

Corporate Governance and Audit Pricing: An Empirical Study of Ghanaian Listed Firms (2015–2024)

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DOI: <https://doi.org/10.47772/IJRISS.2026.100500373>

Received: 11 May 2026; Accepted: 16 May 2026; Published: 02 June 2026

ABSTRACT

This study examines the determinants of audit fees among firms listed on the Ghana Stock Exchange (GSE) over the period 2015–2024, extending earlier research by incorporating a more recent, post-financial-sector-reform era. The study focuses on three broad categories of determinants: client firm characteristics, audit firm attributes, and corporate governance mechanisms. Using a panel data research design with 320 firm-year observations drawn from 32 listed companies and employing Generalised Least Squares (GLS) estimation with fixed effects, the study investigates how variables such as firm size, profitability, complexity, leverage risk, industry classification, audit firm size, audit tenure, board size, board diligence, CEO duality, audit committee independence, and audit committee expertise influence audit fees. Descriptive statistics reveal a mean log audit fee of 5.201 (approximately GHS 159,000), with substantial cross-sectional and temporal variation. The mean log of total assets is 5.610 and mean profitability (ROA) is -0.010 , reflecting the mixed financial performance of GSE-listed firms during a decade that encompassed the banking sector clean-up (2017–2019) and the COVID-19 pandemic (2020). Correlation analysis shows strong positive associations between audit fees and client size ($r = 0.7643$), profitability ($r = 0.6546$), complexity ($r = 0.3750$), and leverage risk ($r = 0.3254$). VIF tests confirm multicollinearity is within acceptable bounds (Mean VIF = 1.78). The Hausman specification test favours the fixed-effects model. The within-firm R^2 is 0.8270, indicating that the model explains 82.70 percent of the variation in audit fees after controlling for firm-specific effects. Client size emerges as the dominant driver ($\beta = 0.6665$, $p < 0.001$). Corporate governance mechanisms exhibit significant negative associations with fees, consistent with the substitution hypothesis. These findings carry important implications for regulators, investors, and audit professionals navigating Ghana's evolving corporate environment.

Keywords: Audit fees; Corporate governance; Ghana Stock Exchange; Panel data; Agency theory; Substitution theory; Board diligence; Audit committee.

INTRODUCTION

The credibility of corporate financial reporting is fundamentally anchored in the effectiveness of external auditing as an independent assurance mechanism (Widmann, Follert, & Wolz, 2021). In modern corporate settings, where ownership is structurally separated from managerial control, shareholders and other stakeholders depend heavily on external auditors to provide reasonable assurance that financial statements present a true and fair view of firms' financial position and performance in accordance with established accounting standards and regulatory requirements (Jensen & Meckling, 1976; Fama & Jensen, 1983; DeFond & Zhang, 2014). This reliance becomes necessary because managers, as agents, may pursue self-interested objectives that are not fully aligned with shareholder wealth maximisation, thereby creating agency conflicts and information asymmetry within firms (Eisenhardt, 1989; Watts & Zimmerman, 1986). Consequently, external auditing functions as a critical governance mechanism that mitigates agency problems, enhances transparency, and strengthens investor confidence in capital markets.

Historically, auditing has evolved alongside the development of trade and corporate organisations. Early auditing practices can be traced to ancient civilisations such as Babylonian, Egyptian, Greek, and Roman societies, where record verification was used as a tool for accountability and fraud prevention (Willmott, 1986; Rick et al., 2005). However, the industrial revolution marked a significant turning point in the profession as the rise of joint-stock

companies created a need for formal financial reporting systems and independent verification. Over time, the establishment of professional accounting bodies and the development of International Standards on Auditing (ISA) institutionalised auditing as a regulated profession guided by ethical, technical, and quality assurance standards (Porter et al., 2014). In the contemporary era, auditing has become central to financial market stability, particularly in enhancing transparency and reducing information risk in increasingly complex global business environments (Hay et al., 2020; Widmann et al., 2021).

Despite these developments, the global auditing profession continues to face significant challenges arising from corporate failures and financial reporting scandals. High-profile collapses such as Enron, WorldCom, and Parmalat exposed major weaknesses in audit independence, governance systems, and financial reporting integrity (Healy & Palepu, 2003; Coffee, 2006). These failures raised global concerns regarding the effectiveness of external audits in detecting material misstatements, fraud, and going-concern risks. In response, major regulatory reforms such as the Sarbanes–Oxley Act were introduced to strengthen internal controls, improve audit committee oversight, and enhance auditor independence (SOX, 2002). More recently, regulatory scrutiny by the Financial Reporting Council and the Public Company Accounting Oversight Board has intensified due to persistent concerns about audit quality, audit market concentration, and auditor-client economic dependence (FRC, 2024; PCAOB, 2023). These developments have further reinforced global interest in understanding the determinants of audit quality and audit pricing.

Within the auditing literature, audit fees have emerged as a key empirical proxy for audit effort, audit risk, audit complexity, and auditor independence. Audit fees represent the remuneration paid to external auditors for assurance services and are widely used in empirical research to measure the extent of audit work performed during an engagement (Simunic, 1980; Hay et al., 2008; Francis, 2011). Recent systematic reviews confirm that audit pricing reflects a combination of client risk, auditor attributes, governance quality, and regulatory environment factors (Widmann et al., 2021; Eierle, 2022). The level of audit fees has important implications for audit quality and corporate governance outcomes. While excessively high audit fees may create economic bonding between auditors and clients, potentially compromising independence, abnormally low audit fees may signal insufficient audit effort and increased audit risk exposure (Dart, 2011; DeFond & Zhang, 2014). Therefore, audit pricing remains a central concern for regulators, investors, and policymakers seeking to enhance financial reporting credibility and audit quality assurance.

Empirical evidence identifies three broad categories of audit fee determinants: client characteristics, audit firm attributes, and corporate governance mechanisms. Client-specific factors such as firm size, profitability, operational complexity, leverage risk, and industry classification are consistently associated with audit effort and engagement risk, thereby influencing audit fees (Thinggaard & Kiertzner, 2008; Ohidoa & Okun, 2018; Hay et al., 2020). Large firms typically require extensive audit procedures due to higher transaction volumes and complex organisational structures, while highly leveraged firms face greater financial risk and potential earnings management incentives. Similarly, firms operating in regulated industries such as banking and insurance are subject to heightened scrutiny, which increases audit effort and pricing.

Audit firm characteristics also play a critical role in audit pricing decisions. Big Four audit firms consistently command fee premiums due to their global reputation, technical expertise, industry specialisation, and perceived audit quality (Palmrose, 1988; DeAngelo, 1981; Hay et al., 2008). Recent empirical studies continue to confirm that Big Four auditors charge significantly higher fees due to reputation effects and risk-based pricing structures (Kale & Gürel, 2024). Audit tenure has also been identified as an important determinant of audit fees. Longer auditor-client relationships may enhance audit efficiency through accumulated knowledge, but they may also increase expectations for audit quality and reputational exposure, resulting in fee adjustments (Bedard & Johnstone, 2010; Cameran et al., 2016).

In addition to client and auditor characteristics, corporate governance mechanisms have increasingly been recognised as important determinants of audit fees. Governance structures such as board independence, board diligence, CEO duality separation, audit committee independence, and audit committee financial expertise significantly influence internal monitoring effectiveness and financial reporting quality (Klein, 2002; Krishnan & Visvanathan, 2009). However, the relationship between corporate governance and audit fees remains

theoretically ambiguous. Signalling theory suggests that firms with stronger governance demand higher-quality audits, thereby increasing audit fees (Carcello et al., 2002), while substitution theory argues that effective internal governance reduces the need for external audit effort, leading to lower audit fees (Boo & Sharma, 2008). This theoretical tension continues to generate mixed empirical findings in the literature (Joshi et al., 2021; Kim et al., 2024).

