

Reciprocal internal audit relationships and governance effectiveness in public higher education: A mixed-methods study from Ghana

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Abstract

This study examines the effectiveness of the internal audit function (IAF) in promoting good corporate governance through its reciprocal relationships with three key governance actors, namely the University Council and Audit Committee, Executive Management, and External Auditors, within a Ghanaian public university context. The University of Mines and Technology (UMaT) serves as the empirical setting. An explanatory sequential mixed-methods design was employed, combining structured Likert-scale questionnaires administered to 40 purposively selected staff members, achieving a 100% response rate, with semi-structured interviews conducted with 10 key informants. Quantitative data were analyzed using descriptive statistics in Microsoft Excel, while qualitative data underwent reflexive thematic analysis using NVivo. The findings reveal a strong and functional relationship between the IAF and both the University Council and Audit Committee (mean = 4.5) and Executive Management (mean = 4.1), confirming that these relational dimensions significantly contribute to institutional transparency, accountability, and oversight. Both Hypothesis 1 and Hypothesis 2 were accepted. However, a recurring and critical operational gap emerges across both governance relationships: despite strong strategic rapport, resource and logistical adequacy scores are consistently moderate, with mean values of 2.8 and 2.5, respectively, indicating that relational goodwill has not translated into sufficient staffing, budgetary allocation, or capacity-building support. The relationship between the IAF and External Auditors is characterized as moderate overall (mean = 3.1), with critically low scores for joint audit planning (mean = 1.3) and periodic risk-assessment meetings (mean = 1.1), identifying a significant coordination deficit that generates duplication of effort, elevated audit costs, and missed assurance opportunities. Hypothesis 3 was also accepted based on existing interaction, though the quality and depth of that interaction fall short of professional standards. The study offers actionable recommendations for university governance structures in emerging economies, including formalized joint audit planning protocols, increased budgetary commitments to internal audit capacity, and governance reforms that convert strategic support into operational empowerment. The findings contribute to the growing literature on public sector audit governance

in sub-Saharan Africa and carry direct implications for the Internal Audit Agency of Ghana and policymakers seeking to strengthen audit-governance synergies in tertiary institutions.

Keywords: Internal Audit Function, Corporate Governance, Audit Committee, Executive Management, External Auditors, Public University, Ghana, Mixed-Methods, Audit Independence, Resource Adequacy

JEL Classification: M42, G34, H83

1. Introduction

In the contemporary corporate landscape, robust governance is predicated on seamless coordination and communication between key governance actors: the Board, Audit Committee, Executive Management, and External Auditors. At the heart of this synergy lies the Internal Audit Function (IAF), which provides the essential assurance and risk-based insights necessary for these stakeholders to fulfill their corporate governance mandates. Research suggests that the relationship between the IAF and these actors is fundamentally reciprocal. At the same time, a competent IAF provides the intelligence required for oversight, the Audit Committee and Board, in turn, safeguard the IAF's independence and organizational standing (Soh & Martinov-Bennie, 2018). Professional accounting and auditing standards, particularly as defined by the International Federation of Accountants (IFAC, 2015) and the 2024 Global IA Standards from the Institute of Internal Auditors (IIA), mandate that IA functions build robust relationships with key actors, including the board, audit committee, senior management, and external assurance auditors, to ensure high-quality, value-added audit services

In Ghana, this reciprocity is anchored in rigorous regulatory frameworks, notably the Internal Audit Agency (IAA) Act, 2003 (Act 658), the Public Financial Management (PFM) Act, 2016 (Act 921), and the PFM Regulations, 2019 (L.I. 2378). These statutes mandate the establishment of Internal Audit Units (IAUs) and Audit Committees across public institutions to fortify the governance architecture through interactive responsibilities. Furthermore, the Audit Service Act, 2000 (Act 584) of Ghana improves governance efficiency and effectiveness by fostering coordination between internal and external audit engagement relationships. Despite these legislative safeguards and professional requirements, the effectiveness of the IAF in the Ghanaian public sector is often hampered by systemic constraints, including inadequate management support, limited budgetary autonomy, insufficient staff, limited technological resources, and varying levels of professional proficiency. Empirical evidence highlights a significant implementation gap. Boateng (2020) observed that while internal auditing significantly influences internal controls and risk management, weak operational relationships with the key governance actors, specifically Audit Committees and Executive Management, hinder the actualization of good governance. Moreover, evidence suggests that for the IAF to transcend mere compliance and become a strategic asset, it must transition from a "policing" persona to a collaborative partnership with the Audit Committee, board, senior management, and external auditors (Quampah et al.,

2021, & IIA, 2024). The urgency of this shift is underscored by persistent challenges in Ghanaian public institutions, including recurring audit queries, high corruption risks, and accountability deficits, stemming from IA's ineffective structural and operational relationships. Consequently, there is a dearth of research on the reciprocal dynamics between the IAF and those charged with governance within the unique ecosystem of public university education in Ghana.

Rather than testing pre-existing abstract sociological or economic theories, this study takes a pragmatic, empirically-driven approach to generate actionable insights into real-world governance dynamics. To achieve this, the research employs an exploratory sequential mixed-methods design. In Phase 1, quantitative data maps and explores the phenomenon. Phase 2 then uses qualitative data to explain the initial quantitative findings, ensuring a deep, practice-oriented understanding of how and why these governance relationships function the way they do in practice.

This study investigates whether the IA relationships with the University Council, Audit Committee, Executive Management, and External Auditors are as effective in promoting good corporate governance, ensuring overall governance effectiveness at the university. By positioning the IAF as a strategic partner, this research fills a critical gap in understanding how IA reciprocal relationships with those charged with good governance drive governance quality. The findings offer actionable insights for university administrators and policymakers to enhance audit-governance synergies, dispel negative “policing” misconceptions about the audit function in academia, and provide a foundational framework for the IAA to refine public-sector oversight.

