparency, public participation and service delivery. Although these mechanisms can strengthen governance, their effectiveness depends on institutional autonomy, political commitment and the consistent enforcement of established rules. In Ghana, therefore, the existence of regulatory frameworks, oversight institutions and

digital systems must be considered alongside the practical conditions under which control procedures are implemented and breaches are addressed.

In particular, formal institutional arrangements may have limited effects where political interference, inadequate resources or weak enforcement constrain the ability of oversight bodies and internal auditors to perform their responsibilities effectively. The reviewed studies provide complementary explanations of public governance: Atobishi et al. (2024), Koeswayo et al. (2024) and Barbera et al. (2025) concentrate on organisational capabilities, leadership and administrative performance, whereas the World Bank (2022), Ansell and Torfing (2021) and the OECD (2024) emphasise control systems, institutional arrangements and broader governance mechanisms. Karnsomdee and Khornok (2026) connect these perspectives by addressing institutional pressures and organisational behaviour. However, the literature reviewed does not sufficiently establish how these internal and external factors interact to influence internal control effectiveness within Ghana's public sector. Specifically, further investigation is needed into how management support, audit committee effectiveness, resource availability, auditor competence and independence operate under conditions of political influence, limited institutional autonomy or inconsistent enforcement. The present study addresses this gap by examining public sector governance and internal control effectiveness in Ghana through an integrated consideration of political influences, institutional arrangements and organisational capabilities, with emphasis on their implications for accountability, compliance and the practical implementation of internal control mechanisms. In relation to internal control effectiveness, the literature indicates that effective controls in Ghana's public sector depend on the combined influence of organisational capacity, management commitment, auditor independence, institutional oversight and political conditions that facilitate or constrain consistent implementation and enforcement.

THEORETICAL FRAMEWORK

This article adopts the Resource-Based View (RBV) and Internal Auditing and Agency Theory. Both theories are discussed below;

Resource-Based View (RBV): The Resource-Based View (RBV) explains organisational effectiveness in terms of the availability and strategic utilisation of valuable, rare, and difficult-to-substitute resources (Barney, 1991; Wernerfelt, 1984). In Ghana’s public sector, the theory provides a basis for understanding how institutional capacity and internal audit resources influence governance and internal control effectiveness. Auditors’ professional competence, technical experience, access to relevant information, and analytical tools enhance their ability to identify control weaknesses, assess compliance, and promote accountability (Jaber et al., 2024). Similarly, adequately resourced internal audit departments are better positioned to support governance processes and improve audit effectiveness (Ismail et al., 2023; Hamzah et al., 2022). However, resource availability alone may not guarantee effective controls if political interference, inadequate management support, or weak institutional oversight restricts the use of those resources. RBV therefore provides a relevant theoretical foundation for examining how auditors’ competence, resource availability, management support, and audit committee support contribute to internal control effectiveness in Ghana’s public sector. In this study, RBV explains internal control effectiveness as dependent partly on the availability and strategic deployment of institutional resources and internal audit capabilities within Ghana’s public sector.

Agency Theory: Agency Theory, developed by Jensen and Meckling (1976), explains the relationship between principals who delegate responsibilities and agents entrusted with managing resources and achieving specified objectives. In Ghana’s public sector, citizens act as principals, while public officials and institutional managers serve as agents responsible for managing public resources and delivering public services (Nadirsyah-Indriani & Mulyany, 2024; Bjurstrøm, 2020). However, information asymmetry, conflicting interests, and weak accountability may encourage agents to prioritise personal or political interests over public objectives (Hamawandy & Omer, 2020). Internal controls help address these agency problems by strengthening compliance, safeguarding public assets, improving accountability, and reducing opportunities for resource misuse (Albaity et al., 2021; Hamawandy & Omer, 2020).

Within the context of public sector governance and internal control effectiveness in Ghana, Agency Theory provides a basis for examining how political and institutional factors influence monitoring, accountability, and control enforcement. Management support, audit committee oversight, adequate resources, auditor competence, independence and objectivity, and collaboration with external auditors can strengthen internal control implementation. However, their effectiveness may be undermined by political interference, inadequate institutional capacity, and weak enforcement of audit recommendations. The theory therefore highlights the importance of governance arrangements that promote independent oversight, transparent decision-making, and accountability in public institutions.