In the Ghanaian context, concerns regarding audit effectiveness and corporate governance intensified following the financial sector clean-up exercise conducted between 2017 and 2019. During this period, the Bank of Ghana revoked the licences of over 420 financial institutions, including nine universal banks, due to insolvency, weak governance structures, and financial reporting irregularities (Bank of Ghana, 2019). These developments raised serious concerns about the effectiveness of external auditors in detecting financial distress and governance failures within regulated institutions (Baffour et al., 2020). In response, the Securities and Exchange Commission Ghana and the Institute of Chartered Accountants Ghana introduced governance reforms aimed at strengthening board oversight, audit committee effectiveness, and financial reporting accountability. The enactment of the Companies Act, 2019 (Act 992) and the SEC Corporate Governance Directives (2020) further strengthened Ghana's regulatory governance framework.

Although global research on audit pricing is extensive, empirical evidence from Ghana and other emerging African economies remains relatively limited. Most existing studies are concentrated in developed markets with stable institutional environments and advanced audit regulation systems, leaving a gap in understanding how audit pricing behaves in emerging economies characterised by institutional volatility and regulatory reforms (Hay et al., 2020; Widmann et al., 2021). Existing Ghanaian studies have largely focused on traditional determinants of audit fees, with limited attention to the combined effects of corporate governance reforms and audit firm characteristics in the post-financial sector clean-up era (Musah, 2022; Afenya et al., 2022). Consequently, there remains limited empirical evidence explaining how client characteristics, audit firm attributes, and corporate governance mechanisms jointly influence audit fees among firms listed on the Ghana Stock Exchange during the 2015–2024 period. Against this backdrop, this study examines the determinants of audit fees among Ghanaian listed firms over the period 2015–2024. Specifically, it investigates how client characteristics, audit firm attributes, and corporate governance mechanisms influence audit pricing within Ghana's evolving regulatory and institutional environment. The study contributes to the literature by providing updated empirical evidence from an emerging market context, thereby informing regulators, policymakers, auditors, and investors on the dynamics shaping audit fees and corporate governance outcomes.

LITERATURE REVIEW

Theoretical Framework

This study is underpinned by Agency Theory, Signalling Theory, and Substitution Theory, which collectively explain the relationship between corporate governance mechanisms and audit pricing among listed firms. These theories provide a strong conceptual foundation for understanding how governance structures influence audit demand, audit effort, audit risk, and ultimately audit fees. Prior literature recognises that audit pricing is not determined solely by client characteristics, but also by governance quality, information asymmetry, and monitoring requirements within firms (Simunic, 1980; Hay et al., 2008; Widmann et al., 2021).

Agency Theory

Agency Theory, developed by Michael C. Jensen and William H. Meckling, explains that the separation of ownership and control in corporations creates conflicts of interest between shareholders (principals) and managers (agents) (Jensen & Meckling, 1976). The theory posits that managers may pursue personal objectives that conflict with shareholders' wealth maximisation goals due to information asymmetry and divergent incentives. Consequently, shareholders establish governance and monitoring mechanisms to minimise agency costs and protect their investments (Fama & Jensen, 1983). External auditing therefore serves as an important monitoring mechanism aimed at enhancing the credibility of financial reporting and reducing opportunistic managerial behaviour. According to agency theory, firms with greater operational complexity, higher leverage, increased litigation exposure, or weak governance structures require greater audit effort because auditors

perceive such firms as riskier engagements. This increased audit effort consequently results in higher audit fees (Palmrose, 1988; Bedard & Johnstone, 2010). Recent empirical evidence continues to support the agency perspective by showing that governance weaknesses, ownership conflicts, and information asymmetry significantly influence audit pricing decisions (Rahman et al., 2023; Low et al., 2023).

Within the context of Ghanaian listed firms, Agency Theory is particularly relevant because many firms exhibit concentrated ownership structures, family influence, managerial dominance, and evolving governance systems. The financial sector reforms and banking sector clean-up initiatives introduced between 2017 and 2020 heightened concerns regarding financial reporting credibility and risk monitoring, thereby increasing reliance on external auditors as independent assurance providers. Moreover, the strengthening of governance regulations through the Securities and Exchange Commission (SEC) Corporate Governance Directives has increased the emphasis on board independence, audit committee effectiveness, and accountability mechanisms among listed firms. In weak institutional environments such as emerging markets, external auditing becomes especially important in mitigating agency conflicts and restoring investor confidence (Bawuah, 2024; Al-Faryan, 2024).

Signalling Theory

The study also draws on Signalling Theory, which argues that firms with strong governance structures voluntarily demand high-quality audit services to signal transparency, accountability, and financial reporting credibility to investors and other stakeholders. The theory suggests that firms with effective boards, diligent directors, independent audit committees, and financially knowledgeable committee members are more likely to engage reputable auditors and support broader audit procedures in order to strengthen stakeholder confidence (Carcello et al., 2002; Abbott et al., 2003). Under this perspective, strong governance mechanisms complement external auditing because both serve as mechanisms for reducing information asymmetry and enhancing market credibility. Consequently, firms with stronger governance structures are expected to pay higher audit fees due to increased audit scope and audit quality demands. Empirical evidence supports this argument. For example, Lee and Mande (2005) found that audit committee diligence and objectivity positively influence audit fees, while Goodwin-Stewart and Kent (2006) reported that board independence and audit committee activity are positively associated with audit pricing. More recent international evidence further indicates that governance reforms and improved disclosure requirements significantly increase audit fees because firms demand higher audit quality and more rigorous verification procedures (Kim et al., 2024; Zhang et al., 2023).

Substitution Theory

In contrast, Substitution Theory posits that effective internal governance mechanisms reduce the need for extensive external auditing because strong governance structures lower audit risk and agency conflicts. The theory argues that firms with effective boards, independent audit committees, robust internal controls, and financially competent oversight structures already possess internal monitoring systems capable of enhancing financial reporting reliability. Consequently, auditors may require less substantive testing and monitoring effort, resulting in lower audit fees (Tsui et al., 2001; Krishnan & Visvanathan, 2009). From this perspective, internal governance substitutes for certain external audit functions. Empirical studies provide support for this argument by demonstrating that firms with stronger governance quality often require lower audit effort because auditors perceive lower engagement risk (Yamada & Fujita, 2022). Additionally, recent studies suggest that governance effectiveness moderates audit risk and reduces the adverse effects of managerial opportunism on audit pricing (Low et al., 2023).

Synthesis of the Theories

The coexistence of the signalling and substitution perspectives explains the mixed findings reported in prior literature concerning the relationship between corporate governance and audit fees. While some studies conclude that stronger governance structures increase audit demand and audit pricing due to greater assurance requirements, others argue that effective governance reduces audit risk and decreases audit effort, thereby lowering audit fees. The contradictory empirical findings suggest that the influence of governance mechanisms on audit pricing may vary across institutional settings, regulatory environments, and ownership structures. This study therefore integrates Agency Theory, Signalling Theory, and Substitution Theory to provide a

comprehensive explanation of audit pricing behaviour among firms listed on the Ghana Stock Exchange between 2015 and 2024. The theoretical framework is particularly appropriate because it captures the dual role of corporate governance as both a complement and substitute for external auditing within Ghana's evolving corporate governance and financial reporting environment.

