Cogent Business & Management

ISSN: 2331-1975 (Online) Journal homepage: www.tandfonline.com/journals/oabm20

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To cite this article: Richard Owusu-Afriyie, Dadson Awunyo-Vitor, Prince Gyimah & Kingsley Opoku Appiah (2024) Monitoring and audit quality: Does quality standards compliance matter?, Cogent Business & Management, 11:1, 2416095, DOI: 10.1080/23311975.2024.2416095

To link to this article: https://doi.org/10.1080/23311975.2024.2416095

Published online: 23 Oct 2024.

COGENT BUSINESS & MANAGEMENT
2024, VOL. 11, NO. 1, 2416095
https://doi.org/10.1080/23311975.2024.2416095

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Monitoring and audit quality: Does quality standards compliance matter?

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ABSTRACT

Monitoring auditors through external inspections and assessments has become a significant driver of continuous improvement in the auditing profession. Surprisingly, there is a scarcity of research on how monitoring influences audit quality and the boundary conditions that may explain this relationship in developing countries. Therefore, this study develops and empirically tests a theoretical model that examines the relationship between monitoring and audit quality in the context of small and medium-sized practice firms (SMPs), using primary data collected from 209 SMPs in a developing country. The study employs variance-based structural equation modeling (SEM) using SmartPLS software to analyze the model's measurement and structural components. The findings reveal a statistically significant positive relationship between the monitoring of SMPs and audit quality, with quality standards compliance serving as a mediating variable that partially explains the mechanisms underlying this relationship. A key practical implication of the study is that audit partners should re-examine their firms' policies, procedures, audit methodologies, and processes to ensure adherence to legal, regulatory, and professional obligations or standards in order to achieve high-quality audits. This study contributes to the audit quality literature by providing novel empirical evidence, offering insights for academic research, informing policy decisions for governments and regulators, and providing practical implications for auditing professionals to enhance audit quality.

ARTICLE HISTORY
Received 15 January 2024
Revised 22 July 2024
Accepted 8 October 2024

KEYWORDS
International standard on auditing (ISA); international standard of quality management (ISQM); audit monitoring; audit quality; mediation; small and medium practice (SMP) firms; auditing

SUBJECTS
Business, Management and Accounting; African Studies; Finance

1. Introduction

The significance of audit quality has engaged the attention of researchers, academicians, and professionals over the last few years, particularly following the various world-wide scandals (Borgato & Marchini, 2021). In the wake of worldwide scandals and audit failures, regulatory bodies and the accounting profession have implemented regulatory modifications and implemented policy measures to enhance corporate governance efficacy, audit process quality, auditor responsibilities, and auditing (Lartey et al., 2020). In addition to bolstering the auditing profession, contemporary accounting scholars are endeavouring to ascertain the determinants that contribute to these controversies (Hoai & Thanwadee, 2015).

However, Ismail et al., (2018) argued that past studies on audit quality mainly focus on audit independence (Jeppensen, 1988), judgment (Libby & Luft, 1993), ethics (Moizer, 1995), and disclosure (Carlin et al., 2009). Scholars in this area, such as Fearnley, Brandt and Beattie (2002) and Hoai and Thanwadee (2015), apart from improving the auditing profession itself, are trying to recognize the factors that contributed to the scandals. Similarly, researches by scholars have examined the concept of audit quality

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and the causes of why audit quality differs amongst audit firms and auditors. This is evidenced by the works of Francis (2011); Knechel et al. (2013); and Simnett et al. (2016). Moreover, most studies used data from developed nations and currently, there is no theory highlights the drivers of audit quality. For example, studies by Hilary and Lennox (2005), Casterella et al. (2009), and Lennox and Pittman (2010) suggest that credible information regarding the quality of audit firms can be obtained from self-regulatory peer review opinions, which are correlated with the actual quality of the firm. Anantharaman (2012) argues in favour of allowing peer evaluations to be credible, on the condition that they remain unmanipulated. On the contrary, a number of scholarly investigations have discovered correlations between PCAOB inspection findings and audit quality as well as tangible economic repercussions (Hermanson et al., 2007; Gunny et al., 2007; Defond & Lennox, 2011; Gramling et al., 2011; Carcello et al., 2002; Abbott et al., 2013; Gunny & Zhang, 2013). This suggests that the self-regulatory peer review mechanism is ineffective. Regarding whether statutory regulation signals and enhances audit quality in developed nations, the existing literature is scant (Aobdia, 2015) and disregards the factors that influence the degree and scope of adherence to audit quality standards (revised ISA 220 and ISQM) established by the IAASB. Regrettably, research on the adoption and level of adherence of auditing monitoring to international standards on auditing (ISAs) is scarce, in contrast to the extent of investigation into the adoption and implementation of IFRS (Simunic et al., 2015). Therefore, external examinations and evaluations of auditors, which constitute auditing or monitoring, are increasingly serving as a catalyst for the profession's ongoing progress (Álvarez-Foronda et al., 2023).

Unexpectedly, the literature regarding the relationship between monitoring and audit quality, as well as the boundary conditions that could account for this relationship in the context of developing countries, is notably scarce (Chalu, 2019). Thus, this study looks at the audit quality of SMPs from the perspective of IAASB framework of audit quality. Additionally, the research aims to tackle the issues that have been brought to light by the general public and The World Bank (2014) Report on the Observance of Standards and Codes in Accounting and Auditing (ROSC A and A) in a developing nation, Ghana, where the audit quality of small and medium practice firms (SMPs) in Ghana as a whole is inadequate with regard to ethical and compliance concerns that impact audit quality. By conducting an extensive literature review and employing the Audit Quality framework, this study aims to address the subsequent research questions (RQ):

RQ1: Does monitoring of the SMP firms influence audit quality?

RQ2: Does quality Standards compliance positively influence Audit Quality?

RQ3: Does the Monitoring of SMPs positively influence quality standards (revised ISA 220 and ISQM1) Compliance?

RQ4: Is the direct relationship between monitoring of SMP firms and audit quality mediated by quality audit standards compliance?

The current study seeks to make the following contributions to the existing literature. First, this study adds to the growing scholarly works on SMP audit quality by synthesizing and integrating theories of Economic to broaden an understanding of how SMP monitoring impacts audit quality. The study does so by theorizing and testing the notions that (a) monitoring of SMP firms influences audit quality; and that quality standards (ISA 220 and ISQC1) compliance mediates the relationship between SMPs monitoring and audit quality. This sheds new theoretical insights on when the benefits of SMPs monitoring can be leveraged to optimise audit quality standards compliance to achieve audit quality. Second, the study extends the empirical literature on audit quality improvement by analysing the relationship between audit monitoring of SMPs and audit quality. An empirical analysis of the relationship between these variables is important because it helps in resolving the debate on monitoring—audit quality linkage. Third, the study enriches context-specific knowledge of audit quality from a developing economy perspective and focusing on SMP firms. Prior studies have not focused on and addressed the challenges facing SMP firms in emerging economies in the adoption and implementation of the quality standards (ISA 220 and ISQM). In using data from Ghana, the present study offers valuable insight on key factors that affect audit quality of SMPs and practices in the audit industry in general, the compliance of audit

quality standards and the concept of audit quality in an emerging economy. Forth, the study empirically contributes to the arguments on the potential benefits of direct regulation and monitoring of audit practices to ensure audit quality. Thus, the study can assist in understanding the role of the other participants in financial reporting in promoting high-quality auditing. Lastly, the findings are expected to be used by professional accounting bodies and regulators in coming out with the appropriate policies, rules and regulations relating to the accounting and auditing profession. They can better appreciate the issues about audit quality standards for effective compliance; and how and when these quality standards affect audit quality. Again, challenges and critical success factors that enhance or hinder the quality standards compliance could be assessed and addressed appropriately and promptly. Corporate management, audit boards, technical associations, authorities, experts, and scholars should have a greater understanding of the essence and key factors that may impact the consistency of the audit and the results of the audit.