Applied to this study, Agency Theory explains how political and institutional factors influence internal control effectiveness in Ghana by shaping the monitoring, independence, and accountability mechanisms through which public officials are held responsible for managing public resources. In linking the two theories together, the Resource-Based View explains how auditors' competence, technological tools, and institutional resources strengthen internal control effectiveness, while Agency Theory explains how auditing and oversight mechanisms promote accountability and constrain the misuse of public resources (Barney, 1991; Wernerfelt, 1984; Jensen & Meckling, 1976). In general, the theories demonstrate how resource capacity and political and institutional factors interact to shape public sector governance and internal control effectiveness in Ghana, particularly where political interference, inadequate institutional support, and weak enforcement undermine accountability. Agency Theory explains the need for monitoring and accountability, while this study applies the theory to the political and institutional conditions that shape the practical effectiveness of internal controls in Ghana's public sector. Its central proposition is that formal oversight mechanisms alone may be insufficient; their effectiveness also depends on managerial commitment, adequate resources, professional independence and an institutional environment capable of enforcing accountability.

METHODS

This study employed a quantitative survey design to examine public sector governance and internal control effectiveness in Ghana, with particular emphasis on political and institutional factors. The study targeted audit committee members, internal auditors, and external auditors associated with ministries, departments and agencies (MDAs) in the Greater Accra Region. The region was selected because it serves as Ghana's administrative and governance centre and hosts the headquarters of many public institutions. It also provides a relevant setting for examining public financial accountability because of its concentrated economic activities and considerable potential for internally generated revenue (Amoah & Tetteh, 2025; Laryea, 2026). Despite this potential, public institutions continue to encounter revenue mobilisation and financial management challenges, including revenue leakages, property rate evasion, unauthorised fee waivers, and inadequate enforcement (Asare & Boateng, 2025; Ghana Audit Service, 2025). These circumstances make the region relevant for investigating the institutional and political conditions influencing internal control effectiveness. A total of 176 respondents participated in the study, comprising 95 audit committee members, 66 internal auditors, and 15 external auditors. The process for arriving at the total of 176 respondents is as follows**:**

$N = n_1 + n_2 + n_3 = 95 + 66 + 15 = 176$

Where:

- N = total number of respondents
- n_1 = audit committee members (95)
- n_2 = internal auditors (66)
- n_3 = external auditors (15)

$N = \Sigma n_i = 95 + 66 + 15 = 176$, where $i = 1, 2, 3$

The selection of these three groups enabled the study to capture perspectives from operational, supervisory, and external assurance functions. Eligibility was based on respondents' professional experience, involvement in audit-related decision-making, and familiarity with public sector accountability frameworks. These criteria were intended to ensure that participants could provide informed responses concerning the implementation and monitoring of internal controls. Purposive sampling was appropriate for accessing information-rich participants with specialised knowledge; however, the current study acknowledged its limitation as it introduced selection bias and did not provide every eligible individual with a known probability of selection (Serra et al., 2018). Consequently, the findings are interpreted primarily in relation to the participating respondents and the institutional context studied rather than as statistically representative of all Ghanaian public institutions. As stated earlier, the Greater Accra Region serves as Ghana's administrative and governance centre and hosts the headquarters of many public institutions hence the researcher argues selecting Greater Accra Region is somehow representative (Amoah & Tetteh, 2025; Laryea, 2026).

Data were collected using a structured questionnaire developed from conceptual constructs and measurement approaches reported in previous studies. Questionnaire items were adapted from instruments used by Fonseca and Jorge (2020) and Udeh and Clement (2016), with modifications intended to reflect the Ghanaian public sector context. The instrument was organised into sections covering respondents' demographic and professional characteristics and the governance and institutional factors associated with internal control effectiveness. A five-point Likert scale was used to measure attitudinal responses, ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The questionnaire underwent expert review and pilot testing to improve item clarity, relevance, and contextual appropriateness. The pilot involved ten participants, comprising five audit committee members and five academics specialising in accounting. Participants assessed the completeness, relevance, and clarity of the questions, and unclear or overlapping items were revised in response to their feedback.

Internal consistency reliability was assessed using Cronbach's alpha. The reported coefficient for Section C was 0.81, exceeding the commonly used minimum benchmark of 0.70 and indicating satisfactory internal consistency for the items assessed (Taber, 2018). Data were coded and analysed using the Statistical Package for the Social Sciences (SPSS), Version 22. Descriptive statistics were used to summarise respondents' professional and demographic characteristics and the distribution of responses to the study variables. Construct scores and their associated reliability coefficients were examined to assess the consistency of the measurement scales. Logistic regression was subsequently employed to estimate the associations between the selected political and institutional predictors and the binary dependent variable representing internal control effectiveness.

This technique is appropriate when the outcome is binary and the objective is to estimate the relationship between that outcome and multiple explanatory variables (Hosmer et al., 2013). Ethical consideration ensured voluntary participation, informed consent, confidentiality, and responsible handling of respondents' information. Participants received an explanation of the study's purpose, the nature of their involvement, and their right to decline participation or withdraw where applicable without penalty. The questionnaire avoided collecting personally identifying information and all information collected was securely stored and accessed only for authorised research purposes. Results have been reported in aggregate form, with care taken to prevent the identification of individual respondents or institutions through their professional roles or responses.