Empirical Review and Hypotheses Development

Client Characteristics and Audit Fees

The extant literature consistently identifies client characteristics as the most significant determinants of audit fees because they directly influence audit effort, audit complexity, engagement risk, and the extent of audit procedures required by external auditors. Since the seminal work of Simunic (1980), firm size has remained the most robust and consistently supported predictor of audit pricing across developed and emerging economies (Hay et al., 2008; Widmann et al., 2021). Larger firms typically possess more diversified operations, multiple subsidiaries, higher transaction volumes, sophisticated accounting systems, and broader geographical coverage, all of which increase the complexity of the audit engagement and require additional audit resources. Consequently, auditors devote more hours, personnel, and technical expertise to larger clients, thereby increasing audit fees (Palmrose, 1988). Recent evidence from emerging and developed markets continues to confirm that client size exerts a significant positive influence on audit pricing decisions (Kale & Gürel, 2024).

Profitability is another important determinant of audit fees because profitable firms often attract greater attention from shareholders, regulators, creditors, and tax authorities. Highly profitable firms may face increased pressure to maintain earnings performance, thereby creating incentives for earnings management and aggressive accounting practices. Auditors therefore respond by increasing audit scrutiny and verification procedures to minimise litigation and reputational risks (Thinggaard & Kiertzner, 2008). At the same time, financially distressed firms may equally pose higher audit risk due to concerns relating to going-concern uncertainty and financial instability. As a result, both high profitability and poor financial performance can increase audit effort and audit pricing depending on the level of perceived engagement risk. Recent studies on audit pricing in emerging markets further indicate that return on assets and profitability indicators significantly influence audit fees because they shape auditor risk assessments and stakeholder expectations (Kale & Gürel, 2024).

Firm complexity has also been widely recognised as a key driver of audit fees. Complexity may arise from diversified business operations, foreign subsidiaries, mergers and acquisitions, extensive inventories, or sophisticated financial transactions. Complex organisational structures increase the amount of substantive testing, internal control evaluation, and risk assessment required during the audit process (Simunic, 1980). Hay et al. (2008) argued that organisational complexity significantly increases audit hours and audit planning requirements because auditors must gather sufficient evidence across multiple operational segments. More recent evidence suggests that emerging risks such as climate disclosures, sustainability reporting obligations, and technological integration have further expanded audit complexity and increased audit pricing internationally (Ding et al., 2024).

Financial leverage and client risk are similarly important determinants of audit fees because highly leveraged firms are generally perceived as riskier engagements. Firms with substantial debt obligations often face pressure to satisfy loan covenants and maintain liquidity positions, thereby increasing the likelihood of financial statement manipulation or earnings management (Ohidoa & Okun, 2018). Auditors respond to such risks by expanding audit testing and charging higher fees to compensate for increased litigation exposure and reputational concerns. Recent studies conducted in emerging economies continue to support the argument that leverage risk significantly increases audit fees due to heightened auditor caution and enhanced monitoring requirements (Legenzova, 2024).

Industry classification also plays a critical role in determining audit fees because some industries are inherently more regulated, risk-sensitive, and technically demanding than others. Firms operating in sectors such as banking, insurance, telecommunications, and energy are subject to strict regulatory requirements and complex financial reporting standards, which increase audit effort and audit risk. In Ghana, the banking sector clean-up and financial sector reforms introduced between 2017 and 2020 heightened auditor sensitivity toward financial

institutions and increased the risk premium attached to regulated industries. Consequently, industry type became particularly important in explaining audit pricing behaviour during the 2015–2024 period. Contemporary literature further suggests that regulatory reforms, governance reforms, and market uncertainties significantly shape industry-based audit risk assessments and pricing decisions (Kim et al., 2024).

The foregoing empirical evidence demonstrates that client characteristics influence audit effort, auditor risk perceptions, and the extent of monitoring required by external auditors. Guided by agency theory, which posits that complex and risky firms require stronger monitoring mechanisms, the study expects client size, profitability, complexity, leverage risk, and industry classification to positively influence audit fees among firms listed on the Ghana Stock Exchange. Therefore, the following hypothesis is formulated:

H1: Client size, profitability, complexity, risk, and industry type are positively and significantly associated with audit fees.

Audit Firm Characteristics and Audit Fees

Audit firm characteristics constitute another major category of audit fee determinants because they influence perceptions of audit quality, auditor reputation, technical competence, and assurance credibility. Existing literature consistently documents that Big Four audit firms command premium audit fees relative to non-Big Four firms due to their international reputation, specialised industry expertise, superior audit methodologies, and perceived audit quality (Palmrose, 1988; DeAngelo, 1981). Clients often engage Big Four auditors to signal transparency, credibility, and financial reporting reliability to investors and regulators. Consequently, firms audited by Big Four auditors generally incur higher audit fees because of the premium associated with brand reputation and assurance quality.

Empirical evidence across both developed and emerging markets strongly supports the existence of Big Four audit fee premiums. Hay et al. (2008) observed that internationally affiliated audit firms consistently charge higher fees because of their expertise and risk management capabilities. More recent evidence indicates that the Big Four premium remains significant despite increasing market competition and technological advancements within the audit profession (Legenzova, 2024; Kale & Gürel, 2024). Furthermore, contemporary studies suggest that the relationship between Big Four auditors and audit fees becomes even stronger in high-risk industries and under conditions of increased regulatory scrutiny (Ding et al., 2024).

Within the Ghanaian context, the dominance of Big Four firms among listed companies reflects the importance attached to international audit quality and reputational assurance. The current dataset reveals that approximately 66.9 percent of firm-year observations engage Big Four auditors, indicating a relatively concentrated audit market. This concentration is consistent with evidence from other emerging markets where listed firms rely heavily on internationally affiliated audit firms to improve investor confidence and facilitate access to capital markets.

Audit tenure has also received considerable attention within the audit pricing literature. Long-term auditor-client relationships enable auditors to accumulate client-specific knowledge regarding operational systems, accounting practices, internal controls, and industry risks (Bedard & Johnstone, 2010). Such accumulated expertise may improve audit efficiency and audit effectiveness over time. However, long audit tenure may simultaneously increase expectations regarding audit quality and increase reputational exposure for auditors, thereby attracting expertise-related fee premiums. Recent literature further suggests that long-term audit engagements may influence audit pricing through specialised knowledge accumulation, relationship-specific investments, and enhanced understanding of client risk environments (Joshi et al., 2021).

At the same time, certain studies argue that prolonged auditor tenure may reduce audit effort because auditors become more familiar with client operations and internal systems. Despite these competing perspectives, empirical evidence generally supports a positive relationship between audit tenure and audit fees, particularly for complex firms and regulated industries where accumulated expertise becomes valuable. In the Ghanaian context, approximately 67.2 percent of sampled firms maintain audit tenures exceeding six years, suggesting that long-standing auditor-client relationships are common among listed firms. Such relationships are likely to

influence audit pricing because auditors may possess deeper operational understanding and industry-specific expertise developed over prolonged engagements.

The empirical literature therefore demonstrates that audit firm size and audit tenure significantly shape perceptions of audit quality, expertise, and engagement risk. Guided by signalling theory and agency theory, which suggest that reputable auditors and specialised audit expertise enhance monitoring quality and financial reporting credibility, this study expects Big Four audit firms and longer audit tenure to positively influence audit fees. Hence, the following hypothesis is proposed:

H2: Audit firm size and audit tenure are positively and significantly associated with audit fees.

Corporate Governance and Audit Fees

The relationship between corporate governance mechanisms and audit fees remains one of the most extensively debated areas within auditing and governance literature. Corporate governance structures influence audit pricing because they shape internal monitoring effectiveness, auditor risk perceptions, financial reporting quality, and the extent of external assurance demanded by firms. However, empirical findings remain mixed because of the competing predictions of signalling theory and substitution theory.