The rest of the paper is structured as follows. Sections 2, 3 and 4 provide the background, theoretical literature review, empirical literature review and hypotheses development. Section 5 describes the research design used for the study. Section 6 provides the empirical results and discussion, and Section 7 finally summarizes and concludes the study.

2. Background

Ghana is a vibrant country in West Africa with a rich cultural heritage and diverse landscapes. When it comes to monitoring and audit quality in Ghana, it's crucial to ensure that financial statements are accurate and reliable. It is essential for organizations in Ghana to prioritize monitoring, audit quality, and compliance with standards to uphold the credibility of their financial reporting and contribute to the country's overall economic growth and stability. External auditors and other practitioners in Ghana are required to comply with auditing standards which include quality standards (revised ISA 220 and IQCM); and other codes, ethics and regulations (Aveh, Awunyor-Vitor, and Owusu-Afriyie, 2016) to enhance audit quality. However, the collapsed of the notable financial institutions in Ghana raised concerns over the quality of audits by auditors over the years. It is critical to sustain the confidence of the public in auditors and ensure effective audits to avoid collapse of entities, which is a huge cost to an emerging economy like Ghana.

Unfortunately, prior studies do not indicate that Small and Medium-Sized firms (SMPs) have been adequately researched to address the challenges facing SMPs which are mostly found in emerging economies like Ghana when implementing and complying with the quality standards. The World Bank (2014) Report on the Observance of Standards and Codes in Accounting and Auditing (ROSC A and A) in Ghana noted that there is a compliance gap in complying with international standards on auditing in the country (ISA). In addition, the report indicated that the introduction of the ISA is a problem, especially for local SMPs, since it is hard to justify the higher cost of an ISA audit for their client management. The report also noted the challenge of the SMPs in complying with the international standards on quality control (ISQC) in audit methodologies and communicating with the previous auditors on change of auditors. ROSC's (2014) observations are consistent with earlier findings by Boolaky and O'Leary (2011) that compliance gaps are prevalent in emerging economies like Tanzania in an attempt to comply with the auditing standards, laws and regulations. As noted by Brinkley (2006), the auditing or supervision of auditors by external reviews and audits is becoming a guiding force for the profession to continuously develop. Regulators and the accounting profession have taken a range of legislative steps as a result of global crises and audit deficiencies and have implemented administrative reforms to strengthen the efficiency of corporate governance, the consistency of the audit process and the positions of auditing and auditors.

Building on the observations of the ROSC (2014) report about the compliance gap in complying with international standards on auditing in the country (ISA), it is evident the audit quality of firms in Ghana, in particular, that of SMPs is not considered to be of high quality. Literature posits that in any compliance system, coercive regulatory mechanisms remain an integral ingredient and that the strength of auditing standards can be favorably influenced by legal structures. The linkage between the legislative system and quality requirements would help ensure that implementation is accomplished and fully

complied with which leads to high-quality audits. Cognizance of the fact that the regulator's effective monitoring of SMPs is responsible for appropriate compliance with quality standards, and positively influences audit quality, it is imperative that quality standards compliance will mediate the relationship between monitoring of SMPs and audit quality.

3. Theory literature review

Deegan and Unerman (2011) state that since auditing is considered as a human activity, individuals' behaviour and characteristics are needed in financial auditing theories such as policeman theory, lending credibility theory, theory of inspired confidence, and others. Dowling and Leech (2011) note that despite audit quality research since the early 1980s, there is no agreed theoretical base on audit quality. Accordingly, this study draws on the Theory of Economic Regulation to achieve the objectives. Peltzman (1979) expands upon the Theory of Economic Regulation, which is initially proposed by Stigler (1971). According to Stigler (1971), the Theory of Economic Regulation describes the merits, responsibilities, and advantages of the industry's applicable regulatory framework.

In this study, it is considered that quality standards (revised ISA 220 and ISQMs) are the regulatory framework, to which SMPs must comply to achieve audit quality. Therefore, compliance with these quality standards goes with some benefits and responsibilities. Compliance will lead to high audit quality with its attendant benefits and non-compliance will lead to audit failure that may attract sanctions. This aligns with the views of Posner (1974) that the Theory of Economic Regulation is based on Public Interest and Capture theories. The Public Interest Theory considers that the public demands regulations to correct market inefficiencies and failures; whilst the Capture Theory considers that regulations are influenced by the regulated (interest groups) to protect their private interests and to maximise benefits of their members.

This study uses the two theories of the Theory of Economic Regulation to explain the relationship between monitoring of SMP firms and audit quality. With the use of quality standards as a mediating variable between monitoring of SMPs and audit quality, the view of Posner (1974) is adopted. The Theory of Economic Regulation is thus, used in the study to explain the mediating role of quality standards compliance. This study uses the Public Interest theory to explain the relationship between monitoring of the SMP firms, the independent variable and quality standards, the mediating variables. The Public Interest theory explains that arising from the global scandals resulting in market and audit failures, there is the need to introduce and enhance regulations in the form of quality standards to ensure audit quality to restore public confidence in auditing and prevent future failures. Furthermore, the Capture theory is used to explain the relationship between the mediating variable of quality standards and audit quality. It is argued that arising from these market and audit failures, the Accounting and Auditing profession requires these regulations to restore the confidence of the public and to redeem the profession's sinking image.

Gipper et al. (2013) consider the application of the Economic Regulation Principle in the accounting and auditing profession as they argue that despite the fact that these rules vary from other forms of legislation, laws have an impact on the establishment of accounting and auditing requirements. They contend that this is despite accounting and auditing setters trying to be politically independent as their standards apply to accounting and auditing only. This aligns with the perspectives put forth by Kothari et al. (2015) regarding the existence of sparse political markets and political standards. They hypothesise that accounting standard setters employ a limited number of qualified experts to regulate accounting practices. Additionally, Gipper et al. (2013) contend that, in the interest of their clients and for their own benefit, large auditing firms have effectively influenced the decisions of accounting standard setters. Using both Regulatory Capture Theory and Private Interest Theory, Chalmers et al. (2012) evaluate the public interest and private interest in the establishment of accounting standards in Australia. They conclude that while private interest is not considered to outweigh public interest at the time, there are opportunities for private interest to do so. Thus, this research investigates the mediating function of quality standards compliance in the relationship between monitoring SMPs and audit quality, utilising the Theory of Economic Regulation.

4. Empirical literature review and hypotheses development

4.1. Monitoring of SMPs and audit quality

Most studies in developed markets suggest that audit opinions monitored by self-regulatory bodies generally reflect high-quality audits; however, certain audit results are manipulated by preferred reviewers (Anantharaman, 2012). Existing research on whether statutory regulation enhances and signals audit quality is scant. By comparing PCAOB's specific audit deficiencies to common audit quality measures found in prior literature, Aobdia (2015) concludes that a number of audit quality measures can predict audit deficiencies. This suggests that the PCAOB reports serve as an indicator of audit quality. Hermanson et al. (2007) determine, based on an analysis of 316 reports issued to small audit firms, that inadequate substantive testing accounts for 80% of engagement performance defects, while auditor tests of control account for 5% and audit opinions account for the remaining 15%. Additionally, the authors discover that 22 (7.0%) PCAOB reports include information regarding a restatement of the audited financial statements of the client, which indicates that examiners identify at least some significant audit deficiencies that serve as an indicator of audit quality. In their study, Gunny et al., (2007) investigate the correlations between the quality of earnings reported by clients and the reports generated by PCAOB inspectors from 2005 to 2006 and peer examiners from 1997 to 2003, respectively. A negative correlation is observed between the quality of earnings and the PCAOB's disclosure of GLPA violations; however, no statistically significant association is identified when peer review reports are considered. Gunny et al. (2007) reach the conclusion that differentiation in earnings quality is exclusively facilitated by PCAOB inspection reports.