2. Literature Review Hypothesis Development

This section reviews the extant literature to provide a theoretical context for the current study. By examining prior research, the review both highlights the study's relevance and establishes a benchmark for interpreting its findings. Grounded in the conceptual and empirical review process advocated by Creswell (2021), a structured framework is developed to guide the investigation. While existing studies have focused on theoretical frameworks, this paper offers a contextual, empirical contribution to internal audit literature by focusing on practical dynamics. The resulting hypotheses are formulated with respect to specific research gaps and thematic trends observed in the literature.

2.1 Internal Audit Relationship with the Board and the Audit Committee

The IAF relies on a critical dual-reporting structure that links directly to the Board of Directors through the Audit Committee to ensure the independence, authority, and resources necessary for effective operation, in alignment with IIA Standard 8.2 (2024). Acting as a trusted advisor, the IAF offers impartial insights regarding risk, governance, and controls, with the Chief Audit Executive (CAE) reporting directly to the board. The Audit Committee plays a pivotal role in reviewing the effectiveness of the IAF, sanctioning risk-focused plans, and ensuring that management acts on audit findings (IIA, 2023; Smith, 2022). Furthermore, this committee

strengthens the function by ensuring adequate resource allocation and providing strategic guidance to maximize organizational impact (Smith, 2022; Brown & Davis, 2021). In the Ghanaian context, the 2023 Audit Committee guidelines, aligned with the Public Financial Management Act, 2016 (Act 921), legally require these committees to ensure the functional capability of IAUs and oversee the implementation of their reports. To protect independence from management influence regarding audit scope, performance, and reporting, the CAE maintains a functional reporting line to the Audit Committee concerning plans, budgets, and findings. Recommendations from the Treadway Commission (1987) and the IIA (2024) emphasize that the CAE must have direct, unrestricted access to the committee, including private sessions. An effective audit committee goes beyond administrative oversight to actively evaluate the IAF's staffing, qualifications, and organizational structure (Deloitte & Touché, 2005). The committee is responsible for monitoring the function's objectivity, ensuring comprehensive reporting on controls and risk management, while managing any scope, limitations, or disputes with management (Bailey, 2007; Deloitte & Touché, 2005). This relationship is built on mutual support, enabled by aligned charters and direct access to the committee chair (ECIIA, 2005). These works highlight the interaction between these players, noting that IA helps the board discharge its responsibilities. At the same time, the audit committee ensures the IA team is functioning effectively, with all acting under the oversight framework established by management (Sarens, 2007 & Cofie, 2018). The audit committee, as a representative of the board of directors, serves as a central hub connecting IA, management, and external auditors, making them all vital to the organization's control and direction. This collective literature often describes a "virtuous cycle" where the board sets direction, management executes, the audit committee oversees, and IA provides assurance (Al-Baidhani, 2016). The CAE has a professional obligation to directly inform the committee upon discovering significant irregularities involving senior management (ECIIA, 2005). Ultimately, this relationship ensures robust corporate governance, with the committee providing essential oversight, approving the IA charter, and conducting performance evaluations.

H 1. The reciprocal relationship between Internal Audit and the Board/Audit Committee has a significant positive impact on promoting good corporate governance.

2.2 Internal Audit Relationship with Executive Management

While maintaining independence, the IA function collaborates with executive management to provide insights that improve operational performance, all while sustaining objectivity by assuming no direct management responsibilities. Recognized within organizational governance frameworks, management is the primary driver responsible for risk monitoring, mitigation, and control implementation, and setting the "tone at the top" (Treadway, 1987), which significantly influences overall governance quality (ECIIA, 2005). Although management retains ultimate responsibility for governance, risk management, and internal control functions, the IAF provides critical assurance and consulting services by leveraging broad operational expertise to evaluate

efficiency and drive improvement (Hermanson & Rittenberg, 2003). Consequently, a productive relationship with executive management is essential, facilitated by an administrative reporting line to the Chief Executive Officer (CEO). This structure bolsters the Chief Audit Executive's (CAE) independence, facilitates information flow, and ensures unrestricted access to personnel and documentation (ECIIA, 2005). This relationship involves daily communication to ensure efficient IA functioning, specifically regarding budget, resource allocation (office space, staffing), and unrestricted access to operational systems and policies. Asare (2015) and Onumah & Krah (2012) found that in Ghanaian local governance, IAUs are frequently constrained by chronic underfunding, a challenge that directly undermines their operational independence and overall effectiveness. Asare (2016) further reinforces this, suggesting that without dedicated financial support and the provision of necessary tools, the institutional integrity of these units remains compromised. An effective management relationship requires adequate budget releases for operational efficiency. Furthermore, effective governance necessitates management's commitment to implementing audit recommendations promptly, actively monitoring action plans, and keeping the IAF informed regarding changes to the organizational risk profile and policies (ECIIA, 2005; Sarens et al., 2019). The Institute of Chartered Accountants of India (ICAI, 2009) highlights that management relies on internal auditors to ensure robust risk monitoring and process efficiency. This role has evolved into a strategic partnership, leveraging technology for proactive insights and organizational resilience (IIA, 2024; Audit Board, 2025). Internal auditors provide critical, timely observations through continuous communication during planning and advisory processes (ICAI, 2009). Ultimately, the core objective, as outlined by The IIA (2000), is to assist management by providing analyses and recommendations across all business activities, now extending to governance, risk management, and ethical resource management to mitigate modern threats (PKF, 2024; Global Scientific Journal, 2021).

H 2. The reciprocal relationship between Internal Audit and Executive Management has a significant positive impact on promoting good corporate governance.