RESULTS

The results are presented below;

Table 1: Demographic and Socio-Economic Characteristics of Respondents

Variable	Category	Percentage (%)
Gender	Male	60.23
	Female	39.77
Age	31–40 years	26.70
	41–50 years	56.82
Educational Qualification	Bachelor's degree	44.88
	Master's degree	35.23
Professional Qualification	CA (GH)	55.68
	ACCA	14.77
	CIMA	2.84
	No professional qualification	26.71
Audit Committee Experience	Less than 1 year	19.32
	1–3 years	51.70
	4–6 years	21.02
	7–10 years	7.39

Source: Field Data, 2026

The demographic and socioeconomic features of the respondents suggest that 60.23% are male and 39.77% are female. In terms of age distribution, the highest proportion (56.82%) is between 41 and 50 years old, followed by 31 and 40 years old (26.70%), showing that the sample is largely made up of middle-aged people. They are highly educated, with the majority having a Bachelor's degree (44.88%) or a Master's degree (35.23%). The majority of respondents (55.68%) possess a CA(GH) qualification, followed by ACCA (14.77%) and CIMA (2.84%), with 26.71% holding no professional qualification. The majority of audit committee members have one to three years of experience (51.70%), with smaller groups having less than a year (19.32%), four to six years (21.02%), or seven to ten years (7.39%). Per the description, the group is middle-aged, professionally engaged, well-educated, and has some experience in audit-related positions.

Dependent Variable Encoding

Internal control effectiveness is a dichotomous dependent variable, with "0" denoting ineffectiveness and "1" denoting effectiveness (Table 2). Based on organisational and professional factors, binary logistic regression was used to calculate the probability that internal audit processes are effective (Wooldridge, 2010). This method is suitable since it takes into account the non-linear relationship between predictors and the result and ensures that projected probabilities stay within [0, 1]. Internal control effectiveness was specified as a dichotomous dependent variable, coded 0 for ineffective and 1 for effective internal control. The classification was intended to distinguish respondents' assessments of internal control effectiveness into two mutually exclusive categories. The classification table indicates that the sample comprised 176

respondents, of whom 94 were classified as having ineffective internal control and 82 as having effective internal control. These figures represent 53.4% and 46.6% of the sample, respectively.

Table 2: Dependent Variable Encoding

Original value	Internal value
Ineffective	0
Effective	1

Source: Field Data, 2026

Model Fit and Diagnostics

The predictors collectively increase model fit over the null model, as confirmed by the very significant Omnibus Test of Model Coefficients ($\chi^2 = 124.091$, df = 6, $p < 0.001$). Strong explanatory power is indicated by the -2 Log Likelihood of 119.078, Cox & Snell $R^2 = 0.506$, and Nagelkerke $R^2 = 0.676$. There was no indication of a poor match, according to the Hosmer Leme show goodness-of-fit test ($\chi^2 = 3.777$, df = 8, p = 0.877) (Fisher et al., 2019). Before estimation, multicollinearity among the six explanatory variables was assessed using tolerance and variance inflation factor (VIF) statistics. The reported tolerance values ranged from 0.84 to 0.92, while VIF values ranged from 1.09 to 1.19, suggesting no serious multicollinearity among the predictors (Hair et al., 2019). The overall model was statistically significant according to the Omnibus Test of Model Coefficients ($\chi^2 = 124.091$, df = 6, $p < 0.001$), indicating that the six predictors jointly improved model fit relative to the intercept-only model.

The reported −2 Log Likelihood was 119.078, while the Cox and Snell and Nagelkerke pseudo-R^2 values were 0.506 and 0.676, respectively. These pseudo-R^2 statistics indicate the model's relative explanatory performance but should not be interpreted as the exact proportion of variance explained in the same manner as ordinary least squares R^2. The Hosmer–Lemeshow test was non-significant ($\chi^2 = 3.777$, df = 8, p = 0.877), indicating no evidence of poor calibration according to this test (Fisher et al., 2019). The classification results showed an overall accuracy of 84.7%. The model correctly classified 82 of the 94 observed ineffective cases (87.2%) and 67 of the 82 observed effective cases (81.7%). These results indicate that the fitted model discriminated between the two observed categories reasonably well within the study sample.

Table 3: Model Fit and Diagnostic Statistics

Statistics	Value
-2 Log Likelihood	119.078
Cox & Snell R^2	0.506
Nagelkerke R^2	0.676
Omnibus χ^2 (df = 6)	124.091, $p < 0.001$
Hosmer-Lemeshow χ^2 (df = 8)	3.777, p = 0.877

Source: Field Data, 2026

Multicollinearity Assessment

Predictor variables were evaluated for multicollinearity using variance inflation factor (VIF) and tolerance prior to estimation. There was no significant multicollinearity, since all variables had tolerance values >0.8 and VIF <1.2 (Hair et al., 2019).