The substitution perspective argues that effective internal governance mechanisms reduce reliance on external auditing because strong boards and audit committees improve monitoring quality and reduce agency conflicts (Krishnan & Visvanathan, 2009). Under this view, firms with effective governance systems are perceived as lower-risk engagements, thereby reducing the amount of audit testing and substantive verification required from external auditors. Consequently, strong internal governance structures substitute for certain monitoring functions of external auditing and lead to lower audit fees.

Board size represents one of the most commonly examined governance variables in audit fee research. Larger boards are generally associated with greater diversity of expertise, broader oversight capacity, and improved monitoring effectiveness. Effective boards strengthen internal control systems and reduce managerial opportunism, thereby lowering audit risk. However, some studies argue that excessively large boards may create coordination problems and reduce monitoring efficiency. Despite these mixed findings, recent international evidence indicates that board reforms and stronger governance structures significantly influence audit pricing decisions because auditors incorporate governance quality into their risk assessments (Kim et al., 2024).

Board diligence, commonly measured by board meeting frequency, reflects the intensity of board monitoring activities within firms. Boards that meet more frequently are often considered more effective in overseeing financial reporting processes, risk management systems, and compliance activities (Vafeas, 1999). More active boards are expected to reduce agency conflicts and strengthen financial reporting credibility, thereby reducing audit risk and audit effort. Similarly, CEO duality separation strengthens board independence by separating managerial authority from board oversight functions. Firms that separate the roles of Chief Executive Officer and Board Chairperson are often perceived as possessing stronger accountability structures and more effective governance systems.

Audit committee independence is also widely regarded as an important determinant of audit quality and audit pricing. Independent audit committees are better positioned to monitor management objectively, oversee financial reporting processes, and support compliance with accounting standards. Such committees reduce the likelihood of financial reporting irregularities and enhance investor confidence. Likewise, audit committee expertise enhances the technical competence of governance oversight because financially knowledgeable committee members are more capable of understanding accounting complexities, internal control deficiencies, and audit findings (Krishnan & Visvanathan, 2009). Recent multi-country evidence suggests that audit committee independence and financial expertise significantly influence audit pricing because they affect auditors' assessments of engagement risk and governance quality (Joshi et al., 2021).

In Ghana, governance reforms introduced through the 2020 Securities and Exchange Commission Corporate Governance Directives strengthened requirements relating to board independence, audit committee effectiveness, and governance accountability among listed firms. The current dataset indicates that

approximately 40.6 percent of firm-year observations report boards with six or more annual meetings, while 93.8 percent maintain majority-independent audit committees. These developments reflect growing compliance with governance standards and increasing emphasis on internal monitoring effectiveness among Ghanaian listed firms.

Although signalling theory suggests that firms with strong governance structures may demand higher audit quality and therefore incur higher audit fees, this study adopts the substitution perspective because effective governance mechanisms are expected to reduce audit risk and external monitoring requirements. Therefore, firms with effective boards, independent audit committees, separated CEO-chair roles, and financially competent audit committees are expected to require less extensive audit effort and consequently incur lower audit fees. Based on the empirical evidence and theoretical arguments discussed above, the study proposes the following hypothesis:

H3: Board size, board diligence, CEO duality separation, audit committee independence, and audit committee expertise are negatively and significantly associated with audit fees.

METHODOLOGY

Research Design

The study employs a quantitative, panel data research design, which integrates cross-sectional and time-series observations, enabling control for firm-specific unobserved heterogeneity (Wooldridge, 2010). The design is guided by the positivist paradigm, relying on secondary data extracted from the annual reports of GSE-listed firms.

Population, Sample, and Data

The target population comprises all companies listed on the Ghana Stock Exchange. As at 2024, the GSE lists approximately 34 active companies. Consistent with established practice, firms with incomplete data across the full study period (2015–2024) and firms delisted during the period were excluded. After applying these criteria, 32 firms remained, yielding a panel of 320 firm-year observations over a ten-year horizon. Data were hand-collected from published annual reports and audited financial statements filed with the GSE.

The study period (2015–2024) was selected for three reasons. First, it captures the full impact of Ghana's financial sector reform (2017–2019). Second, it encompasses the implementation of the Companies Act 2019 and the revised SEC Corporate Governance Directives (2020). Third, it includes the COVID-19 pandemic period (2020–2021), during which audit processes were substantially disrupted, potentially altering fee structures.

Variable Measurement

The dependent variable is the natural logarithm of total audit fees paid by each firm in each year. Client characteristics include the log of total assets (client size), return on assets (profitability), number of subsidiaries (complexity), log of the total debt-to-total-assets ratio (leverage risk), and a binary indicator for financial sector firms (industry). Audit firm characteristics include binary indicators for Big Four affiliation (audit firm size) and long audit tenure (six or more years). Corporate governance variables include binary indicators for large boards, frequent board meetings, CEO duality separation, majority-independent audit committees, and financially expert audit committees.

Estimation Strategy

The following model, based on Simunic (1980), is estimated:

$$\text{Audfee}(it) = a + b1 * \text{Clntsize}(it) + b2 * \text{Clntprt}(it) + b3 * \text{Clntind}(it) + b4 * \text{Clntcpy}(it) + b5 * \text{Clnttrk}(it) + b6 * \text{AudFS}(it) + b7 * \text{AudTen}(it) + b8 * \text{FisY}(it) + b9 * \text{Bsize}(it) + b10 * \text{Bind}(it) + b11 * \text{Bdili}(it) + b12 * \text{Ceodual}(it) + b13 * \text{AudComInd}(it) + b14 * \text{AudComexp}(it) + e(it)$$

The Simunic (1980) audit fee model is estimated using GLS with firm fixed effects, selected via the Hausman (1978) specification test ($\chi^2 = 841.26$, $p = 0.000$). Robust standard errors address heteroscedasticity and within-cluster correlation. The within-firm transformation (demeaning) controls for all time-invariant firm characteristics. Multicollinearity is assessed using VIF, with a threshold of 5.0 (Nachsheim et al., 2004).

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1 presents descriptive statistics for all variables drawn from the 320 firm-year observations spanning the period 2015 to 2024. The mean log audit fee is 5.201, corresponding to approximately GHS 159,000 in raw terms. This figure represents a substantial upward shift from the mean of 4.931 reported by Fraikue (2020) for the 2008–2017 period, and reflects both the cumulative effects of inflation on audit fee structures and the growing complexity, risk intensity, and regulatory burden of the Ghanaian audit environment following the financial sector clean-up exercise (2017–2019) and the implementation of the Companies Act 2019. The standard deviation of 0.594 signals meaningful cross-sectional and temporal variation in audit pricing across the sample, consistent with the heterogeneous nature of GSE-listed firms. Fees range from a minimum log value of 3.699, equivalent to GHS 5,000 paid by Transol Solutions in 2020 at the height of the COVID-19 pandemic, to a maximum of 6.519, equivalent to GHS 3.3 million paid by Trust Bank Limited in 2024, illustrating the wide disparity in audit cost between the smallest and largest firms on the exchange.

The mean log of total assets is 5.610 ($SD = 1.257$), reflecting the considerable size diversity of GSE-listed firms, from small domestic manufacturers and processors with asset bases below GHS 200,000 to large pan-African banking and financial groups with total assets exceeding GHS 38 billion. This range is substantially wider than that observed in the earlier study period, partly because several large financial institutions that survived the clean-up have continued to grow their balance sheets significantly while smaller non-financial firms have remained relatively modest in scale. Mean profitability, measured as return on assets, is -0.010 ($SD = 0.143$), rendering it marginally negative for the sample as a whole. This reflects the financial distress experienced by a significant number of firms during the banking sector clean-up between 2017 and 2019, when several listed entities reported losses, as well as the COVID-19 pandemic in 2020, which depressed earnings across nearly all sectors. The range of ROA, from -0.820 to 0.270 , confirms that profitability experiences are highly uneven across firms and years in the sample.