2.3 Internal Audit Relationship with External Audit

Effective corporate governance relies on a symbiotic relationship between internal and external auditors. While their specific objectives differ, mutual support and open communication are essential to enhance audit quality and strengthen organizational oversight (Gramling & Myers, 2003; ICAI, 2009). Historically, however, research suggests this collaboration is often insufficient; external auditors frequently underutilize the IAF, and the relationship can become adversarial if management fails to foster a cooperative environment (Mubako & Grace, 2019). To address these gaps, professional standards, including IIA Standard 2050 and the updated Global IA Standards (2024), mandate that the Chief Audit Executive (CAE) coordinate activities and share information with external assurance providers. Specifically, Standard 9.5 (coordination and reliance) requires the CAE to align work programs to reduce redundant tasks and optimize resource usage. By

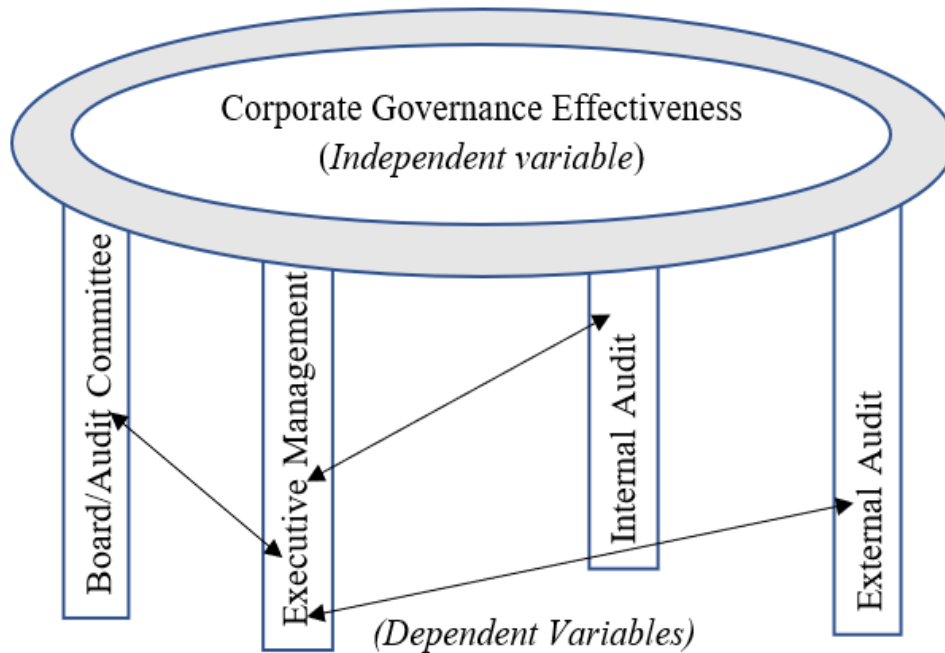
exchanging audit reports and management letters, both parties can create synergy; internal auditors can address control weaknesses flagged by external teams, while external auditors can leverage internal findings to refine their own processes (ECIIA, 2005; Wong et al., 2019). In the public sector, this collaboration is often reinforced by legal frameworks. For instance, Section 11(4) of the Audit Service Act, 2000 (Act 584) requires internal auditors of public institutions to submit all reports to the Auditor General, ensuring findings are formally communicated to the supreme audit institution. Furthermore, the IA Regulations, 2011 (L.I. 1994) emphasize the internal auditor's role in following up on both internal and external recommendations. Ultimately, the board and audit committee must oversee this coordination to ensure comprehensive risk coverage, eliminate duplication, reduce cost, and fulfill the organization's legal and fiduciary obligations. Extensive research and international standards, including the International Auditing and Assurance Standards Board (IAASB, 2013), consistently advocate coordination of internal and external audit functions during the planning phase to enhance audit quality and organizational oversight. According to the International Federation of Accountants (IFAC, 2015), external auditors should evaluate and discuss IA plans to identify key risk areas, ensuring comprehensive coverage while minimizing the duplication of effort. This collaborative approach is further supported by the National Audit Office (2010), which notes that joint planning and clear communication of needs lead to better-coordinated activity. Academic findings suggest that such integration not only reduces overall audit costs but also improves the quality of performance across all audited activities (Shuker, 2012). Furthermore, recent guidance from the OECD and INTOSAI (2024) indicates that regular communication and joint risk evaluation are essential to address the increasing complexity and resource limitations inherent in public-sector accountability.

H 3. There is effective relationship between Internal Audit and the External Auditors in strengthening good corporate governance.

2.4 Conceptual Framework

This conceptual framework maps reciprocal audit relationships, and governance effectiveness at the University of Mines and Technology (UMaT), modeling three distinct independent variables: IA's relationships with the Board and Audit Committee, Executive Management, and External Auditors, to measure their direct impact on the dependent variable: **governance effectiveness**. This framework posits that strengthening IA independence and communication with the Audit Committee ensures high-level oversight. Simultaneously, fostering collaborative, yet independent, interactions with Executive Management enhances operational accountability, while a transparent relationship with External Auditors improves financial reporting quality, all aimed at fostering an environment of accountability and transparency within the university's governance structure. Therefore, the framework measures the IA relationships and governance effectiveness at UMaT.

Figure 2. Conceptual framework



Source: Developed by the author

3. Research Methodology

3.1 Research Design and Methodology

To assess how reciprocal Audit relationship impacts corporate governance effectiveness at the University of Mines and Technology (UMaT), this study employs an explanatory sequential mixed-methods approach. This design was selected to blend quantitative precision with qualitative depth, offering a thorough analysis of the subject. The research was conducted in two phases: first, structured questionnaires (using a 5-point Likert scale) gathered quantitative data on the relationships between the IAF, Audit Committee, Executive Management, and External Auditors, which were then analyzed using descriptive statistics (frequency, mean, and standard deviation). Second, qualitative, semi-structured interviews were conducted with purposively selected staff to provide a deeper context for the initial findings, and the data were analyzed using thematic analysis. Ultimately, both data sets were integrated during interpretation enable triangulation, ensuring that the qualitative insights explained the quantitative trends and yielded a more robust conclusion.

3.2 Data Sources

To guarantee the validity and reliability of the research results, this study employed a triangulation approach, combining both primary and secondary data sources. Primary data was gathered directly from key university staff purposively selected based on their active involvement in governance,

IA, and financial management. This was achieved through structured Likert-scale questionnaires and in-depth interviews, allowing for both quantitative assessment and qualitative insights into the research questions. Secondary data was obtained through a thorough desk review of institutional, statutory, and regulatory documents to contextualize the findings. Key materials reviewed included the IA Charter, IA manuals and reports, annual audit plans, as well as mandatory compliance documents such as the Public Financial Management Act and the Audit Service Act. Furthermore, the analysis incorporated academic journals, international auditing standards (IIA standards), UMaT Vice-Chancellor's reports, and relevant position papers to evaluate findings against global best practices and established benchmarks. This combined approach ensures the findings are grounded in both local practice and wider academic literature.