Table 4: Classification, Hierarchical Logistic Regression and Multicollinearity Diagnostics

Panel A: Hierarchical entry, odds ratios and collinearity					
Step	**Predictor**	**Exp(B)**	**Sig.**	**Tolerance**	**VIF**
1	Management support	5.324	0.003	0.92	1.09
1	Audit committee support	7.730	<0.001	0.87	1.15
2	Availability of resources	5.021	0.004	0.84	1.19
2	Internal auditors' competence	6.178	0.001	0.91	1.10
3	Internal auditors' independence and objectivity	7.162	<0.001	0.90	1.11
3	Collaboration between internal and external auditors	2.739	0.038	0.88	1.14
	Constant	n/a	n/a	n/a	n/a
Panel B: Classification results (Step 1 model)					
Observed	**n**	**Predicted Ineffective**	**Predicted Effective**	**% Correct**	
Ineffective	94	82	12	87.2	
Effective	82	15	67	81.7	
Overall	**176**	**97**	**79**	**84.7**	

Source: Field Data, 2026

From Table 4 above, all six predictors are statistically significant at the 5% level, and each has an odds ratio above one. Higher levels of each governance factor are therefore associated with higher odds of effective internal control, holding the other predictors constant. Audit committee support (Exp(B) = 7.730, $p < 0.001$) has the largest effect. Each unit increase is associated with roughly 7.7 times the odds of effective internal control. Independence and objectivity follow (7.162, $p < 0.001$). These two point to oversight and auditor impartiality as the strongest drivers of control effectiveness, consistent with agency-theory arguments that independent monitoring limits opportunistic behaviour in public institutions. Internal auditors' competence (6.178, $p = 0.001$), management support (5.324, $p = 0.003$) and availability of resources (5.021, $p = 0.004$) form a middle group. Each is associated with five to six times higher odds. This suggests that technical skill, leadership commitment and adequate resourcing all matter, which fits a resource-based view of organisational capability. Internal and external auditor collaboration has the weakest effect (2.739, $p = 0.038$). It is significant.

On collinearity, tolerance values range from 0.84 to 0.92 and VIFs from 1.09 to 1.19. These are well within the usual cut-offs (tolerance above 0.10 and VIF below 10). The predictors therefore share little overlapping variance, and the odds ratios are not distorted by multicollinearity. Resource availability has the lowest tolerance (0.84) and highest VIF (1.19). The model correctly classifies 149 of 176 cases, an overall accuracy of 84.7%. Of the 94 ineffective cases, 82 are correctly identified (87.2%, specificity). Of the 82 effective cases, 67 are correctly identified (81.7%, sensitivity). There are 12 false positives and 15 false negatives, so errors are spread fairly evenly. The 84.7% figure compares favourably with the 53.4% predicting the larger category (ineffective). The result is also consistent with the strong fit (Nagelkerke $R^2 = 0.676$). For Ghanaian public sector institutions, the evidence points to strengthening audit committees and protecting auditor independence as the priorities, followed by competence, management support and resources, with collaboration as a useful but secondary measure.

Table 5: Governance, Political and Institutional Factors Predicting Internal Control Effectiveness

Domain	Predictor	Direction	B	Exp(B)	95% CI	p	Rank (by |B|)	Robust at 1%?	Survives Bonferroni (m = 9)?
Governance	Audit committee support	+	2.045	7.730	2.824–21.15	<0.001	1	Yes	Yes
Governance	Independence & objectivity	+	1.969	7.162	2.575–19.92	<0.001	2	Yes	Yes
Governance	Internal auditors' competence	+	1.821	6.178	2.187–17.46	0.001	3	Yes	Yes
Governance	Management support	+	1.672	5.324	1.772–16.00	0.003	4	Yes	Yes
Governance	Availability of resources	+	1.614	5.021	1.699–14.84	0.004	5	Yes	Yes
Political/ Institutional	Weak enforcement	−	−1.280	0.278	0.122–0.633	0.002	6	Yes	Yes
Political/ Institutional	Political interference	−	−1.100	0.333	0.155–0.715	0.005	7	Yes	Yes

Governance	Internal/ external collaboration	+	1.007	2.739	1.057–7.096	0.038	8	No	No
Political/ Institutional	Institutional constraints	−	−0.910	0.403	0.199–0.815	0.011	9	No	No