On average, firms have 0.875 subsidiaries ($SD = 1.787$), indicating that while many firms operate as standalone entities, a notable subset, particularly the large financial and commercial groups, maintain multiple subsidiaries that contribute to audit complexity. Approximately 37.5 percent of firm-year observations are classified as financial sector firms, reflecting the significant representation of banks and insurance companies on the GSE. Regarding audit firm characteristics, approximately 66.9 percent of firm-year observations involve a Big Four auditor, suggesting that the majority of GSE-listed firms, particularly those of larger size and in the financial sector, favour internationally affiliated audit firms. About 67.2 percent of observations correspond to long-tenure audit engagements of six or more years, indicating a tendency toward stable, long-term auditor-client relationships in Ghana.

Turning to governance characteristics, approximately 62.2 percent of firm-year observations involve boards classified as large (8 to 16 members), consistent with the governance requirements of larger listed entities. Board independence has a mean of 1.000 with zero variance, indicating that all firms in the sample maintained the required minimum level of board independence throughout the study period, suggesting full compliance on this dimension. Board diligence, however, shows more variation: only 40.6 percent of firm-year observations record boards with six or more annual meetings, indicating that a substantial proportion of firms fell below the benchmark for board meeting frequency, whether due to governance culture, firm size constraints, or transitional compliance challenges. Audit committee independence stands at 93.8 percent, reflecting near-universal compliance with the SEC requirement for majority-independent audit committees. Audit committee financial expertise and CEO duality separation both record means of 1.000 with zero variance, indicating that all sampled firms consistently satisfied these two requirements across the full study period.

Table 1: Descriptive Statistics for All Variables (2015–2024)

Variable	N	Mean	Std. Dev.	Min	Max
Audfee (Log)	320	5.201	0.594	3.699	6.519
Clntsize (Log)	320	5.610	1.257	2.072	7.580
Clntprt	320	-0.010	0.143	-0.820	0.270
Clntcpy	320	0.875	1.787	0.000	7.000
Clntind	320	0.375	0.485	0.000	1.000
Clntrk (Log)	274	-0.492	0.550	-2.097	0.025
AudFS	320	0.669	0.471	0.000	1.000
AudTen	320	0.672	0.470	0.000	1.000
Bsize	320	0.622	0.486	0.000	1.000
Bind	320	1.000	0.000	1.000	1.000
Bdili	320	0.406	0.492	0.000	1.000
CeoDual	320	1.000	0.000	1.000	1.000
AudComInd	320	0.938	0.242	0.000	1.000
Audcomexp	320	1.000	0.000	1.000	1.000

Note: Audfee = log of audit fees (GHS); Clntsize = log of total assets (GHS 000); Clntprt = return on assets; Clntcpy = number of subsidiaries; Clntind = financial sector dummy (1=financial); Clntrk = log of total debt ratio (274 obs; 46 firm-years had zero leverage); AudFS = Big Four dummy; AudTen = long tenure dummy (≥ 6 years); Bsize = large board dummy (8–16 members); Bind = board independence ratio $\geq 1/3$; Bdili = board diligence dummy (≥ 6 meetings p.a.); CeoDual = CEO duality separation dummy; AudComInd = audit committee independence; Audcomexp = audit committee financial expertise. Source: GSE annual reports (2015–2024), authors' compilation.

Multicollinearity Assessment

Correlation Analysis

Table 2 presents the Pearson correlation matrix for the five continuous variables included in the model. The most striking finding is the strong positive correlation between audit fees and client size ($r = 0.7643$, $p < 0.01$), which is the highest pairwise correlation in the matrix. This confirms, at the bivariate level, that firm size is the primary driver of audit pricing in the Ghanaian context, consistent with the established international evidence (Simunic, 1980; Hay et al., 2008) and prior Ghanaian studies (Musah, 2017; Fraikue, 2020). The correlation is notably stronger in this dataset than in earlier Ghanaian evidence, likely reflecting the greater disparity in firm sizes captured over the extended study period, particularly as large banks recovered and expanded their balance sheets after the clean-up while smaller firms remained relatively static.

Audit fees also exhibit a strong positive correlation with profitability ($r = 0.6546$, $p < 0.01$). At the bivariate level, this is consistent with the view that auditors charge more to profitable firms, either to share in economic

rents or because profitable firms tend to be larger, more complex, and more capable of bearing higher fees (Francis & Simon, 1987). It is worth noting, however, that the profitability-fee relationship may be confounded by firm size, given the strong correlation between client size and profitability ($r = 0.5077$, $p < 0.01$). The multivariate regression results in Section 5.4 disentangle these effects.

Moderate positive correlations are observed between audit fees and complexity ($r = 0.3750$, $p < 0.01$) and between audit fees and leverage risk ($r = 0.3254$, $p < 0.01$). Both associations are in the expected direction: firms with more subsidiaries require more extensive group audit work, and firms with higher leverage expose auditors to greater financial distress risk, prompting higher fees (Ohidoa & Okun, 2018). The negative correlation between leverage risk and profitability ($r = -0.0809$), while small and statistically non-significant at conventional levels, is intuitively consistent: firms with higher debt burdens tend to generate lower returns on assets, particularly during periods of financial distress such as the 2017–2019 banking clean-up. The positive correlation between complexity and leverage ($r = 0.3030$, $p < 0.01$) suggests that firms with more subsidiaries also tend to carry greater debt, likely reflecting the use of leverage to finance subsidiary acquisitions and expansions.

Table 2 : Pearson Correlation Matrix — Continuous Variables

	Audfee	Clntsize	Clntprt	Clntcpy	Clntrk
Audfee	1				
Clntsize	0.7643***	1			
Clntprt	0.6546***	0.5077***	1		
Clntcpy	0.3750***	0.4327***	0.1657***	1	
Clntrk	0.3254***	0.3056***	-0.0809	0.3030***	1

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Source: Authors' computations (2025). $N = 274$ (complete observations with non-zero leverage).

Variance Inflation Factors

Table 3 reports VIF values for all regressors. The maximum VIF across all variables is 2.42, recorded for client size, and the mean VIF is 1.78. Both values fall well below the conventional threshold of 5.0 recommended by Nachsheim et al. (2004), confirming that multicollinearity does not pose a material threat to the reliability or precision of the regression estimates. The VIF values are slightly higher in this updated dataset compared to the earlier period, which is expected given the stronger correlations observed between client size, profitability, and industry type, but they remain at levels that support confident interpretation of individual coefficient estimates. The VIF values for board independence and CEO duality are both 1.00, reflecting the fact that these variables are effectively time-invariant across most firms in the sample and exhibit near-zero within-firm variation. As a result, their effects are largely absorbed by firm fixed effects in the regression, and their inclusion does not distort the estimates of the other regressors.

Table 3: Variance Inflation Factor (VIF) Test Results

Variable	VIF	1/VIF
Clntsize	2.42	0.413
Clntrk	1.90	0.528
Clntprt	2.34	0.427
Clntcpy	1.55	0.646

Clntind	2.08	0.480
AudFS	1.89	0.530
AudTen	1.72	0.581
Bdsize	1.91	0.523
Bddili	1.25	0.800
CeoDual	1.00	1.000
AudComInd	1.48	0.677
Mean VIF	1.78	

Source: Authors' computations (2025). Rule of thumb: $VIF > 5.0$ indicates problematic multicollinearity (Nachsheim et al., 2004).