3.3 Study Population and Sample Size

The target population for this study consisted of key university officers whose job responsibilities entail regular interaction with the IAF. To ensure the collection of accurate, reliable, and relevant data, a purposive sampling technique was employed to select participants holding strategic positions, including top management (principal officers), accountants, internal auditors, deans, directors, and heads of administrative units. A total of forty (40) key officers were purposively selected, as they possess the necessary experience and oversight for the research topic. Data was collected through a combination of distributed questionnaires and, for principal officers, structured interviews. The study achieved a 100% response rate, with all 40 participating respondents. Table 1 provides a detailed breakdown of the respondents based on their roles and positions.

Table 1. Sample Size

SN	Roles/Positions	Number of Respondents
1	Senior Management	6
2	Deans - Heads of Faculties/Schools	5
3	External Auditors	3
4	Internal Auditors	10
5	Accountants	10
7	University Council and Audit Committee	6
	Total	40

Source: Authors Computation

3.4 Sampling Technique

A purposive sampling technique was employed to select 40 respondents at the University of Mines and Technology (UMaT). This non-probability technique was deemed appropriate because it targets individuals whose positions and operational areas provide them with specialized knowledge regarding IA and its role in corporate governance, aligning with Kothari's (2004) assertion that purposive sampling yields deeper insights by selecting the most informative participants. To ensure a comprehensive representation and mitigate response bias, participants were selected across lower, middle, and top management, ensuring the sample was not homogeneous. Furthermore, to address potential performance-evaluation bias, the study ensured that only 10% (n=4) of respondents held direct senior management responsibility for IA effectiveness. The 90% (n=36) were selected across various categories who were not senior management members, thereby enhancing the objectivity of the reporting (Podsakoff et al., 2023). Following the initial quantitative phase, a sub-sample of 10 informants was selected for semi-structured interviews. Selection criteria for this qualitative phase included extreme cases (outliers with very high or low scores) and key informants identified through preliminary analysis as presenting unique patterns or significant predictive trends.

3.5 Data Collection Instrumentation

The study utilized a mixed-methods instrumentation strategy to capture both quantitative and qualitative data. The primary instruments included a self-administered questionnaire designed to measure IA effectiveness metrics and stakeholder relationships (Audit Committee, Executive Management, and External Auditors). The survey comprised two sections: respondent demographics and performance metrics evaluated via a five-point Likert scale (1 = strongly disagree, 5 = totally agree). Semi-Structured Interview Guides were developed to elicit in-depth experiences and contextual insights into the nature of IA-stakeholder relationships that go beyond the scope of standardized scales. Secondary data instruments, including university IA charters, annual reports, and operating manuals, were used to provide a formal framework for validating primary data. The integration of these instruments facilitated data triangulation, ensuring a comprehensive framework for both statistical and thematic analysis.

3.6 Data Collection Procedures

Data collection followed a structured, multi-stage process to ensure robustness. Following institutional approval, Research Assistants were trained on the study instruments and ethical protocols. Data were collected over six weeks using a mixed-methods approach. First, questionnaires were administered to the 40 staff members, both personally and electronically, with a three-week interval for completion. Second, follow-up semi-structured interviews were conducted with 10 informants based on the quantitative outcomes. These sessions, lasting 25 to 40 minutes, were conducted either face-to-face or via video conferencing based on participants' preference and availability. To enhance data quality and validity, findings were triangulated by

cross-referencing primary survey data with qualitative interview insights and secondary evidence. The research team was also trained to probe for inconsistencies during data collection.

3.7 Data Analysis Procedures

This study adopted a mixed-methods approach to examine the reciprocal IA relationships with key governance players (the board and its audit committee, executive management, and the external auditors) in promoting good governance and ensuring overall governance effectiveness. Quantitative survey data were processed using MS Excel to calculate frequencies, percentages, means, and standard deviations, providing a comprehensive description of the study population and key audit variables. Qualitative interview data were analyzed following Braun and Clarke's (2020) reflexive thematic analysis framework. This iterative, six-phase approach, facilitated by "NVivo" (QSR International's qualitative data analysis software) for rigorous coding and data organization, identified key themes regarding IA's contribution to governance. The resulting codes were categorized to enhance the transparency and depth of the analysis. Finally, the quantitative and qualitative findings were integrated to provide a holistic overview, triangulating data to validate findings.

3.8 Data Presentation and Analysis

Data analysis followed a mixed-methods approach, integrating qualitative and quantitative techniques to provide a comprehensive view of the study population. Following the collection, raw responses were transformed into operationalized variables and scores for systematic evaluation. Qualitative data from interviews were analyzed using Braun and Clarke's (2006, 2020) reflexive thematic analysis. This iterative process identified recurring patterns regarding IA contribution to corporate governance. To ensure transparency and rigor, "NVivo" (QSR International's qualitative data analysis software) was utilized for systematic coding and data organization. Quantitative data, focused on the effectiveness of the IA relationship with key governance players (the board and its audit committee, executive management, and the external auditors) in promoting good governance, were processed using Microsoft Excel. Analysis involved descriptive statistics, including frequencies, percentages, means, and standard deviations. Finally, both datasets were triangulated and synthesized, with findings presented through integrated tables and narrative descriptions to ensure a holistic interpretation of the results.

3.9 Ethical Considerations

The integrity of this study was anchored in a rigorous adherence to ethical principles, with a primary focus on participant confidentiality and institutional reputation, which is particularly critical given the sensitive nature of corporate governance data. To encourage transparency and honest disclosure, all participants were provided with explicit assurances of anonymity, ensuring that their identities and professional affiliations remained unidentifiable in the final reporting. Data security was maintained through robust technical measures; access was strictly limited to the core

research team via multi-layered encryption and password protection to prevent unauthorized disclosure. Furthermore, the study complied with established university protocols for data management, which dictated that all sensitive records be securely stored during the analysis phase and systematically disposed of upon the completion of the research. By integrating these multi-faceted ethical safeguards, the research not only prioritized the protection of its participants from potential professional or legal risks but also enhanced the overall reliability and validity of the findings (Israel, 2015).