Additionally, Defond and Lennox (2011) reach the conclusion that PCAOB inspections predominantly serve to correct inadequate audit practices in order to enhance the quality of audits. In a similar vein, Abbott et al. (2013) state that PCAOB inspection reports serve as an indicator of audit quality, and that deficient auditor-issued inspection reports would be substituted with spotless inspection reports. Additional factors identified in the existing body of literature that impact audit quality in the United States encompass shortcomings in audit execution and documentation, lack of independence, and inadequate quality evaluations. Regarding Ghana, the self-regulatory ICAG, which establishes the Ghana National Accounting and Auditing Standards, has completely embraced IAASB auditing standards, thereby constraining their autonomy and fostering the growth of private interests. As of December 31, 2015, Ghana National Accounting and Auditing Standards ceased operations. In light of the foregoing, it is hypothesised that ICAG's participation as the regulator would facilitate the surveillance of the audit quality of SMPs:

H1: Monitoring of SMPs positively influences audit quality.

4.2. Monitoring and audit quality standards compliance

This study employs the Public Interest theory to elucidate the correlation between monitoring and quality standards. According to public interest theory, the emergence of regulatory measures occurs when there is a market failure crisis that is considered amenable to resolution for the benefit of the general public (Skinner and Srinivasan, 2012). Certain governments worldwide hold the belief that the management of certain entities operating within their jurisdictions intentionally generates inaccurate financial statements (van Nieuw Amerongen et al., 2023). However, the external auditors of said entities have issued unaltered reports on these financial statements (Suttipun, 2022). Government intervention in the process of establishing financial accounting standards has been deemed essential due to deficiencies in the accounting information market. According to Nobes (2010), the Institute of Chartered Accountants in England and Wales established an Accounting Standards Steering Committee, which was subsequently renamed the "Accounting Standards Committee," in response to criticism of the accounting profession in the United Kingdom stemming from what is considered deceptive annual reporting. In 1984, the Accounting Standards Review Board was instituted by the Australian Government in response to market challenges attributed to inadequate accounting standards and limited adherence to accounting

standards established by the accounting profession. The primary function of the Accounting Standards Review Board is to grant legal validation to accounting standards, thereby facilitating enhanced reporting (Cianci & Tsakumis, 2023). The Board has the authority to issue standards that are legally binding (Koonce et al., 2024). Global calls for harmonisation of financial accounting to increase capital market efficiency, decrease the cost of capital for domestic firms listed internationally, and reduce the cost of national standard-setting (Guermazi, 2023). These objectives have contributed to the current global dominance of private sector standard-setting by the International Accounting Standards Board (IASB). Also, the International Auditing and Assurance Standards Board (IAASB) published "A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality" in 2014 to raise awareness regarding the most effective systemic approaches to achieving high audit quality. SMP audits practice in accordance with International Standards on Auditing (ISAs) and International Standards on Quality Management (ISQM 1), as evident from the preceding discourse, if the regulator effectively monitors the appropriate compliance with accounting and auditing standards. Thus, the subsequent hypothesis is developed.

H2: Monitoring of SMPs positively influences quality standards (revised ISA 220 and ISQM1) Compliance

4.3. Audit quality standards compliance and audit quality

The study also employs the Capture theory to elucidate the correlation between audit quality and the mediating variable of compliance with quality standards. Regulatory capture theory is a distinct variant of private interest theory in which the prevailing private interest is that of one or more parties whose conduct is subject to regulation (Xia et al., 2024). It operates under the assumption that the regulatee can ensure that their private interests take precedence over the public interest, despite the stated purpose of regulation is to safeguard the public interest (Peltzman, 1979). Consistent with Regulatory Capture theory, Richardson (2009) contends that regulatory networks have a substantial impact on both accounting and auditing standards. Furthermore, these networks are susceptible to substantial influence from regulated individuals and groups with specific agendas. The public interest, including that of SMPs, might be overshadowed by the interests of professional organisations and large auditing firms during the promulgation of auditing standards. According to Eltweri et al. (2022), professional accountancy organisations determine whether a country should implement ISAs. Consequently, the participation of professional organisations may result in standard-setting organisations serving the professional organisations' interests. Similarly, given the higher likelihood of professional bodies engaging with sizable auditing firms, the auditing standards that are mandated may be more suitable for such firms compared to SMPs.

It has been previously stated that the pursuit of self-interest can both advance and hinder the public interest. Self-interest advancement and public interest service are inextricably linked. As long as it does not come at the detriment of other stakeholders, self-interest is a valid endeavour that has the potential to advance the public interest. In fact, serving the public interest is the most efficient approach to advancing one's own self-interest. Regulatory agencies' concerns and initiatives in an effort to restore public confidence in the audit process and improve audit quality are likely to mirror endeavours to preserve, defend, or manage their respective domains (Xia et al., 2024). Accounting regulatory bodies and accounting firms are image-sensitive organisations that rely on establishing and maintaining an impression that their activities align with public expectations (Holm & Zaman, 2012). As a consequence, SMPs are obligated to diligently adhere to quality standards in order to attain a superior level of performance, safeguard their standing, and evade regulatory sanctions. Drawing from the aforementioned arguments, the subsequent hypothesis is formulated:

H3: Quality Standards compliance positively influences Audit Quality

4.4. Mediating effect of audit quality standards compliance

By employing the Theory of Economic Regulation, the relationship between monitoring and audit quality is elucidated through the mediating function of quality standards compliance. Knechel et al. (2013) argue

that the function of standards is crucial for maintaining the profession's relevance, addressing the concerns of stakeholders, and advancing the overall quality of the auditing process, albeit with certain significant caveats and limitations. Boolaky and Soobaroyen (2017) postulate that legal frameworks might have a beneficial effect on the robustness of auditing standards. Establishing a connection between the legal framework and quality standards will facilitate the attainment and proper observance of the adoption. A person is considered to have committed a crime under Becker et al. (1998) model when the anticipated benefit of perpetrating the crime surpasses the benefit derived from participating in a lawful activity. Following this, Heineke (1978) formulates theoretical frameworks that are widely employed in the economic literature to analyse criminal behaviour. Heineke (1978) determines that the fundamental deterrence model possesses at least two significant flaws: first, it inadequately explains the available evidence; and second, its policy recommendations are not particularly practical. Sutinen and Kuperan (1999) propose an enhanced model of regulatory compliance behaviour in their article "A socio-economic theory of regulatory compliance." This model posits that rational individuals are influenced by extrinsic and intrinsic motivations, including but not limited to wealth enhancement. Their model incorporates psychological and sociological theories alongside economic theory in order to consider both tangible and intangible motivations that impact individuals' choices regarding compliance with a specific set of regulations. The model takes into consideration various factors, including social influence, moral obligation, and the traditional revenues and expenses linked to unlawful conduct.