Source: Field Data, 2026

Table 5 examined the effects of governance, political and institutional factors on internal control effectiveness in Ghana's public sector. The results identify five positive governance predictors, led by audit committee support (B=2.045), OR = 7.730, (p<0.001), followed by independence and objectivity (B=1.969), OR = 7.162, (p<0.001), internal auditors' competence (B=1.821), OR = 6.178, (p=0.001), management support (B=1.672), OR = 5.324, (p=0.003), and availability of resources (B=1.614), OR = 5.021, (p=0.004). These findings indicate that stronger oversight, professional independence, technical competence, managerial commitment, and adequate resources are associated with higher odds of effective internal control. Audit committee support records the largest positive coefficient, highlighting the potential importance of active monitoring, accountability, and follow-up of audit recommendations. Conversely, weak enforcement (B=-1.280), OR = 0.278, (p=0.002) and political interference (B=-1.100), OR = 0.333, (p=0.005) are negatively associated with effectiveness, suggesting that inconsistent enforcement and undue political influence may weaken compliance, auditor independence, and the implementation of corrective measures. The odds ratios indicate approximately 72.2% lower odds of effectiveness for a one-unit increase in weak enforcement and 66.7% lower odds for a one-unit increase in political interference, assuming higher scores represent greater levels of these adverse conditions and other model variables are held constant.

The remaining predictors show comparatively weaker statistical evidence. Internal/external auditor collaboration has a positive association with internal control effectiveness (B=1.007), OR = 2.739, (p=0.038), suggesting that information sharing and coordination may improve audit coverage and follow-up, although the result does not meet the 1% significance threshold or survive the reported Bonferroni correction. Institutional constraints also have a negative association (B=-0.910), OR = 0.403, (p=0.011), indicating approximately 59.7% lower odds of effectiveness for a one-unit increase in constraints, subject to the same coding assumptions; however, this result likewise fails to meet the stricter significance criteria. Generally, seven predictors are reported as significant at the 1% level and as surviving the Bonferroni correction across nine comparisons, with an adjusted threshold of approximately 0.0056 when the family-wise significance level is 0.05. The results therefore place particular emphasis on audit committee support, auditor independence and competence, management commitment, resource availability, effective enforcement, and protection against political interference. Strengthening these areas may help improve public-sector accountability and control implementation.

Table 6: Diagnostic and Predictive-Validation Evidence

The following statistics treats effective internal control as the positive outcome.

Diagnostic Measure	Calculation	Result
True positives	Correctly predicted effective cases	67
True negatives	Correctly predicted ineffective cases	82
False positives	Ineffective cases predicted as effective	12
False negatives	Effective cases predicted as ineffective	15
Sensitivity	67 / (67 + 15)	81.7%
Specificity	82 / (82 + 12)	87.2%
Positive predictive value	67 / (67 + 12)	84.8%
Negative predictive value	82 / (82 + 15)	84.5%
Balanced accuracy	(81.7% + 87.2%) / 2	84.5%
F1-score	2 × 67 / (2 × 67 + 12 + 15)	83.2%
Overall accuracy	(67 + 82) / 176	84.7%
Majority-class baseline accuracy	94 / 176	53.4%

Source: Field Data, 2026

Table 6 indicates that the model demonstrates good predictive performance in classifying internal control effectiveness. The diagnostic and predictive-validation results provide further evidence of the model's performance within the observed sample. Using effective internal control as the positive outcome, sensitivity was 81.7%, indicating that the model correctly identified 67 of the 82 respondents classified as having effective internal controls. Specificity was 87.2%, indicating that 82 of the 94 respondents classified as having ineffective internal controls were correctly identified. The positive predictive value was 84.8%, while the negative predictive value was 84.5%. Balanced accuracy was approximately 84.5%, and the F1-score was 83.2%. The model's overall accuracy of 84.7% exceeded the 53.4% accuracy obtained by simply predicting the majority category, ineffective internal control, for every respondent. This comparison suggests that the fitted model classified the observed cases substantially better than that simple baseline. Nevertheless, these figures measure performance on the same sample used to estimate the model.

Table 7: Sensitivity Analysis and Robustness Checks

Predictor	Wald (Reporte)	Wald (Recomputed)	Exp(B) (Reported)	Exp(B) (Recomputed)	95% CI(Reported)	95% CI(Recomputed)
Management Support	8.875	8.88	5.324	5.32	1.772–16.00	1.77–15.99
Audit Committee Support	15.851	15.83	7.730	7.73	2.824–21.15	2.82–21.17
Availability of Resources	8.516	8.52	5.021	5.02	1.699–14.84	1.70–14.84
Internal Auditors' Competence	11.808	11.80	6.178	6.18	2.187–17.46	2.19–17.46
Independence & Objectivity	14.229	14.23	7.162	7.16	2.575–19.92	2.58–19.93
Internal/External Collaboration	4.301	4.29	2.739	2.74	1.057–7.096	1.06–7.10
Political Interference	7.954	7.95	0.333	0.33	0.155–0.715	0.16–0.72
Weak Enforcement	9.288	9.29	0.278	0.28	0.122–0.633	0.12–0.63
Institutional Constraints	6.390	6.39	0.403	0.40	0.199–0.815	0.20–0.82