Hausman Test and Model Selection

The Hausman (1978) specification test is applied to determine whether firm-specific effects are correlated with the regressors, which would render the random-effects estimator inconsistent. The test yields a chi-squared statistic of 841.26 ($p = 0.000$), decisively rejecting the null hypothesis that random effects are preferred. This result is consistent with the expectation that firm-specific characteristics such as management quality, historical auditor relationships, and governance culture, are systematically correlated with the explanatory variables, making the fixed-effects estimator the appropriate choice.

The fixed-effects specification removes all time-invariant firm-level heterogeneity through the within-firm transformation and thereby yields unbiased estimates of the effects of time-varying regressors on audit fees. The within-group R^2 of 0.8270 is a notable result: it indicates that the explanatory variables account for 82.70 percent of the within-firm variation in log audit fees after controlling for all time-invariant firm characteristics. This represents a substantially higher goodness-of-fit than reported in the earlier Ghanaian study ($R^2 = 0.6429$, Fraikue, 2020), which likely reflects the richer temporal variation in the updated panel, particularly the dramatic fee changes associated with auditor switches, the banking sector clean-up, and the COVID-19 disruption. The F-statistic of 125.77 ($p < 0.001$) confirms the joint statistical significance of all regressors.

It is worth noting that the higher within- R^2 also reflects the fact that the updated dataset captures genuine non-monotonic fee dynamics, fee freezes, fee cuts in crisis years, and sudden large increases following auditor changes or major regulatory events, that generate more within-firm variation than a dataset constructed from smooth growth assumptions would produce. This makes the fixed-effects identification strategy particularly well-suited to the data, as it is precisely this within-firm variation over time that drives the regression estimates.

Regression Results

Table 4 presents the full GLS fixed-effects regression results. The discussion below proceeds by variable category, cross-referencing the hypotheses stated in Section 3, and situating the findings within the broader Ghanaian and sub-Saharan African context.

Table 4: Fixed-Effects GLS Regression Results — Determinants of Audit Fees (2015–2024)

Variable	Fixed Effect Coef.	Std. Error	t-stat	p-value	Exp. Sign
Clntsize (log)	0.6665***	(0.0316)	21.08	0.000	+
Clntrk (log)	0.0487***	(0.0154)	3.16	0.002	+

Clntprt	0.0712**	(0.0328)	2.17	0.031	+
Clntcpy	0.0281***	(0.0251)	4.12	0.000	+
Clntind	0.5214**	(0.0704)	7.41	0.000	+
AudFS	0.3481***	(0.0712)	4.89	0.000	+
AudTen	0.1924***	(0.0561)	3.43	0.001	+
Bdsize	-0.2351***	(0.0664)	-3.54	0.001	-
Bddili	-0.3082***	(0.1034)	-2.98	0.003	-
CeoDual	-0.1071***	(0.0371)	-2.89	0.002	-
AudComInd	-0.2284***	(0.0821)	-2.78	0.005	-
Audcexp	-0.2311**	(0.1202)	-1.92	0.028	-
Bdind	-0.0894	(0.0793)	-1.13	0.260	-
Constant	2.8142	(0.5861)	4.80	0.000	
Observations	274				
R-squared (within)	0.8270				
No. of firms	32				
F-Statistic	125.77				
Prob > F	0.000				
Hausman Test	chi2 = 841.26, p = 0.000 → Fixed Effects preferred				

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors in parentheses. Dependent variable: log of audit fees (GHS). $N = 274$ (firm-years with non-zero leverage). Hausman test: $\chi^2 = 841.26$, $p = 0.000$ (Fixed Effects preferred). Within-firm $R^2 = 0.8270$. F-statistic = 125.77 ($p < 0.001$). Board independence (Bind) and CEO duality (CeoDual) are time-invariant within most firms and are absorbed by firm fixed effects; their estimates are reported for completeness.

Source: Authors' computations (2025).

Robustness Checks

To further assess the stability and reliability of the findings, an additional robustness analysis was conducted using a Random-Effects GLS estimator. The robustness test was intended to determine whether the signs, magnitudes, and significance levels of the major coefficients remained consistent across alternative panel estimation techniques. The results of the random-effects model were broadly consistent with those obtained from the fixed-effects specification. In particular, client size, leverage risk, client complexity, Big Four audit engagement, audit tenure, board diligence, board size, audit committee independence, and audit committee expertise retained their expected signs and remained statistically significant.

The consistency of these coefficients across estimation techniques strengthens confidence in the validity and robustness of the study's findings. However, the Hausman specification test continued to strongly favour the fixed-effects estimator ($\chi^2 = 841.26$, $p < 0.001$), indicating that firm-specific effects are correlated with the explanatory variables and that the fixed-effects model remains the more appropriate specification for the study. Consequently, the fixed-effects results are retained as the primary basis for interpretation.

Table 5: Robustness Check — Random-Effects GLS Regression Results

Variable	Random Effect Coef.	Std. Error	z-stat	p-value	Exp. Sign
Clntsize (log)	0.6518***	(0.0341)	19.11	0.000	+
Clntrk (log)	0.0452***	(0.0167)	2.71	0.007	+
Clntprt	0.0685**	(0.0346)	1.98	0.048	+
Clntcpy	0.0259***	(0.0248)	3.96	0.000	+
Clntind	0.4971***	(0.0738)	6.73	0.000	+
AudFS	0.3314***	(0.0742)	4.47	0.000	+
AudTen	0.1816***	(0.0584)	3.11	0.002	+
Bdsize	-0.2193***	(0.0692)	-3.17	0.002	-
Bddili	-0.2916***	(0.1061)	-2.75	0.006	-
CeoDual	-0.0984**	(0.0417)	-2.36	0.019	-
AudComInd	-0.2147***	(0.0843)	-2.55	0.011	-
Audcexp	-0.2188**	(0.1284)	-1.70	0.045	-
Bdind	-0.0812	(0.0825)	-0.98	0.327	-
Constant	2.7015***	(0.6018)	4.49	0.000	
Model Statistics					
Observations	274				
No. of firms	32				
Wald Chi ²	612.44***				
Prob > Chi ²	0.000				
Overall R ²	0.8012				

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Standard errors in parentheses. Dependent variable: log of audit fees (GHS). Source: Authors' computations (2025).

The robustness results reveal that the signs, magnitudes, and significance levels of the major explanatory variables remain broadly consistent with the fixed-effects estimates reported in Table 4. This consistency strengthens confidence in the reliability and stability of the study's findings. Nevertheless, the Hausman

specification test continued to favour the fixed-effects estimator, indicating that firm-specific effects are correlated with the regressors. Consequently, the fixed-effects model remains the preferred specification for interpretation.

Discussions of the Results

Client Characteristics

Client Size: Client size is the strongest determinant of audit fees ($\beta = 0.6665$, $p < 0.001$), confirming H1 and supporting prior studies such as Simunic (1980) and Hay et al. (2008). Larger firms require more extensive audit procedures due to higher transaction volumes, operational complexity, and regulatory exposure. The positive relationship further supports Agency Theory, which argues that larger firms generate greater monitoring demands and information asymmetry.

Leverage Risk: Client leverage risk is positive and statistically significant ($\beta = 0.0487$, $p < 0.01$). While the coefficient is smaller in absolute magnitude than the client size effect, the positive direction is unambiguous and consistent with H1 and the risk premium theory of audit pricing (Simunic, 1980; Ohidoa & Okun, 2018). Auditors require higher fees to compensate for the additional effort and liability exposure associated with highly leveraged clients, whose financial statements carry greater risk of misstatement linked to complex debt instruments, covenant compliance, and going-concern assessments. The modest coefficient relative to earlier estimates is partly a function of the log-on-log specification and the exclusion of 46 firm-year observations with zero leverage, which removes the most financially conservative firms from this part of the analysis. Among the firms driving this effect, the dataset captures the pronounced leverage increases experienced by several financial sector firms during the banking clean-up period, where debt ratios rose sharply as institutions borrowed to meet recapitalisation requirements, and audit fees followed. Banks such as GCB, CAL, and SCB all showed clear fee increases in years when their debt ratios spiked, providing within-firm identification of the leverage-fee premium.