Adherence to rules and regulations is contingent upon an individual's internal capabilities as well as external environmental influences; the socialisation process serves as the conduit between the individual and society. Cognitive and social learning are the two predominant psychological theories that explain how socialisation processes influence compliance behaviour. Individuals and developmental stages are the primary foci of cognitive theory (Robson & Ezzamel, 2023). As per cognitive theory, the moral development and integrity of the individual are the most influential factors in determining compliance. Conversely, social learning theory places predominant emphasis on environmental conditioning influences (Akers, 1985; Akers et al., 1979; Bandura, 1969). Social learning theory posits that the critical determinants of compliance are the viewpoints of peers and the degree of social influence that an individual experiences. There are two main perspectives on compliance found in the sociology literature: normative and instrumental (Robson & Ezzamel, 2023). The instrumental perspective, similar to Becker's (1998), posits that people are solely motivated by self-interest and are influenced by alterations in the immediate, concrete rewards and punishments linked to a particular action. Coercive enforcement measures continue to be indispensable components of any compliance regime, notwithstanding the fulfilment of a substantial level of compliance through the combined effects of moral obligation and social influence (Jibrin et al., 2014). Acknowledging the correlation between effective regulatory oversight of SMPs and audit quality, as well as the positive impact that such oversight has on audit quality, this study argues that adherence to quality standards will mediate the relationship between SMP monitoring and audit quality. The following hypothesis is put forth:

H4: *Quality Standards compliance will mediate the relationship between monitoring of SMPs*

4.5. Other variables

The audit quality can be enhanced by the presence of experienced auditors as opposed to inexperienced auditors (Brekumi et al., 2023). It has been argued by Brekumi et al. (2023), Cahan and Sun (2015), Libby and Frederick (1990), Kaplan et al. (2008), and Shelton (1999) that experience influences audit quality positively. According to Libby and Frederick (1990), auditors with greater experience have comprehensive knowledge of financial statement errors and error occurrence rates. Consequently, they have a higher probability of detecting errors. Shelton (1999) and Kaplan et al. (2008) concur that auditors with extensive experience are less susceptible to the impact of management's optimistically biassed evaluation and extraneous data.

Additionally, behavioural auditing research indicates that auditors' judgements are influenced by their level of audit experience. Consequently, the correlation between monitoring and audit quality

is governed by the firm's age (Brekumi et al., 2023). The number of years an audit firm has been around can influence audit quality because it shows their experience and expertise in conducting audits (Rezaei & Shabani, 2014). Over time, audit firms develop better systems, processes, and knowledge, which can lead to higher-quality audits. So, the longer a firm has been in existence, the more likely they are to have a strong track record of delivering reliable and accurate audits (Brekumi et al., 2023).

Furthermore, empirical studies indicate that the size of a firm may have an influence on the quality of audits, as indicated by proxies such as audit opinion (Chen et al., 2023; Lennox, 1999). Large audit firms, according to these researchers, generate higher-quality audits than their smaller counterparts because they are financially more vulnerable to litigation and client loss (Li et al., 2023). According to Brekumi et al. (2023), the proficiency of larger audit firms is enhanced due to their implementation of standardised audit methodologies, the breadth of audit procedures executed by the auditor, and their greater access to resources for conducting tests and training programmes. Large audit firms are the providers of superior audit quality due to the reputation associated with their brand (Chen et al., 2023; Teoh & Wong, 1993; Pham et al., 2014). Conversely, research findings from Yuniarti (2011) and Ali and Aulia (2015) indicate that the magnitude of an audit firm does not have a substantial impact on the quality of audits. In general, the majority of prior research supports a positive correlation between the size of an audit firm and the quality of its audits, whereas others do not. The aforementioned indicates that the relationship between monitoring and audit quality is influenced by the size of the firm. Thus, firm size is controlled in the context of this research.

5. Research design

5.1. Approach and data

The study uses quantitative and explanatory analysis of cross-sectioanl survey responses to examine the mediating role of quality standards compliance in monitoring SMPs and audit quality relationships in a developing country, Ghana. The research targets all registered audit firms in Ghana (342 in total as of December 31, 2022), excluding the big four and PKF, using the list from the Institute of Chartered Accountants (Ghana). The list of audit firms is sourced from the Quality Assurance Monitoring (QAM) unit of the Institute of Chartered Accountants (Ghana), guaranteeing a comprehensive and accurate representation of the study population. A simple random sampling method is used to select the SMP respondents from the sampling frame. Cohen et al. (2007) observe that a sample size of at least 100 for major subgroups and 20 to 50 in minor subgroups is appropriate for inferential statistics-based survey research. According to Ghozali (2014), the minimum sample size for SEM analysis with the Maximum Likelihood estimation method is 100 to 200. Previous research (Boso et al., 2013a, 2013b) has found that, when studying human participants like senior business executives in Ghana, using a delivery and collection approach for data collection yields a higher response rate compared to other methods.

Since the study involves human participants in the methodological setting, the Humanities and Social Sciences Research Ethics Committee (HuSSREC) of the Kwame Nkrumah University of Science Technology provided introductory and approval letters to collect responses. Also, written informed consent was obtained from all participants before data collection. The consent form clearly explains the purpose, risks, and benefits of the study, as well as the participants' rights, confidentiality and anonymity. The ethical approval and consent process are carried out in accordance with the Declaration of Helsinki and the guidelines of QAM and HuSSREC. Two hundred eighty closed-ended questionnaires are delivered and collected from principals, senior partners, or managers of the SMPs willing to participate in the study. A total of 209 usable responses are obtained from the 280 distributed questionnaires, yielding a response rate of 74.64%.

5.2. Conceptual model and measures

This study utilizes Structural Equation Modeling (SEM) to investigate the mediating effect of SMP monitoring on audit quality, as SEM is deemed an appropriate statistical technique for addressing complex

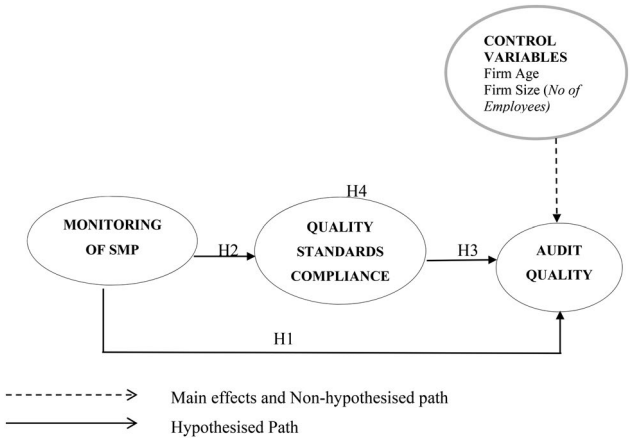

Figure 1. Conceptual research model.

business research questions, as noted by Crisci (2012). A mixed-methods approach for data analysis is used, utilizing IBM SPSS for data cleaning and descriptive statistics, and Partial Least Squares Structural Equation Modeling (PL-SEM) in SmartPLS software for modeling and estimating the structural relationships between variables.

The study examines the measurement theory (such as the reliability and validity of the model), and the structural theory involving the tests of the proposed hypotheses relating to the latent variables. With the reflectively specified constructs, the measurement model is assessed with indicator reliability (satisfactory degree of reliability), internal consistency reliability (assessed by composite reliability ρc and Cronbach's alpha), convergent validity (assessed by the average variance extracted (AVE) and discriminant validity (assessed by heterotrait-monotrait ratio (HTMT) of correlations, Fornell and Larcker criterion and Cross loading). The structural theory uses five different structural equation model (SEM) assessment metrics which include collinearity assessment, path coefficients, coefficients of determination (r-squared), Effect size (f-squared), and Blindfolding and predictive relevance (Q-squared).

Audit quality, monitoring of SMP, and quality standards compliance are the dependent, independent, and mediating variables, respectively. Firm age and firm size are the control variables. Figure 1 shows the network diagrams of the model.

5.2.1. Independent variable—monitoring of SMPS

The regulator, ICAG, monitors SMPs through its Quality Assurance Monitoring unit, focusing on improving the quality of services by practicing firms, with particular emphasis on SMPs. The study operationalises the Monitoring of SMPs by adapting three of the five items relating to technical support to SMPs from the studies of Martin (2013) and KPMG (2013). The study further adapts two items from Knechel et al. (2013), specifically those related to compliance with quality standards and obtaining sufficient appropriate audit evidence. All items were measured using a 7-point scale that ranged from "strongly disagree (=1)" to "strongly agree (=7)".