Source: Field Data, 2026

Table 7 presents the sensitivity analysis and robustness checks, demonstrating the consistency of the factors influencing internal control effectiveness. The sensitivity check recomputed each Wald statistic, odds ratio and 95% confidence interval from the original coefficients and standard errors. The 5% significance level (z = 1.96) was the decision rule. The recomputed values matched the reported ones apart from rounding differences. Management support (OR = 5.32), audit committee support (OR = 7.73), resource availability (OR = 5.02), auditors' competence (OR = 6.18), and independence and objectivity (OR = 7.16) positively influence the outcome. Audit committee support records the strongest positive association, followed by independence and objectivity, suggesting that effective oversight and auditor autonomy are particularly important. Internal and external collaboration also exhibits a positive association (OR = 2.74), although its influence is comparatively weaker. Conversely, political interference (OR = 0.33), weak enforcement (OR = 0.28), and institutional constraints (OR = 0.40) negatively influence the outcome, indicating that these barriers reduce the likelihood of effective internal control. The reported 95% confidence intervals for all predictors exclude 1.00, suggesting statistically significant associations at the 5% level. The findings indicate that the results are robust, highlighting the importance of strengthening institutional support, professional competence, independence, and collaboration while addressing political interference, enforcement weaknesses, and institutional barriers.

Table 8: Sensitivity to the Significance Threshold and Multiple-Testing

Predictor	p-value (from Wald)	α = 0.10	α = 0.05	α = 0.01	α = 0.001	Bonferroni (m = 9; α = 0.0056)
Management support	0.003	Sig.	Sig.	Sig.	No	Sig.
Audit committee support	<0.001	Sig.	Sig.	Sig.	Sig.	Sig.
Availability of resources	0.0035	Sig.	Sig.	Sig.	No	Sig.
Internal auditors' competence	0.0006	Sig.	Sig.	Sig.	Sig.	Sig.
Independence & objectivity	0.0002	Sig.	Sig.	Sig.	Sig.	Sig.
Internal/external collaboration	0.0383	Sig.	Sig.	No	No	No
Political interference	0.0048	Sig.	Sig.	Sig.	No	Sig.
Weak enforcement	0.0023	Sig.	Sig.	Sig.	No	Sig.
Institutional constraints	0.0115	Sig.	Sig.	No	No	No

Source: Field Data, 2026

Table 8 examines the robustness of the predictors' statistical significance under different significance thresholds and the Bonferroni correction. The results indicate that seven predictors remain significant at the 1% level, while audit committee support, internal auditors' competence, and independence and objectivity remain significant even at the stricter 0.1% threshold. Under the Bonferroni-adjusted threshold of 0.0056, seven predictors remain significant, namely management support, audit committee support, availability of resources, internal auditors' competence, independence and objectivity, political interference, and weak enforcement. The findings essentially demonstrates that most predictors are robust to stricter significance criteria, reinforcing the reliability of their observed associations.

DISCUSSION OF RESULTS

The findings indicate that internal control effectiveness in Ghanaian public sector institutions is associated with organisational governance, professional capacity, resource availability, political influence and institutional enforcement. The binary logistic regression model was statistically significant ($\chi^2 = 124.091$, df = 6, $p < 0.001$), while the Nagelkerke R^2 of 0.676 indicated substantial explanatory performance within the fitted model. The Hosmer–Lemeshow test ($\chi^2 = 3.777$, df = 8, $p = 0.877$) showed no evidence of poor model fit. Furthermore, tolerance values of 0.84–0.92 and VIF values of 1.09–1.19 suggested that multicollinearity was not a serious concern. These results provide a basis for interpreting the relationships between the

explanatory variables and internal control effectiveness, although the pseudo-R^2 statistics should not be interpreted as the exact proportion of variance explained. The findings are consistent with the view that effective internal control depends on organisational capacity, appropriate oversight and the consistent implementation of accountability procedures (Grima et al., 2023; Khelil & Khlif, 2022; Ratmono & Darsono, 2022).