4. Result and Discussions

4.1 Demographic Characteristics

Table 2 presents detailed demographic characteristics of the respondents, providing a comprehensive overview of the study’s sample composition, detailing key attributes such as gender, age, highest qualification, and tenure in both current and equivalent roles. The data shows a diverse workforce with varied professional backgrounds, spread across different age brackets, which ensures a broad perspective. Furthermore, the qualification levels highlight a knowledgeable group of participants. Also, the tenure data, covering both immediate and past relevant roles, suggests that the respondents possess substantial experience to provide reliable insights into the subject matter. This structured profile of the sample (Table 2) validates the appropriateness of the respondents for the study, demonstrating that the data collected is grounded in a well-represented and qualified population.

Table 2: Demographic Characteristics

Variables	Category	Frequency	Percent (%)
Gender	Male	36	90
	Female	4	10
Age	21 – 30	0	0
	31 – 40	7	17.5
	41 – 50	15	37.5
	Above 50	18	45
Highest Education	PhD	12	30
	Master and Professional Certs.	25	62.5
	Masters Only	3	7.5
	Professional Certificate Only	0	0
	First Degree	0	0
Experience	Less than 5 years	2	5

5 – 10 years	10	25
11 – 15 years	15	37.5
Above 15 years	13	32.5

Source: Authors Fieldwork, 2025

4.1.1 Gender Distribution

The gender distribution in the study reveals a pronounced imbalance, with the 40-participant sample comprising 36 males (90%) and 4 females (10%). This stark disparity is not merely a statistical anomaly but rather a reflection of broader socio-historical trends within specialized academic environments. Traditionally, mining, engineering, and technological universities have been male-dominated spaces due to systemic barriers and cultural perceptions of these industries. While the low female enrollment in this study highlights a persistent gender gap, it also underscores the gradual nature of the shift currently occurring as women increasingly enter and influence these technical fields.

4.1.2 Age Profile

Based on the data in Table 2, the respondent demography is predominantly mature, with 45% over 50 years old, while the smallest age group represents only 17.5% (seven individuals). This high concentration of older, experienced participants is a direct outcome of the study's focus on high-level professional roles requiring extensive tenure and seniority, making the demographic skew intentional rather than random. Consequently, the implementation of purposive sampling was critical to ensure that data were collected from these specific, high-seniority individuals, thereby enhancing the depth, relevance, and credibility of the findings.

4.1.3 Educational Background

The group of respondents exhibits an exceptional degree of academic and professional rigor, reflecting a deliberate strategy to engage individuals with the highest levels of expertise. This is evidenced by the fact that 30% (12) of participants hold PhDs and serve in influential leadership capacities as Deans or Professors. A significant majority of 62.5% (25) possess both Master's degrees and professional certifications. With only three respondents (7.5%) holding a Master's degree alone, the cohort maintains a remarkably high educational standard. This concentration of specialized knowledge was achieved through targeted sampling, specifically identifying and recruiting individuals in pivotal institutional positions whose insights are foundational to the research objectives.

4.1.4 Work Experience

The study's participant pool is composed entirely of seasoned professionals. A dominant 37.5% (n=15) reported between 11 and 15 years of experience, while 32.5% (n=13) reported over 15 years. An additional 25% (n=10) reported 5 and 10 years of experience, with only 5% (n=2) having

less than 5 years old. These tenure figures reflect a comprehensive view of their careers, accounting for both their current positions and the foundational roles that qualified them for their appointments. This depth of professional background, combined with their direct and frequent interaction with the IAF, ensures that the data gathered is grounded in practical expertise. Consequently, the respondents' insights offer a highly reliable foundation, lending significant credibility and authority to the study's findings.

4.2 Phase 1: Quantitative Analysis/Results

The quantitative analysis evaluated the effectiveness of IAF relationships the University Council/Audit Committee, Executive Management, and External Auditors in promoting good corporate governance, using a 5-point Likert scale. By categorizing mean scores into ranges from "Very Low" (below 1.5) to "Very High" (4.5 - 5.0), the study provides a standardized metric to gauge how these professional dynamics foster institutional governance. This structured assessment not only benchmarks the current strength of these essential collaborations but also serves as a diagnostic tool to pinpoint specific relational gaps that may require strategic improvement in communication or oversight. This analysis determines the effectiveness of these relationships and identifies potential gaps for improvement.

Table 3. Internal Audit relationship with the Council and Audit Committee

SN	Interactions	Mean	Standard deviation
1	Ensure appointment and removal of the CAE.	4.8	0.113
2	Ensure adequacy of resources and logistics	2.8	0.114
3	Review and approve IA charter, strategic, and annual work plans, and review reports	4.4	0.051
4	Resolution of conflicts between IA and Management	4.8	0.012
	CAE regularly attends the AC meeting and presents reports	4.9	0.131
5	Ensure management promptly implements audit recommendations	4.5	0.025
6	CAE regularly submits reports, plans, budgets, etc.	4.8	0.022
	Average mean	4.5	

Source: Author's field research

The data reveals a striking disconnect between strategic alignment and operational empowerment within the IAF. While Table 3 confirms an exceptionally strong, positive relationship between IA and the University Council/Audit Committee (Mean = 4.5), this high-level rapport does not fully translate into adequacy of resources. The moderate mean score for resource and logistical adequacy (Mean = 2.8, SD = 0.114) highlights a critical operational gap, suggesting that while leadership values the function’s professional contributions, it has not yet met its full funding requirements. This disparity implies that the IA function is effectively "punching above its weight," maintaining high-quality professional relationships despite being constrained by insufficient budgeting, staffing, and logistics. Ultimately, these resource limitations act as a bottleneck, preventing the IAF from reaching its full operational capacity and potentially undermining the long-term effectiveness of the oversight it provides