5.2.2. Mediating variable—quality standards compliance

Consistent Kohlers (2009), and Suzuki and Takada (2024), quality standards refer to both clarified international standards on auditing (revised ISA 220) and International Standards on Quality Management1 (ISQM 1). Previous studies support the notion that standards alone are insufficient to maintain and improve audit quality (Sujana & Dharmawan, 2023). More stringent enforcement by the regulator of these quality standards will compel the SMPs to comply with these standards, eventually leading to high audit quality. All the measures are adapted from Knechel et al. (2013). All items are measured using a 7-point scale that ranged from "not at All (=1)" to "to the largest extent (=7)". The respondents are asked to indicate the extent to which they agree or disagree with each item statement.

5.2.3. Dependent variable—audit quality

The definition and measurement of audit quality remain controversial as there has been little agreement on a unified definition and measure of audit quality (Brekumi et al., 2023). Research from the professional literature point of view is inclined to define audit quality as compliance with the auditing standards during audit performance (Rajgopal et al., 2021). However, various academic research approaches conceptualise and measure audit quality in several ways, including input, output, and outcome measures.

Audit quality is defined as the outcome of an effective audit process, and is measured as an output, as per the International Auditing and Assurance Standards Board (IAASB) framework. Combining insights from extant literature and IAASB's Audit Quality Framework (2014), the study develops a six-item scale to measure audit quality. The study operationalizes audit quality by using two items from IAASB (2014) related to regulators' inspection reports, specifically those indicating weaknesses in audit firms' work (audit failure), and the subsequent publication of these reports.

This study adapts four measures of audit quality from prior research, namely: (1) reduced financial restatements and rare re-issuance of audit opinions (Francis et al., 2013; Wooten, 2003), (2) fewer litigation cases due to audit malpractice (Francis, 2011), (3) relevant management reports on internal control weaknesses (Liddy, 2014), and (4) issuance of reliable, useful, and timely independent audit reports (Francis, 2011; Reichelt & Wang, 2010). All items are measured using a 7-point scale that ranged from "not at All (=1)" to "to the largest extent (=7)". The respondents are asked to indicate the extent to which they agree or disagree with each item statement.

5.2.4. Control variables

Empirically, there is evidence to confirm that some other variables may affect audit quality other than the variables in the conceptual model (Sirmon and Hitt, 2009). SMP age and SMP size are the control variables that could affect the independent and dependent variables. Consistent with prior research (Boso et al., 2013b; Boso et al., 2013a), the number of full-time staff, as indicated by the respondents of the SMP firms, is used as an indicator to determine firm size. Studies such as Schilke and Goerzen (2010); Lee and Lim (2009) have used firm size as a control variable.

Like these prior studies (Boso et al., 2013b; Boso et al., 2013a), firm age is controlled to determine performance. In this study, firm age, as indicated by the number of years of existence of an SMP, as reported by respondents, is controlled. This study hypothesizes a positive relationship between firm age and audit quality, suggesting that as a firm's age increases, its auditors' knowledge and experience also increase, leading to enhanced audit quality.

6. Empirical results and discussion

6.1. Demographic characteristics statistics

Table 1 presents a report on the summary statistics of the demographic of the respondents. Table 1 shows that the greatest number of respondents (50) falls between the age brackets of 6–10.9 years representing 23.92%. The 3–5.9 years age group is the next dominant age grouping of the respondents (48), representing about 22.97%. The other groupings of SMP firms (respondents) in order of age brackets are as follows: 11-15.9–34 (6.27%); 16-20.9–22 (10.53%); 21-25.9–21 (10.05%); 26-30.9–19 (9.09%) and above 31–15 (7.18%), respectively.

6.2. Research constructs statistics

Table 2 presents the descriptive statistics of the perceived statements of research constructs. The study uses a 7-point scale ranging from strongly disagree (a minimum scale of 1) to strongly agree (a maximum scale of 7) on the perceived statements—Monitoring of SMPs, Quality Standards Compliance, and Audit Quality. From Table 2, regarding the Monitoring of SMPs (MON), MON2 has the highest mean score of 5.74 with a standard deviation (SD) of 1.136 and a variance of 1.291. MON2 result indicates that the Institute of Chartered Accountants Ghana (ICAG) can monitor to ensure that the quality of financial

Table 1. Descriptive statistics of respondents ($N = 209$).

Characteristics	Sub level	Frequency	%	Mean	SD	Variance
Firm age (years of experience)	Below 3	0	0	6.3589	3.47801	12.097
	3–5.9	48	22.97			
	6–10.9	50	23.92			
	11–15.9	34	16.27			
	16–20.9	22	10.53			
	21–25.9	21	10.05			
	26–30.9	19	9.09			
	31 and over	15	7.18			
Number of clients	Below 10	0	0	51.7416	23.09429	533.346
	11–20	14	6.70			
	21–30	29	13.88			
	31–40	31	14.83			
	41–50	35	16.75			
	51–60	29	13.88			
	61–70	30	14.35			
	71–80	17	8.13			
	81 and over	24	11.48			
Number of full-time employees	1–3	39	18.66	6.3589	3.47801	12.097
	4–6	93	44.50			
	7–9	40	19.14			
	10–12	25	11.96			
	13 and over	12	5.74			

Table 2. Research constructs ($N = 209$).

Constructs	Constructs' codes	Measurement code	Min	Max	Mean	Standard deviation	Variance
Monitoring of SMPs	MON	MON1	1	7	5.64	1.245	1.550
		MON2	1	7	5.74	1.136	1.291
		MON3	1	7	5.53	1.233	1.519
		MON4	1	7	5.46	1.348	1.817
		MON5	1	7	5.24	1.352	1.827
Quality standards compliance	COMP	COMP1	1	7	5.54	1.148	1.317
		COMP2	1	7	5.61	1.073	1.152
		COMP3	1	7	5.45	1.311	1.720
		COMP4	1	7	4.97	1.381	1.908
		COMP5	1	7	5.25	1.224	1.498
		COMP6	1	7	5.37	1.367	1.868
		COMP7	1	7	5.46	1.330	1.769
Audit quality	QUAL	QUAL1	1	7	5.84	1.147	1.316
		QUAL2	1	7	6.02	0.985	0.971
		QUAL3	1	7	5.97	0.937	0.879
		QUAL4	1	7	6.05	1.119	1.252
		QUAL5	1	7	6.03	0.942	0.888
		QUAL6	1	7	6.20	0.848	0.719

statements signed by small and medium practice firms (SMPs) is enhanced by compliance with applicable financial reporting frameworks, laws, and regulations. The result also indicates that ICAG provides technical and professional support to SMPs to enhance compliance with audit quality standards (MON1: mean = 5.64, SD = 1.245, and variance = 1.550). The results for MON3 also with a mean of 5.53, SD of 1.233, and variance of 1.519, implying that respondents agree with the perceived statement that ICAG can ensure that audits by SMPs comply with the provisions of ISAs, Companies Act, 2019 (Act 992) and other local laws and regulations in Ghana. Regarding MON4, the study records a mean of 5.46, SD of 1.348, and variance of 1.348. Here, the respondents somewhat or slightly agree that ICAG ensures that SMPs comply with the provisions stipulated in ISQM 1 and ISA 220 (revised) to achieve audit quality. Similarly, MON5 reports the lowest average score, and the respondents somewhat agree that ICAG pressures on processing sufficient and appropriate audit evidence of SMPs (MON5: mean = 5.24, SD = 1.352, and variance = 1.827).

For the mediating variable, Quality Standards Compliance (COMP), COMP2 records the highest mean score of 5.61 with a standard deviation (SD) of 1.073 and variance of 1.152, indicating that the SMPs have established policies to provide reasonable assurance on compliance with ICAG/IFAC code of ethics.

Table 3. Summary of internal consistency reliability and validity.