Audit committee support recorded the strongest positive association with internal control effectiveness (Exp(B) = 7.730, $p < 0.001$), followed by auditor independence and objectivity (Exp(B) = 7.162, $p < 0.001$), internal auditors' competence (Exp(B) = 6.178, $p = 0.001$), management support (Exp(B) = 5.324, $p = 0.003$), and resource availability (Exp(B) = 5.021, $p = 0.004$). These findings suggest that effective oversight, professional autonomy, technical competence, management commitment and adequate operational resources are important correlates of internal control effectiveness. From an agency-theory perspective, audit committee support and auditor independence may strengthen monitoring and accountability by reducing opportunities for decisions that conflict with institutional interests (Jensen & Meckling, 1976). The results also align with the resource-based view, which emphasises the importance of organisational capabilities and resources in achieving institutional objectives (Barney, 1991; Wernerfelt, 1984).

These implications are consistent with previous research highlighting the contribution of institutional oversight, professional competence and management cooperation to effective control arrangements (Alqudah et al., 2023; Asare Baffour et al., 2020; Grima et al., 2023). Collaboration between internal and external auditors also showed a positive association with internal control effectiveness (Exp(B) = 2.739, $p = 0.038$). Appropriate information sharing, coordination of audit activities and follow-up of recommendations may improve assurance arrangements, provided that each audit function retains its distinct responsibilities and professional independence (Alqudah et al., 2023; Coetzee et al., 2023; Irwansyah & Zega, 2023). The findings therefore support collaboration as a complementary governance measure, while indicating that stronger statistical evidence exists for audit committee support, independence, competence, management support and resource availability.

The political and institutional results further demonstrate the importance of the wider accountability environment. Weak enforcement was negatively associated with internal control effectiveness (Exp(B) = 0.278, $p = 0.002$), as was political interference (Exp(B) = 0.333, $p = 0.005$). Assuming that higher scores represent greater levels of these adverse conditions, the odds ratios indicate approximately 72.2% and 66.7% lower odds of effective internal control, respectively, for a one-unit increase in weak enforcement and political interference, holding other model variables constant. These associations suggest that inadequate enforcement and undue political influence may undermine compliance, independent oversight and the implementation of corrective measures. Agency theory provides a relevant explanation because competing political or personal interests may weaken monitoring and divert institutional decisions from established accountability requirements (Jensen & Meckling, 1976). The practical implication is that public institutions should apply control procedures consistently, protect audit professionals from undue interference and strengthen follow-up mechanisms for identified deficiencies. These interpretations are consistent with research emphasising the importance of institutional accountability and the implementation of audit recommendations (Afadzinu et al., 2024; Ghana Audit Service, 2025; Oppong & Fofack, 2023).

Institutional constraints also exhibited a negative association with internal control effectiveness (Exp(B) = 0.403, $p = 0.011$). This corresponds to approximately 59.7% lower odds of effectiveness for a one-unit increase in institutional constraints, assuming higher scores indicate greater constraints and other predictors remain constant. The result highlights the potential relevance of institutional conditions to the operation of internal controls. Previous research has similarly associated organisational and structural limitations with difficulties in maintaining effective accountability arrangements (Agyemang et al., 2023; Quampah et al., 2021). From a resource-based perspective, institutional limitations may restrict the capacity to implement established procedures consistently (Barney, 1991; Wernerfelt, 1984). The sensitivity analysis and multiple-testing results provide further evidence regarding the stability of the reported associations. According to Table 8, seven predictors remain significant at the 1% level: management support, audit committee support,

resource availability, internal auditors' competence, independence and objectivity, political interference, and weak enforcement. Three predictors—internal auditors' competence, independence and objectivity, and audit committee support—also meet the stricter 0.1% threshold. Under the Bonferroni-adjusted threshold of approximately 0.0056, seven predictors remain significant, while internal/external auditor collaboration and institutional constraints do not. This pattern reinforces the statistical evidence for the principal governance factors and the adverse associations of political interference and weak enforcement.

On the whole, the findings suggest that internal control effectiveness in Ghanaian public sector institutions is associated with both internal governance arrangements and the wider political-institutional environment. Audit committee support, auditor independence and objectivity, competence, management support and resource availability demonstrate positive associations, whereas political interference and weak enforcement show negative associations that remain statistically significant under the reported Bonferroni correction. These findings support an integrated approach to strengthening internal control through effective oversight, professional independence, adequate resources, competent personnel and consistent enforcement of established procedures.

CONCLUSION AND RECOMMENDATIONS

This study examined public sector governance and internal control effectiveness in Ghana, with particular emphasis on the role of political and institutional factors. The findings indicate that effective internal control is associated with the quality of institutional oversight, professional independence, staff competence, management support, resource availability and the broader enforcement environment. The statistically significant logistic regression model, together with the reported goodness-of-fit and multicollinearity diagnostics, provides evidence that the selected predictors are jointly relevant to explaining differences in the observed internal control outcome. The study identifies audit committee support as the strongest positive predictor among the reported governance factors, followed by auditor independence and objectivity, internal auditors' competence, management support and resource availability. These findings suggest that internal control effectiveness is more likely to be associated with an institutional environment in which oversight bodies actively perform their responsibilities, auditors exercise independent professional judgement, personnel possess the necessary skills, management cooperates with control functions and adequate operational resources are available. The findings also suggest that formal control structures require practical institutional support to function effectively.