Table 4. Internal Audit Relationship with Executive Management

SN	interactions	Mean	Standard deviation
1	Timely responses to audit findings and implementations of agreed audit recommendations.	4.8	0.015
2	Adequate budget for resources and logistics, e.g., IT tools/audit software, vehicles, office equipment, and staff.	2.5	0.124
3	The CAE attends management meetings	4.9	0.001
4	Approve the IA charter and make inputs into the IA strategic and annual work plans	4.4	0.056
5	The CAE regularly submits reports on risk management, control, and governance processes.	4.9	0.012
6	Resolution of audit engagement conflicts with clients	3.8	0.065
7	Enabling and conducive work environment	4.3	0.058
8	Support IA Continuous Professional Development,	2.8	0.116
	Average mean	4.1	

Source: Author’s field research



The data in Table 4 reveals a significant discrepancy between high-level management relationships and practical resource allocation, indicating that while IA enjoys strong strategic positioning, it is functionally hampered by inadequate operational support. With a high mean score of 4.1, the results demonstrate a very strong positive relationship and effective communication between the IA function and executive management, fostering a mutual understanding of governance roles. Conversely, a moderate rating (mean 2.5, standard deviation 0.124) regarding the adequacy of resources and logistics suggests inadequate top-level support, as IA is not receiving sufficient operational tools, staffing, or logistical support. Therefore, despite a robust relational foundation, the overall performance and capacity of the IAF are restrained by a lack of necessary, tangible resources, creating a gap between expectation and operational reality

Table 5. Internal Audit Relationship with External Auditors

SN	interactions	Mean	Standard deviation
1	Exchange/share audit programs, working papers, and reports	4.0	0.015
2	Joint planning; coordinate timing of planned work and audit procedures.	1.3	0.012
3	IA and the external audit have periodic meetings to discuss audit plans, risk assessment, and findings.	1.1	0.044
4	IA considers and places reliance on the work of external auditors	4.7	0.131
6	External audit reviews IA competence, objectivity, and methodology, offer feedback.	4.5	0.161
Average mean		3.1	

Source: Author’s field research

Table 5 shows moderate relationship that the overall interaction between IA and external audit is characterized by a moderate relationship, with a mean score of 3.1. This is supported by evidence that the two functions share audit programs, working papers, reports, and considerations, and rely on each other’s work. Additionally, external auditors review IA competence, objectivity, and methodology, providing feedback for enhanced assurance. However, the data reveal low coordination in joint planning, with the coordination of the timing of planned work and audit procedures showing a low mean of 1.3 (SD = 0.012). Also, periodic meetings between IA and

external audit to discuss audit plans, risk assessments, and findings yielded a low mean of 1.1 (SD = 0.044).

4.3 Phase 2: Thematic Result/Analysis

Building on the quantitative results, follow-up in-depth interviews were conducted to investigate the underlying drivers and mechanisms behind identified gaps in IAF resource allocation, logistics, and internal-external auditor coordination. This qualitative phase aimed to move beyond numerical trends to capture the lived experiences and nuanced perspectives of practitioners, focusing specifically on the "how" and "why" of operational inefficiencies. By exploring the complexities of resource constraints and the frictions inherent in collaborative auditing, the following themes emerged, grounded in and illustrated by direct participant quotes, to provide a comprehensive narrative of the current auditing landscape.

4.3.1 Internal Audit Resources and Logistics Adequacy

To assess how adequate resource allocation to the IA enables the promotion of good governance at UMaT, qualitative data regarding logistics and support were subjected to thematic analysis. Themes centered on the role of executive management and the audit committee in ensuring adequate resourcing. Below, these findings are presented along with the respondents' quotes and recommendations for enhancing governance support.

4.3.1.1 Theme: Inadequate IA Staffing Resource and logistical support

Respondents overwhelmingly highlighted a critical shortage of personnel within the IAF, advocating for enhanced budgetary allocations to human resources to ensure the timely execution of risk-based audit plans. This finding aligns with the 2024 Global IA Standards (IIA, 2024), which emphasize that adequate resourcing is vital for comprehensive audit coverage of high-risk areas. Furthermore, the consensus among respondents suggests that bolstering the staffing levels of the UMaT, IAF is necessary for enhancing good governance and accountability mechanisms. One respondent explained;

"Due to the university's rapid expansion and rising demands for governance, our internal audit workload has increased significantly. However, limited human resources make it difficult to execute the planned annual audit scope. Consequently, the quantity of our annual planned work is being affected, creating a situation where some high-risk areas remain unexamined. While we acknowledge the current lack of financial clearance from the central government, in the interest of sound governance, we urge the Audit Committee, Management, and the Council to explore dedicated funding strategies to resolve the staffing deficiency."

One respondent stated;

"Our internal auditors are hardworking and marked by excellence; they were recognized as the best IAU in the tertiary category in 2023, enjoying high-level support from Council and the Audit

committee, Senior Management, and staff. There are usual resource limitations... they would do more to help those charged with good governance if we were able to increase staffing resources, office space, and other logistics; they could significantly expand their contribution to good governance."

The testimony highlights a critical failure in the IAF, driven by a mismatch between rapid university expansion and stagnant staffing levels. Understaffing acts as a fundamental impediment to IA performance, creating a direct conflict between the growing demand for governance and the capacity to deliver assurance. The inability to fully execute the planned annual audit scope means that high-risk areas, potentially in procurement, IT systems, or financial management, remain unexamined, increasing the likelihood of fraud, operational inefficiencies, and non-compliance. While the lack of central government financial clearance is recognized, this inadequate resources potentially hampers the operational efficiency of the IAU as a proactive risk-based partner. Furthermore, the inadequate staff limits the ability to leverage modern auditing techniques, such as data analytics, which are essential for timely risk detection in a large, modern university setting.

4.3.1.2 Theme: Limited budget for training and capacity building

Respondents highlighted a significant need for improved budget allocation to enhance regular training in IT, fraud detection, risk management, and governance, alongside essential logistical support such as specialized audit software and adequate office space. These resource constraints hinder internal auditors' ability to effectively assist management and governance bodies, creating an urgent and crucial requirement to align with the 2024 Global IA Standards set by the Institute of Internal Auditors (IIA). One respondent explained;

"Frankly speaking, given the high demand for good governance and the increasing expectations of the IAF as a strategic partner to university councils, audit committees, and management, there is a critical need for regular professional training. Focusing on capacity building in areas such as fraud, risk management, and IT will go a long way in enabling the IAF to contribute to effective governance within the university".