	Cronbach's Alpha	Composite reliability	Average variance extracted (AVE)
Audit quality	0.891	0.917	0.648
Controls	0.730	0.044	0.226
Mon-audit mediator	1.000	1.000	1.000
Monitoring	0.903	0.928	0.720
Quality standard compliance	0.833	0.875	0.500

Again, respondents agree that the SMPs have policies that promote internal culture recognizing audit quality (COMP2: mean = 5.54, SD = 1.148, and variance = 1.317). Likewise, COMP7 records a mean of 5.46, SD of 1.330, and variance of 1.769, indicating that the SMPs have established policies and procedures requiring appropriate documentation in providing evidence on the operation of the six elements of the quality control system. Similarly, the respondents agree that SMPs consider staff as real assets essential for ISA adoption and implementation to achieve audit quality. The result, however, shows that respondents somewhat agree that the SMPs have established a monitoring process designed to provide reasonable assurance that policies and procedures relating to the system of quality control are relevant and adequate per the applicable standards (Mean = 5.37, SD = 1.367, variance = 1.868). The result again shows that SMPs have slightly established policies and procedures for accepting and continuing audit engagements (COMP5: mean = 5.25, SD = 1.224, and variance = 1.498). COMP4 records that the lowest average score of 4.97 (with SD of 1.381 and variance of 1.908) in terms of compliance with quality standards implies that SMPs have established and maintained a quality control system according to all quality control standards.

The research constructs of the dependent variable (Audit Quality) show that the respondents agree with all the perceived statements because the values have approximate scores of 6 or more. The highest average score is QUAL6 of 6.20, SD of 0.848, and variance of 0.719, indicating the respondents agree that the Regulators' inspection reports to the SMPs in Ghana can describe the weaknesses in their audit work and audit failure. Also, QUAL4 records a high mean of 6.05 (with SD and variance of 1.199 and 1.252, respectively), and this result implies that the SMPs issue appropriate management reports on the internal control weaknesses to their clients. Additionally, the SMPs issue appropriate independent audit reports on the financial statements that are reliable, useful, and timely (QUAL5: mean = 6.03, SD = 0.942, variance = 0.888). Furthermore, QUAL2's mean of 6.02, SD of 0.985, and variance of 0.971 indicates that there are fewer financial restatements by the preparers of the financial statements of the SMPs clients and that the SMPs seldom re-issue audit opinions. Moreover, QUAL3 records a mean of 5.97, SD of 0.937, and variance of 0.879, indicating that respondents agree there are fewer litigation cases due to audit malpractice towards audit firms. The last construct of QUAL1 of the Audit Quality perceived statements records the least mean score of 5.84 (SD and variance of 1.147 and 1.316, respectively). These scores also show that the publication of the SMPs inspection reports (favorable or adverse) plays a significant role in key stakeholders' perception of audit quality (especially investors and users of audit reports).

6.3. Validity and reliability tests

Tables 3–7 show the internal consistency, convergent, and discriminant validity tests. Table 4 displays the outer loadings of all variables, with loadings above 0.708 indicating reliable indicators that explain over 50% of the variance, while loadings between 0.4 and 0.7 can be acceptable if the construct's Average Variance Extracted (AVE) is at least 0.5. Literature indicates that a researcher can use outer loadings of 0.4 to 0.7 when the construct's Average Variance Extracted (AVE) is more than or equal to 0.5 (Hair et al., 1998). The analysis shows that most indicators have strong loadings (> 0.708), but some quality standards compliance items (COMP1, 3, 4, 6, 7) have lower loadings (0.4-0.7). However, since the Average Variance Extracted (AVE) of the construct is 0.5, and the AVE of these five items is 0.6, it is acceptable to include them in further analysis.

Also, this study evaluates the reliability and consistency of the measurement using Cronbach's alpha and composite reliability (Joreskog, 1971), to ensure the reliability and validity of the study's findings. Adeola et al. (2021), Bonsu et al. (2023), Gyimah and Adeola (2021), Gyimah et al. (2020), and Nkukpornu

Table 4. Summary of indicator loadings reliability.

Construct	Outer loadings
COMP1	0.694
COMP2	0.774
COMP3	0.691
COMP4	0.633
COMP5	0.769
COMP6	0.686
COMP7	0.693
MON1	0.828
MON2	0.849
MON3	0.903
MON4	0.842
MON5	0.818
QUAL1	0.779
QUAL2	0.831
QUAL3	0.818
QUAL4	0.756
QUAL5	0.797
QUAL6	0.847

Table 5. Summary of Fornell and Larcker criterion.

	1	2	3	4	5
1. Audit quality	0.805				
2. Controls	0.228	0.475			
3. Mon-audit	0.044	−0.021	1.000		
4. Monitoring	0.419	0.156	−0.495	0.848	
5. Quality standard compliance	0.592	0.101	−0.028	0.395	0.707

Table 6. Summary of Cross loadings.

	Audit quality	Com-audit	Monitoring	Quality standard compliance
COMP1	0.372	−0.085	0.288	0.694
COMP2	0.480	−0.010	0.397	0.774
COMP3	0.413	−0.098	0.381	0.691
COMP4	0.337	−0.052	0.167	0.633
COMP5	0.357	−0.048	0.333	0.769
COMP6	0.456	0.047	0.164	0.686
COMP7	0.492	0.107	0.163	0.693
MON1	0.381	−0.450	0.828	0.364
MON2	0.315	−0.409	0.849	0.285
MON3	0.422	−0.411	0.903	0.371
MON4	0.309	−0.420	0.842	0.301
MON5	0.329	−0.410	0.818	0.339
QUAL1	0.779	0.036	0.301	0.496
QUAL2	0.831	0.017	0.339	0.509
QUAL3	0.818	−0.003	0.341	0.463
QUAL4	0.756	0.033	0.337	0.440
QUAL5	0.797	0.083	0.325	0.460
QUAL6	0.847	0.046	0.377	0.488

Shaded values in the table indicate that the values exceed 50%, which aligns with the recommendation of scholars. The shading is intentional to highlight these values as they meet the threshold established in the relevant literature.

Table 7. Summary of HTMT validity.

	1	2	3	4	5
1. Audit Quality					
2. Controls	0.151				
3. Com-Audit quality	0.048	0.101			
4. Monitoring	0.461	0.129	0.521		
5. Quality Standard Compliance	0.681	0.106	0.099	0.437	

et al. (2020) recommend that both Cronbach's alpha and composite reliability (CR) should exceed the 0.7 threshold. In general, greater values signify an increase in the levels of dependability. On the contrary, according to Hair et al. (2014), values ranging from 0.60 to 0.70 are deemed acceptable in exploratory

Table 8. Summary of VIF.

Indicator	VIF
COMP1	1.790
COMP2	1.828
COMP3	1.531
COMP4	1.485
COMP5	1.879
COMP6	2.412
COMP7	2.346
Employees	1.493
Firm_Age	1.493
MON1	2.083
MON2	2.803
MON3	3.332
MON4	2.490
MON5	2.223
QUAL1	2.325
QUAL2	2.783
QUAL3	2.239
QUAL4	1.984
QUAL5	2.412
QUAL6	2.495

research for composite reliability. Satisfactory to good reliability levels are between 0.70 and 0.95. However, exceedingly high values (e.g., greater than 0.95), which indicate that the items are nearly identical and redundant, are problematic. The analysis shows that Cronbach alpha values for all constructs exceed 0.7. The composite reliability, which is between 0.7 and 0.95, further confirms that the data is reliable. Table 3 provides a synopsis of the composite reliability and Cronbach's alpha analyses.

Additionally, the study assesses convergent validity by calculating the Average Variance Extracted (AVE) for each construct. An acceptable threshold for the AVE is 0.50 or greater for adequate convergent liability (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). As indicated in Table 3, the AVE test is passed for each construct in the subsequent order: Quality Standards Compliance (0.500), Audit Quality (0.648), and Monitoring of SMPs (0.720).