The analysis further establishes that weak enforcement and political interference are negatively associated with internal control effectiveness. These relationships remain statistically significant under the reported Bonferroni-adjusted threshold, highlighting the importance of consistent compliance, impartial oversight and the implementation of corrective measures. Institutional constraints also show a negative association, although the result is less robust under stricter significance criteria. Accordingly, the findings justify prioritising the governance factors, political interference and weak enforcement while treating institutional constraints and auditor collaboration as additional areas requiring attention. The findings are relevant to agency theory because they demonstrate the importance of monitoring, independent scrutiny and accountability in public institutions. They also relate to the resource-based view by highlighting the contribution of professional competence, management support and resource availability to the operation of internal control systems. The study therefore contributes to the understanding of public sector governance by examining organisational and political-institutional factors within a common analytical context.

The results also compliment previous research addressing internal auditing, financial reporting, procurement technologies and institutional accountability. For example, Abdulai et al. (2021) examined internal auditing and financial reporting in universities, Denny et al. (2024) investigated audit technologies in procurement practices, and Afadzinu et al. (2024) highlighted political influence, institutional mandates and coordination challenges in public financial management. Gbambegu Umar et al. (2025) further identified a significant mediating role for political interest in the relationship between internal control systems and financial management in Ghanaian local government authorities. The present study extends this discussion by considering the reported associations of governance, political interference and weak enforcement with

internal control effectiveness. Conclusively, strengthening internal control in Ghana's public sector requires more than the formal adoption of control procedures. It requires effective audit committee oversight, professional independence, competent personnel, management commitment, adequate resources and consistent enforcement of established requirements. It also requires institutions to address political interference and operational constraints that may weaken implementation. Based on the findings, the following recommendations are proposed:

- **Strengthening audit committee oversight:** Public institutions should ensure that audit committees operate actively and independently, review internal control weaknesses, monitor management responses and follow up on outstanding audit recommendations. Since audit committee support recorded the strongest positive association with internal control effectiveness (Exp(B) = 7.730, $p < 0.001$), strengthening the practical performance of these committees should be a major governance priority.

- **Protect the independence and objectivity of internal auditors:** Appropriate reporting arrangements should enable internal auditors to communicate findings without undue political or administrative pressure. Public institutions should establish clear procedures for reporting interference and ensure that complaints are reviewed through appropriate independent channels. This recommendation follows from the strong positive association between independence and objectivity and internal control effectiveness (Exp(B) = 7.162, $p < 0.001$).

- **Improve auditors' competence through continuous professional development:** Public sector institutions should provide regular training in risk assessment, compliance monitoring, financial reporting, fraud-risk identification, information systems and audit methodologies. Where appropriate, institutions should support professional certification, mentoring and knowledge sharing. Internal auditors' competence recorded a positive association with internal control effectiveness (Exp(B) = 6.178, $p = 0.001$), supporting continued investment in professional capacity.

- **Increase management commitment and accountability:** Heads of public institutions and departmental managers should demonstrate active commitment to internal control by providing timely information, facilitating access to records, allocating responsibilities clearly and responding promptly to audit findings. Progress should be reviewed periodically by the relevant oversight bodies. These measures are supported by the positive association between management support and internal control effectiveness (Exp(B) = 5.324, $p = 0.003$).

- **Provide adequate resources for internal control operations:** Public institutions should assess the staffing, funding, equipment, information systems and logistical support required by their internal audit and financial control units. Where staffing or funding is constrained, institutions should prioritise high-risk transactions and critical control activities without abandoning essential independent checks. This recommendation is consistent with the positive association between resource availability and internal control effectiveness (Exp(B) = 5.021, $p = 0.004$).

- **Strengthen enforcement and follow-up of audit recommendations:** Public accountability bodies and institutional management should establish clear procedures for tracking audit findings, monitoring compliance and ensuring that corrective actions are completed within reasonable deadlines. Compliance status should be documented and reported to the appropriate oversight authorities. The negative association between weak enforcement and internal control effectiveness (Exp(B) = 0.278, $p = 0.002$) makes consistent implementation and follow-up a key priority.

- **Strengthen the role of the Ghana Audit Service and other accountability institutions:** The Ghana Audit Service and relevant public accountability bodies should continue to identify recurring control deficiencies while encouraging systematic examination of their underlying causes. The emphasis should be on ensuring that identified deficiencies lead to appropriate corrective action rather than relying solely on the publication of audit findings.

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