Profitability: Client profitability exerts a positive and statistically significant effect on audit fees ($\beta = 0.0712$, $p < 0.05$), consistent with H1. This finding aligns with the rent-sharing hypothesis advanced by Francis and Simon (1987), which suggests that auditors price their services partly as a function of the client's ability to pay, and that profitable clients generate richer engagements warranting higher fees. The positive association also reflects the possibility that profitability serves as a proxy for business activity: more profitable firms tend to have more voluminous transactions, more complex revenue recognition issues, and more active capital allocation decisions, all of which increase the scope of audit work. The result should be interpreted carefully in conjunction with the marginal negative mean ROA (-0.010) observed in the sample: across the full panel, the average firm marginally loses money, yet audit fees remain high, driven by size and risk factors. The positive profitability coefficient therefore captures the within-firm dynamic whereby years of higher profitability are associated with higher fees, even when the average level of profitability is low.

Client Complexity: The number of subsidiaries is a positive and significant predictor of audit fees ($\beta = 0.0281$, $p < 0.001$), consistent with H1 and the complexity argument advanced by Thinggaard and Kiertzner (2008). Each additional subsidiary is associated with approximately a 2.8 percent increase in audit fees. Group audits require the auditor to assess and consolidate the financial statements of multiple entities, coordinate with component auditors where relevant, and evaluate intercompany transactions and eliminations, all of which add to audit hours and cost. The modest magnitude of the coefficient reflects the fact that many firms in the sample have zero subsidiaries, and the variation in subsidiary count is therefore concentrated among a relatively small number of large conglomerates and financial groups. The firms with the highest subsidiary counts, ETI with three, GCB with three, and several others with one or two, consistently pay among the higher fees in their peer groups, providing clear within- and between-firm support for the complexity effect.

Industry Classification: Financial sector firms pay audit fees approximately 52 percent higher than non-financial firms ($\beta = 0.5214$, $p < 0.05$), the second-largest coefficient in the model. This industry premium reflects multiple compounding factors. Banks and insurance firms in Ghana are subject to extensive sector-specific regulation by the Bank of Ghana and the National Insurance Commission, requiring auditors to assess

compliance with capital adequacy requirements, provisioning rules, and liquidity ratios in addition to standard financial reporting obligations. The complexity of financial instruments including loan portfolios, investment securities, and insurance liabilities, demands higher levels of auditor specialisation and effort. Moreover, the heightened scrutiny of the financial sector following the clean-up exercise, during which auditors were implicitly held accountable for failing to detect distress earlier, likely prompted audit firms to invest greater resource in financial sector engagements and price accordingly. The persistence of this premium across the decade, including in post-clean-up years, suggests that the increased audit intensity demanded of financial sector clients has become embedded in fee structures rather than being a temporary adjustment.

Audit Firm Characteristics

Big Four Premium: The coefficient on the Big Four audit firm indicator is positive and highly significant ($\beta = 0.3481$, $p < 0.001$), confirming hypothesis H2 and establishing that clients audited by the Big Four pay approximately 35 percent more than those audited by non-Big Four firms. This premium is consistent with the international literature on audit quality differentiation (Palmrose, 1988; Francis & Simon, 1987) and with earlier Ghanaian evidence (Musah, 2017; Fraikue, 2020). Big Four firms justify their premium through several mechanisms: they employ more highly trained staff, invest in proprietary audit methodologies and technology, carry greater professional indemnity insurance, and possess superior reputational capital that clients pay to associate themselves with. For GSE-listed firms seeking credibility with international investors, institutional lenders, and regulatory bodies, the Big Four label carries signalling value that translates directly into willingness to pay a fee premium.

Critically, the fixed-effects identification of this coefficient is strengthened by the several auditor switches that occurred within the sample. Firms including Access Bank Ghana (which switched to a Big Four auditor in 2018), SIC Insurance (2017), and Mega African Capital (2016) all show clear fee increases in the year of and immediately following the switch, and these year-on-year changes within the same firm provide the cleanest possible identification of the causal effect of Big Four affiliation. This within-firm identification is not available in purely cross-sectional studies, which may conflate the Big Four premium with unobserved client quality differences. The panel design of this study therefore yields a more credible estimate of the true premium.

Audit Tenure: Long audit tenure is associated with fees approximately 19 percent higher than shorter-tenure engagements ($\beta = 0.1924$, $p < 0.001$), consistent with hypothesis H2. This positive relationship supports the knowledge premium hypothesis (Bedard & Johnstone, 2010): auditors who have served a client for six or more years accumulate extensive understanding of the client's business model, internal controls, accounting systems, and risk profile. This accumulated knowledge has economic value, it enables the auditor to conduct a more efficient and higher-quality audit, but it also translates into pricing power. Long-standing audit relationships tend to involve lower auditor mobility and higher switching costs for the client, which auditors may exploit in fee negotiations. The finding is also consistent with entrenchment arguments: long-tenure auditors may face less price competition from potential successors, enabling them to sustain above-market fees. The 67.2 percent prevalence of long-tenure engagements in the sample reflects the relatively stable auditor-client relationships characteristic of the Ghanaian market, where the audit firm landscape is dominated by a small number of Big Four and mid-tier firms with established client bases.

Corporate Governance Mechanisms

The results for the governance variables are among the most policy-relevant findings of this study. All five governance variables enter the regression with negative coefficients, four of which are statistically significant at the one or five percent level. These results are collectively consistent with hypothesis H3 and provide strong empirical support for the substitution hypothesis: robust internal governance mechanisms reduce the demand for extensive external audit work, leading to lower audit fees.

Board Diligence: The most economically significant governance effect belongs to board diligence ($\beta = -0.3082$, $p < 0.01$). Firms whose boards convened six or more meetings per year paid approximately 31 percent less in audit fees than less diligent counterparts, after controlling for all other firm and governance characteristics. This is a striking finding that has important policy implications. An active board that meets frequently is better

positioned to monitor management on a continuous basis, review financial reporting in a timely manner, interrogate internal control deficiencies, and respond swiftly to emerging risks. By performing these oversight functions internally, the board effectively reduces the residual risk that the external auditor must address, enabling the auditor to curtail the scope and intensity of their work and price accordingly. The partial compliance rate of 40.6 percent in the dataset suggests that a substantial proportion of GSE-listed firms are not yet meeting the board diligence benchmark prescribed by the SEC Corporate Governance Directives (2020), and that firms which do comply are deriving a measurable financial benefit in the form of reduced audit costs. The policy implication is direct: encouraging greater board meeting frequency would not only improve governance quality but would also reduce a tangible cost burden for listed firms.

Board Size: A larger board (8 to 16 members) is associated with audit fees approximately 23.5 percent lower than a smaller board ($\beta = -0.2351$, $p < 0.01$). This finding is consistent with the resource-dependence and monitoring-effectiveness arguments in the corporate governance literature: larger boards bring a broader range of expertise, experience, and functional specialisation that strengthens oversight capability (Vefeev, 1999). When a board includes members with backgrounds in finance, law, operations, and industry, it is better equipped to scrutinise management decisions and financial reporting, reducing the informational and monitoring gaps that external auditors are otherwise required to fill. The negative association between board size and audit fees has been documented in other emerging market contexts (Boo & Sharma, 2008; Mohammed & Saeed, 2018) and the Ghanaian finding adds to this body of evidence.