Moreover, the study employs the Fornell and Lacker criterion, cross-loadings, and the Heterotrait-Monotrait Ratio (HTMT) to assess the discriminant validity of the constructs. This study satisfies the Fornell-Larcker criterion (Chin, 2010) for discriminant validity, as depicted in Table 5, where the Average Variance Extracted (AVE) of each factor exceeds the sum of its squared correlations with all other factors in the model, thereby demonstrating adequate discriminant validity among the factors. Furthermore, the study evaluates the cross-loadings of each indicator to guarantee that no indicator is erroneously attributed to the incorrect factor. In order to satisfy the cross-loadings criterion, the loadings of each construct's indicators must be greater than those of any other construct. The results in Table 6 show that the loadings on each of the constructs are higher than those on the remaining constructs. Regarding the HTMT validity, various scholars have proposed different cutoff values, such as 0.85 (Kline, 2011) and 0.90 (Gold et al., 2001; Henseler et al., 2015; Adjekum & Tous, 2020). This study employs a stringent discriminant validity threshold of 0.90, whereby HTMT values exceeding this cutoff are considered indicative of poor discriminant validity. The results of the HTMT validity analysis, presented in Table 7, reveal that all constructs exhibit values below the 0.90 threshold, thereby demonstrating satisfactory discriminant validity.

6.4. SEM evaluation tests

Collinearity assessment, Effect size (f-squared), and Blindfolding and predictive relevance (Q-squared) are used to evaluate the SEM. Table 8 shows the Variance Inflation Factor (VIF) to access probable collinearity problems in the estimated model. Brekumi et al. (2023), Bonsu et al. (2023), and Gyimah et al. (2020) argue that collinearity problems exist when VIF is greater than or equal to three. From Table 8, all the results record VIF less than three indicating that collinearity should not be problematic.

According to Chin (2010), effect size (f-squared) values of 0.02, 0.15, and 0.35 correspond to small, medium, and large effect sizes, respectively, providing a reference scale for interpreting the practical significance of research findings. The results in Table 9 reveal that monitoring of SMPs has a medium-sized effect

Table 9. Effect size.

	Audit quality	Quality standard compliance
Controls	0.036	
Interaction—Mediation	0.048	
Monitoring	0.056	0.185
Quality Standard Compliance	0.357	

Table 10. Blindfolding and predictive relevance.

	SSO	SSE	Q^2 (=1-SSE/SSO)
Audit quality	1254.000	621.921	0.504
Controls	418.000	682.674	−0.633
Compliance-audit quality	209.000		1.000
Monitoring	1045.000	452.268	0.567
Quality standard compliance	1463.000	982.882	0.328

(0.056) on audit quality, while quality standard compliance has a large-sized effect (0.357) on audit quality. The interaction term's effect size (0.048) also indicates a medium, but predictable, mediating effect.

The Blindfolding and predictive relevance (or Q-squared statistic) indicates the predictive validity of a model, with a value greater than zero suggesting the model has predictive relevance for the endogenous variables, and a value less than zero indicating no predictive relevance. The results in Table 10 show that monitoring of SMPs (0.328) and SMP resources (0.652) have significant predictive power and relevance to audit quality, indicating that these constructs are important predictors of audit quality.

6.5. SEM results

Figure 2 shows SEM results for dependent, independent, mediation, and control variables. The analysis indicates that there is a direct relationship between monitoring of SMPs (MON) and audit quality (QUAL), with a path coefficient of 0.199 reporting a p-value of 0.000, indicating a statistically significant test at a 5% level of significance (H1). There is also a direct relationship between monitoring of SMPs (MON) and quality standard compliance (COMP) with a path coefficient of 0.395, reporting a p-value of 0.000, indicating a statistically significant test at a 5% level of significance (H2). The direct relationship between quality standards compliance (COMP) and audit quality (QUAL) has a path coefficient of 0.499, reporting a p-value of 0.000, indicating a statistically significant test at a 5% level of significance (H3). Table 11 gives a summary of both the direct and indirect paths in the mediation analysis. A summary of the mediation analysis from the bootstrapping is found in Table 12. The data analysis revealed that the direct effect has a path coefficient of 0.396, *t*-value of 5.710 and reporting a *p*-value of 0.000 indicating a statistically significant test at a 5% significance level. The indirect effect also has a path coefficient of 0.197, an associated t-value of 4.229, and reporting a *p*-value of 0.000, indicating a statistically significant test at a 5% level of significance.

6.5.1. Magnitude of mediation

After determining the significance of the indirect effect, the total effect and variance account for (VAF) assesses the mediator's strength. The value of VAF in Table 12 is 0.498, or 0.197 divided by 0.396. Hair et al. (2014) state that partial mediation is established when the value of VAF surpasses the threshold level of 0.2, and full mediation is established when it surpasses 0.8. COMP serves as a partial mediator between the Monitoring of SMPs (MON) and Audit Quality (QUAL) nexus, given that the VAF exceeds the 20% threshold level. The proportion of the impact of MON on QUAL accounts for by the COMP mediator amounts to 49.8%; this magnitude is deemed partial. The results refute the null hypothesis, and the H4 hypothesis is supported by COMP's mediating function. This research has validated Knechel et al. (2013) assertion that standards are crucial for maintaining the profession's relevance, addressing the concerns of stakeholders, and advancing the overall quality of the auditing process, albeit with significant caveats and limitations. However, it is possible to accomplish this in a significant way by implementing a robust legal system and rigorous enforcement, as supported by Boolaky and Soobaroyen (2017). Hence,

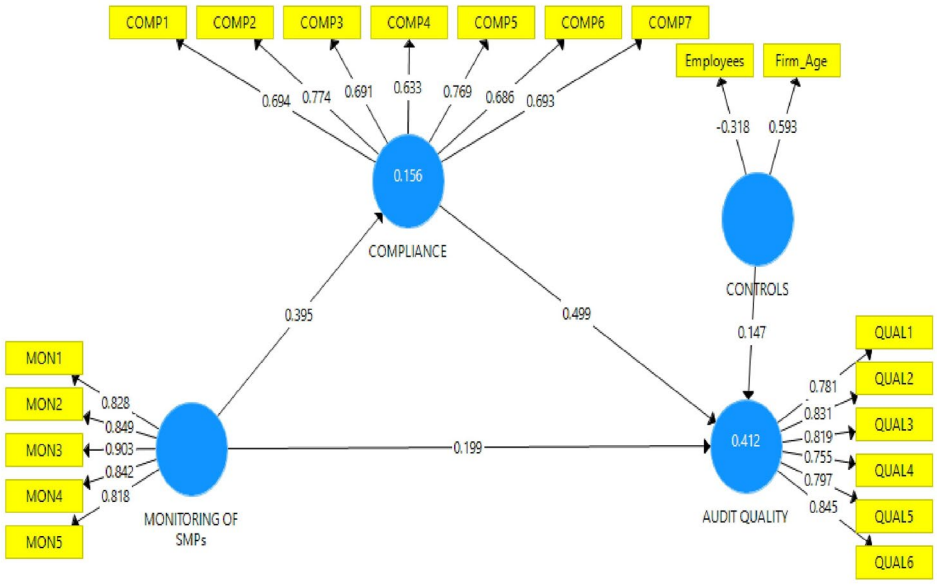

Figure 2. Model estimate.

Table 11. Mediating paths.

	Coefficient	*T* statistic	*P* values	Significant
Monitoring -> Audit Quality	0.199	2.642	0.000	Yes
Monitoring -> Quality Standard Compliance	0.395	5.196	0.008	Yes
Quality Standard Compliance -> Audit Quality	0.499	7.250	0.000	Yes

Table 12. Mediation analysis in PLS-SEM.