Another respondent emphasized;

"While we fully appreciate the current fiscal constraints, we must emphasize that the IAF serves as a fundamental pillar for good governance, accountability, and risk management. Insufficient budget for capacity building and logistics for the IAF is a direct limitation on the function's ability to adequately identify risks, prevent fraud, and benefit from a more efficient IA service delivery."

The respondents highlight that restricted funding for training and capacity building severely hampers the IAF from operating as a strategic partner to management, the audit committee, and the university council in fostering good governance, fraud detection, and risk management within universities, particularly in emerging areas like IT auditing. Despite acknowledging existing fiscal constraints, they argue that failing to invest in professional development and logistics directly

limits the function's proficiency, ultimately leading to inefficient audit services and reduced ability to prevent fraud. The inability to build capacity in auditing risks means that the IAF cannot adequately support university councils, audit committees, and management in addressing complex, modern governance challenges. Overall, this insufficient financial support for staff development is a barrier to enhancing IA's overall performance and upholding governance standards in higher education institutions.

4.3.2 *Internal Audit and External Audit Coordination and Cooperation*

Thematic analysis of qualitative data regarding the coordination between external and internal auditors at UMaT revealed a lack of collaboration during the planning stage. While both parties are responsible for reducing work duplication and costs through consistent communication, current findings suggest these efficiencies are not being fully realized. The following section details these results, supported by respondent quotes and specific recommendations to strengthen the internal audit's contribution to good governance.

4.3.2.1 Theme: Lack of Integrated /Joint Audit Planning

Respondents indicated that a persistent, major challenge is the lack of coordination between internal and external auditors during the initial planning stages. Lack of periodic meetings to discuss plans and share risk assessments fails to align strategies. Consequently, this disconnect causes significant duplication of effort, inefficient utilization of company resources, and missed opportunities to address key risk areas, hindering overall audit effectiveness. One respondent echoed,

"We must move beyond merely sharing reports at the end of the year. I am calling for joint planning, truly integrated, shared planning sessions between internal and external auditors. We need to actively synchronize our audit procedures and timing. This ensures we maximize audit coverage while minimizing duplication, ultimately driving better risk management and reducing audit fatigue in the business teams."

Another respondent explained,

"To maximize audit efficiency, it is crucial that the IAF coordinates its annual plan and timing with external auditors. By aligning our risk assessment and fieldwork, we can be assured that this will increase external auditors' reliance on IA procedures, avoiding redundant tests and optimizing resources for both parties, as highlighted by best practices in joint audit planning."

The urgent need to shift from passive, year-end report sharing to active, integrated, and joint audit planning between internal and external auditors is highlighted by respondents as essential for maximizing audit efficiency by enabling the synchronization of annual plans, risk assessments, and fieldwork, thereby ensuring external auditors can rely on internal procedures and avoid redundant tests. By adopting such integrated planning, organizations can achieve a more

comprehensive view of risks, maximize audit coverage, and significantly reduce audit fatigue for business teams, optimizing resources and improving overall audit quality, as reinforced by best practices that encourage shared planning sessions over simple, belated information exchange.

4.4 Integration of Findings and Discussions

4.4.1 IA relationship with Council and Audit Committee

While quantitative and qualitative data confirm a strong, high-quality professional relationship between IA and the University Council/Audit Committee (mean = 4.5), a moderate rating for resource and logistical adequacy (mean = 2.8, SD = 0.114) indicates that this positive rapport has not yet translated into sufficient budget, staffing, or logistical support. This disconnect suggests that, despite a favorable relational standing with leadership, the Audit Committee's advocacy for IA operational resources has not fully materialized.

The mean score of 4.5 highlights a high-quality professional and synergistic relationship between the IAF and the University Council/Audit Committee. This alignment positions IA as a vital contributor to the university's governance framework, and it is viewed as a core pillar of corporate governance, supporting the view of Sarens and Abdolmohammadi (2011) that the IAF is a core pillar of corporate governance when backed by strong leadership. The high score suggests that the Audit Committee serves as a strong advocate for the IA function, providing the strategic support necessary for IA to thrive, as underscored in ECIIA (2005). Conversely, the moderate mean score for resource and logistical adequacy (Mean = 3.0) indicates that, despite this strong structural backing, IA is not receiving the required operational tools, budget, staffing, and technology to heighten its contribution to corporate governance effectiveness. This is consistent with Asare (2015), Oware and Mallikarjunappa (2021), and Abudu & Syed (2025), who observed that operational limitations within the IAF are primarily driven by inadequate budgetary allocation and logistical deficiencies. They further indicated that the inability of institutions to procure necessary field and technological resources prevents audit personnel from delivering comprehensive assurance and consultancy services. The finding also mirrors arguments by Sarens and Abdolmohammadi (2011) and ECIIA (2005), who note that IA effectiveness is reliant on the audit committee's ability to secure adequate resource provision. The current average rating in this area limits the IA function's full operational capacity, creating a gap where IA has high visibility but lacks the capacity for in-depth, proactive audit coverage. This confirms that strategic intent is not translating fully into operational empowerment. To enhance governance, to bridge this gap, and fully maximize the IA's contribution, the University Council must strengthen support for staffing and budget allocation. High strategic alignment without adequate resources significantly hampers the IA's potential and efficiency. Therefore, improving logistical and budgetary support is essential for transforming the Audit Committee's support from merely structural to truly operational.

4.4.2 IA relationship with executive management

Quantitatively, while IA enjoys a highly significant positive relationship with executive management (mean 4.3), this contrasts with a moderate rating regarding the adequacy of resources and logistics (mean 2.5), indicating inadequate budgetary support. These findings, consistent with qualitative interviews highlighting strong top-level support alongside limited operational tools and staff, reveal a disparity where strong relational backing has yet to fully materialize into sufficient resources for optimal performance.