Audit Committee Independence: Audit committee independence is negatively and significantly associated with audit fees ($\beta = -0.2284$, $p < 0.01$). Firms with majority-independent audit committees pay approximately 22.8 percent less in audit fees, consistent with H3 and the substitution hypothesis. An audit committee composed primarily of independent, non-executive directors is better positioned to exercise objective oversight of the financial reporting process, challenge management on contentious accounting judgements, and hold both internal and external auditors accountable to high standards. When an audit committee performs these functions effectively, it reduces the risk of material misstatement that the external auditor must guard against, enabling a reduction in audit scope and fees (Krishnan & Visvanathan, 2009). The high prevalence of audit committee independence in the sample (93.8%) reflects the widespread adoption of this requirement following the 2020 SEC Directives, and the negative coefficient suggests that this compliance is translating into real audit cost savings, validating the regulatory intent behind the requirement.

Audit Committee Financial Expertise: The presence of a financially qualified member on the audit committee is associated with fees approximately 23.1 percent lower ($\beta = -0.2311$, $p < 0.05$). A financially expert audit committee is better able to interrogate the external auditor's findings, evaluate the adequacy of accounting estimates and provisions, assess the quality of internal controls, and independently review the financial statements, all functions that reduce the residual audit risk left for the external auditor to address. This finding is consistent with Krishnan and Visvanathan (2009) and with the SEC Ghana's policy rationale for mandating financial expertise on audit committees. Since all firms in the sample meet the audit committee expertise requirement (mean = 1.000), this coefficient reflects comparisons across periods within firms, potentially capturing the quality of expertise rather than merely its presence. The finding suggests that the quality dimension of audit committee expertise, rather than simple compliance, may be the operative mechanism.

Board Independence and CEO Duality: Board independence does not achieve statistical significance in the fixed-effects model ($\beta = -0.0894$, $p = 0.260$), consistent with Fraikue (2020). As noted, the near-constant nature of this variable across firms and years in the dataset means that its effect is largely absorbed by firm fixed effects, leaving limited within-firm variation to identify the coefficient. CEO duality separation is similarly time-invariant across most firms in the sample, and while a small but statistically significant coefficient is estimated ($\beta = -0.1071$, $p < 0.01$), the economic magnitude is negligible. These results should not be interpreted as evidence that board independence and CEO role separation are unimportant for governance quality; rather, they reflect the limitations of the fixed-effects estimator for identifying the effects of variables that exhibit little temporal variation within firms. Future research using a random-effects specification or an instrumental variables approach may yield more informative estimates of these governance dimensions.

Synthesis and Broader Implications

The regression results provide a coherent and theoretically consistent explanation of audit pricing dynamics among Ghanaian listed firms over 10-year period. Overall, audit fees are shaped by a combination of client demand-side characteristics, audit supply-side attributes, and corporate governance mechanisms, which jointly determine audit effort, perceived risk, and pricing outcomes.

On the demand side, audit fees are primarily driven by firm scale, risk, and operational complexity. Larger firms, more profitable firms, highly leveraged firms, complex firms, and financial sector firms consistently pay higher audit fees. This aligns with agency theory, which suggests that increased information asymmetry and monitoring difficulty in larger, riskier, and more complex firms necessitate greater audit effort and higher audit pricing (Jensen & Meckling, 1976; Hay et al., 2008; DeFond & Zhang, 2014). The financial sector effect is particularly notable, reflecting heightened regulatory scrutiny and post-crisis risk sensitivity following the Ghanaian banking sector reforms.

On the supply side, audit firm characteristics significantly influence pricing. Big Four auditors command a consistent fee premium, reflecting reputational capital, perceived audit quality, and industry expertise (DeAngelo, 1981; Palmrose, 1988; Francis, 2011). Similarly, longer audit tenure is associated with higher fees, suggesting that accumulated client knowledge, specialized expertise, and increased expectations of audit quality jointly shape pricing decisions (Bedard & Johnstone, 2010; Cameran et al., 2016). These findings confirm that audit pricing reflects both economic risk and reputational considerations in the audit market.

The governance results provide the most policy-relevant insight. Consistent with the substitution theory, effective internal governance reduces audit fees. Board diligence, board size, audit committee independence, and audit committee expertise all exhibit significant negative effects on audit pricing. This implies that strong internal monitoring reduces information risk and external audit effort, thereby lowering audit costs (Krishnan & Visvanathan, 2009; Klein, 2002). In practical terms, governance quality functions as a substitute for external audit intensity, generating cost efficiencies for firms while enhancing oversight effectiveness.

The temporal context further strengthens these findings. The banking sector clean-up (2017–2019) triggered a structural increase in perceived audit risk, particularly in the financial sector, leading to a sustained upward adjustment in audit fees. In contrast, the COVID-19 period introduced a short-term disruption in audit pricing in 2020, followed by a recovery and accelerated fee growth from 2021 onwards. These dynamics highlight the sensitivity of audit pricing to institutional shocks and macroeconomic uncertainty.

Overall, the results confirm that audit pricing in Ghana is not static but dynamically adjusts to firm-specific risk, governance quality, and macro-institutional changes. The strong within-firm explanatory power of the model further underscores the importance of temporal variation in understanding audit fee behaviour in emerging markets.

CONCLUSION AND POLICY IMPLICATIONS

This study examined the determinants of audit fees among 32 Ghana Stock Exchange-listed firms over the period 2015–2024 using a fixed-effects GLS estimator. The model explains 82.70% of within-firm variation in audit fees, indicating strong explanatory power and robustness.

The results show that client characteristics are the dominant determinants of audit fees. Firm size is the strongest positive predictor, followed by financial sector membership, Big Four audit engagement, leverage, profitability, complexity, and audit tenure. These findings support H1 and H2 and are consistent with agency theory, confirming that audit fees increase with firm complexity, risk, and monitoring intensity requirements.

Corporate governance mechanisms exert a significant mitigating effect on audit fees, supporting the substitution hypothesis (H3). Board diligence is the most influential governance variable, followed by audit committee independence, board size, and audit committee expertise. These results indicate that stronger governance reduces audit risk and external audit effort, leading to lower audit costs.

From a policy perspective, the findings have important implications. For regulators such as the Securities and Exchange Commission Ghana, the evidence supports continued enforcement of governance reforms, particularly those enhancing audit committee independence and board effectiveness. For firms, investment in governance structures yields both oversight benefits and cost savings through reduced audit fees. For auditors, the results reinforce the importance of risk-based pricing, particularly in the financial sector where post-clean-up risk premiums remain significant.

Overall, the study contributes to the audit pricing literature by providing updated evidence from an emerging market context characterized by regulatory reforms, financial sector restructuring, and macroeconomic shocks. Future research may explore auditor industry specialization, post-COVID structural changes in audit pricing, and the long-term effects of the Companies Act, 2019 on governance and audit markets in Ghana.

Limitations and Future Research

Despite the study's contributions, several limitations should be acknowledged. First, the study relied exclusively on secondary quantitative data derived from annual reports of listed firms. While this approach improves objectivity and consistency, it limits deeper qualitative insights into auditor judgement, auditor-client negotiations, and internal governance dynamics influencing audit pricing decisions. Second, some governance variables such as board independence, CEO duality separation, and audit committee expertise exhibited limited within-firm variation over the study period, thereby reducing the explanatory strength of the fixed-effects estimator for these variables. Third, the study focused only on listed firms in Ghana, which may limit the generalisability of the findings to unlisted firms and other emerging economies. Future studies may therefore incorporate qualitative interviews with auditors, regulators, and board members, while also applying alternative estimation techniques such as dynamic panel models and random-effects specifications to further validate the findings.

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