The strong relationship between IA and executive management (mean 4.3) found in this study suggests that IA is viewed as a vital contributor to good governance, and aligns with Geqeza and Dubihlela's (2024) assertion that executive management's quality relationship and support are critical for advancing IA effectiveness and fostering good governance, arguing that executive support is the backbone of audit effectiveness. However, the moderate score regarding resources (mean 2.5) aligns with Dawuda et al. (2017), who found that internal auditors in Northern Ghana expressed significant dissatisfaction with management support services, specifically regarding the provision of adequate logistics and resources. Furthermore, the resource gap identified here, specifically regarding staffing levels, reflects Ayrah's (2015) findings that inadequate staffing is a critical weakness that limits the effectiveness of IA. Although the current study shows good relationship support, the lack of operational resources suggests that this support is not translating into tangible, operational empowerment. While the professional bond is strong, the lack of physical and human capital remains a critical bottleneck that must be addressed to improve overall effectiveness. As noted by Sarens et al. (2006), management support should not just be relational but also functional, ensuring that the IA department has enough staff and technology to fulfill its mandate. The finding is supported by Asare (2015) and Onumah & Krah (2012), who found that in the Ghanaian local governance, IAUs are frequently constrained by chronic underfunding, a challenge that directly undermines their operational independence and overall effectiveness. Asare (2016) further reinforces this, suggesting that without dedicated financial support and the provision of necessary tools, the institutional integrity of these units remains compromised. The inability to provide these resources acts as a barrier to IA effectively contributing to good governance, as identified by similar studies in Ghanaian public sector organizations. In conclusion, the university's IA effectiveness is characterized by strong executive encouragement but inadequate resources and logistical implementation. To enhance efficiency, university management must bridge this gap for excellence.

4.4.3 IA relationship with External Auditors

Quantitatively, the relationship between IA and external audit is characterized as moderate (mean = 3.2), supported by qualitative efforts toward collaboration, yet hampered by weak operational integration, including low scores for joint planning (mean = 1.3, SD = 0.012) and infrequent meetings to align risk assessments (mean = 1.1, SD = 0.044). While both parties aim to reduce costs and enhance efficiency, the data reveals significant opportunities to improve coordination,

echoing respondents' calls to actively synchronize audit procedures, timing, and risk assessments to maximize coverage and minimize duplication.

The findings indicate that while there is a foundational, cooperative relationship between internal and external auditors at the university, evidenced by the sharing of working papers and reports, this relationship remains only moderate. External audit reviews of IA competence, objectivity, and methodology provide feedback for enhanced assurance, yet this alignment remains underdeveloped (International Auditing and Assurance Standards Board [IAASB], 2013). The moderate mean of 3.1 suggests that although basic collaboration exists to avoid duplication of work, the relationship is not fully maximised. The low mean (1.3) for joint planning and timing suggests significant gaps in high-level collaboration, indicating that audit procedures are often carried out in isolation rather than in a coordinated manner (Goodwin, 2004). The thematic analysis reveals a significant lack of integrated audit planning, characterized by a persistent failure to align strategies or share risk assessments during the initial stages. This reflects infrequent regular meetings to discuss risk assessment, audit plans, and audit procedures, suggesting that formal, strategic communication is infrequent. This is consistent with (Al-Twaijry et al., 2004), who found that the breakdown in collaboration results in substantial duplication of effort and inefficient utilization of university resources. As noted by Pizzini et al. (2015), these disconnects could cause audit teams may to overlook crucial insights that could improve audit quality, ultimately resulting in an ineffective process that fails to leverage the combined knowledge of internal and external parties. Despite these gaps, the review of IA competency, a key governance function, shows a positive commitment to improving corporate governance, though it remains in a nascent stage (Gramling et al., 2004).

5. Conclusion and Recommendations

5.1 Conclusion

This study investigated the efficacy of the IAF in promoting good corporate governance within the Ghanaian public university context, using the University of Mines and Technology (UMaT) as a case study. The investigation centered on the reciprocal IA relationships between the IAF and key governance actors: the University Council/Audit Committee, Executive Management, and External Auditors, in ensuring governance effectiveness. The findings lead to the conclusion that IA plays a significant and vital role in promoting good corporate governance in the university. Because the study found strong, effective interactions between IA and the Council/Audit Committee and Executive Management, *Hypotheses 1 and 2 were accepted*. These relationships are foundational to maintaining transparency and accountability within the institution. While the relational elements of governance are strong, the institutional support for the IA function remains a challenge. Full effectiveness of IA is currently hampered by inadequate staffing, limited budgetary allocations for capacity building, and insufficient logistical support. Regarding the external oversight component, the study concluded that while a significant relationship exists, it is

not yet optimized. *Hypothesis 3 was also accepted* based on the presence of existing interactions; however, the results highlight a critical gap in synergy. The lack of integrated audit planning and inadequate collaboration between internal and external auditors results in duplication of efforts and increased audit costs. In summary, while UMaT possesses a robust relational framework for governance, its full potential is restricted by resource constraints and inadequate coordination between IA and external audit partners.

5.2 Recommendations

Based on the conclusions, the following recommendations are made to enhance good corporate governance:

1. *Enhance Resource and Logistics Support:* Council/Audit Committee and Executive Management should increase budgetary allocations for the IA to facilitate capacity building, technical training, and provide modern technological tools, including modern auditing software and continuous capacity-building training to improve efficiency. Furthermore, staffing inadequacies should be addressed by approving and recruiting personnel to manage the expanding scope of university operations.
2. *Improve External/Internal Auditor Collaboration:* To eliminate unnecessary duplication of efforts and reduce costs, the Internal IA and external auditors must formalize a joint planning strategy, aligning audit strategies. This should include regular meetings, shared risk assessments, and harmonized audit timelines to foster greater synergy in the overall audit process.

The study was limited to one public university. Therefore, a comparative study across other public universities in Ghana or similar jurisdictions is necessary to determine whether the identified resource constraints and lack of synergy with external auditors are widespread. Furthermore, research is needed to explore beyond the IA relation with these key governance partners, to the extent of the quality relationship that exists among all of them: the board/council, audit committee, and executive management in strengthening good governance in the Ghanaian public universities.

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