Path	Path Coeff.	Mean	STDEV	VAF	*T* values	Sig level	*P* values	Hypothesis
Total Effect								
Monitoring -> Audit Quality	0.396	0.408	0.069	0.498	5.710	**	0.000	Accepted
Indirect Effect								
Monitoring -> Audit Quality	0.197	0.205	0.047		4.229	**	0.000	

establishing a connection between adherence to suitable quality standards and the legal framework will facilitate the execution of a superior audit (Bell et al., 2002; Drira, 2013; Epps and Messier, 2007; Jones III & Norman, 2006).

6.6. Discussion of findings

Table 13 presents the summary results for each of the four hypotheses. The direct relationship between the monitoring of SMP firms and the audit quality constructs hypothesis (H1) is examined. The empirical findings provide support for the hypotheses that audit quality is substantially and positively impacted by the monitoring of SMP firms. This suggests that the quality of audits generated is proportional to the effectiveness of audit monitoring conducted by regulators on SMPs. This aligns with the principles of Economic Regulation, which encompass Regulatory Capture theory and Public Interest Theory (both of which posit that the public requests regulations to rectify market inefficiencies and that regulations are supplanted at the behest of interest groups seeking to maximise the benefits for their members, respectively). These findings align with prior research in the empirical literature concerning regulatory enforcement (e.g., Boolaky & Soobaroyen, 2017; Offermanns & Vanstraelen, 2014; Simunic et al., 2015). In

Table 13. Hypothesis testing.

Hypothesis	Relationship	Path coefficient	P-value	Conclusion
H1	MON -> QUAL	0.199	0.008	Supported
H2	MON -> COMP	0.395	0.000	Supported
H3	COMP ->QUAL	0.499	0.000	Supported
H4	COMP mediates MON->QUAL	0.396	0.000	Supported

agreement with the findings of U.S.-based studies (Hilary & Lennox, 2005; Casterella et al., 2009; Lennox & Pittman, 2010), the section concludes that monitoring of SMP firms correlates with the actual quality of an audit firm and provides credible information regarding the quality of audit firms.

Compliance with quality standards partially mediates the relationship between SMP monitoring and audit quality, according to the empirical findings (H4). H2 and H3 provide an explanation for this. The measurements are derived from elements of ISAs and ISQM 1 pertaining to adherence to quality standards. All measurements of compliance with the quality standards (ISQM 1 and revised ISA 220) are significant in achieving audit quality and pertinent to compliance, as determined by the PLS-SEM.

The empirical findings provide support for the hypotheses that monitoring SMP firms has a positive and statistically significant impact on adherence to quality standards (H2), and that likewise, adherence to quality standards has a significant and positive influence on audit quality (H3). The findings are in line with the economic regulation theory and existing literature. Furthermore, they align with the conclusions drawn from a number of studies (Bell et al., 2002; Drira, 2013; Epps and Messier, 2007; Jones III & Norman, 2006; Knechel et al., 2013; Boolaky & Soobaroyen, 2017). In this investigation, the two control variables are the age and size of the firm.

At a 5% level of significance, the total control variables exhibit a direct and positive correlation with audit quality (path coefficient: 0.134; p-value: 0.334), indicating that the test is not statistically significant. This suggests that while the control variables are positively correlated, they had no impact on the quality of the audit. The findings are in line with previous research, including that of Yuniarti (2011) and Ali and Aulia (2015), which conclude that the scale of a firm does not have a substantial impact on the quality of audits. Conversely, several previous investigations record an inverse correlation between the magnitude of audit firms and the quality of audits (Pham et al., 2014). Regarding firm age, the findings align with those of previous research (Brekumi et al., 2023; Suyono, 2012).

7. Summary and conclusion

This study aimed to assess the mediating role of quality standards compliance in monitoring SMP Firms and audit quality relationships in Ghana. The outcome reveals that effective monitoring of SMP firms results in appropriate compliance with quality standards, influencing high-quality audits. The study concludes that effective monitoring of SMPs influences audit quality directly and indirectly through quality standards compliance. This implies that the regulators carry out the more effective audit monitoring of SMPs, the better the audit quality produced. It can be said that SMP audit quality is quite good in Ghana but needs considerable improvement.

Theoretically, the findings indicate that the monitoring of SMP firms' efforts to attain audit quality should be evaluated through the lens of Economic Regulation theory. Additionally, the research offers more extensive ramifications for scholars aiming to comprehend the impacts of diverse elements that impact the quality of SMP audits in developing country contexts.

From a practical standpoint, this study provides implications to accounting professional bodies (ICAG in Ghana), accounting regulators (ICAG in Ghana), auditing standard setters (IAASB), SMP firms, staff of SMP firms, and auditees. The research findings highlight pertinent issues regarding the quality standards (revised ISA 220 and ISQM 1) compliance among the SMPs in Ghana to achieve audit quality. Additionally, it provides timely feedback to ICAG on the core mandate of its QAM unit, which was established in 2012 for its compliance, ethical and technical functions. The study demonstrates that effectively monitoring SMPs to comply with quality standards will ensure high audit quality. In the case of SMPs, they need to consider compliance with quality standards when trying to achieve audit quality. It suggests that the audit partners re-examine their firm policies, procedures, methodologies, and processes to comply with

quality standards and code of ethics to achieve high-quality audits. The revised ISA 220 and ISQM 1 mandate ethical compliance in order to enhance audit performance and quality by ensuring that human resources are both technically and ethically competent. Inadequate audit quality has detrimental effects on the reputation of the audit firm and can result in client attrition, fee reductions, heightened litigation risks, and associated professional insurance expenses. Consequently, continuous efforts must be exerted by the SMPs to enhance audit quality.

For professional bodies like ICAG, their monitoring units (QAM in the case of Ghana) must be strengthened and well-resourced to continue to provide useful advisory services to the SMP firms, including best practices for running their audit firms. This would ensure that SMP firms, particularly those with limited resources from international networks, have access to the latest technical updates to ensure they are abreast with current developments within the audit and accounting profession. Professional accounting bodies should ensure that their members comply with professional codes of ethics and practices that promote audit quality. Furthermore, effective regulatory monitoring would help improve compliance with quality standards and audit quality. It could also ensure that auditors are being monitored. This could improve the credibility of financial statements, and so users could have access to useful financial information. This could also help to protect shareholders' investments. A robust compliance monitoring regime will help create a reputable financial reporting framework environment and attract foreign investment to support Ghana's economic development. Finally, ICAG could strengthen its requirement for obtaining practicing certificates. This would ensure that only credible firms operate within the industry to enhance the quality of audit services rendered.

On the other hand, the auditees are encouraged to cooperate with the SMPs on compliance with quality standards and ethical codes and provide feedback to improve the audit process. The auditees should also ensure that appropriate reporting frameworks are used in preparing the financial statements and that their staff also eschew unethical behaviors. Before focusing solely on mandatory compliance with quality standards, regulatory bodies should also develop policies that increase the capacity of audit clients and guarantee the availability of resources for SMPs. By increasing the capacity of clients to obtain audit reports that adhere to quality standards, an equilibrium will be established between the supply and demand for auditing services.

As with any other study, there are a few limitations of this study. Firstly, the study and findings are limited to SMPs in Ghana. Applying the same conclusions to any other jurisdiction may not be suitable, as each country has unique characteristics. However, emerging economies with similar characteristics, like Ghana, can leverage the findings of this study for guidance. Secondly, many studies have used different proxies for audit quality in the past. As a result, the findings of prior research should be approached with caution, as there is little agreement regarding the most suitable proxy for audit quality, and various proxies produce divergent results. Likewise, alternative measures could have been employed to construct the remaining latent constructs, potentially yielding disparate outcomes. Furthermore, the study employed a cross-sectional design as its third component. A time difference is not an issue with cross-sectional data, since information is collected only once. This is consistent with the claims made by Rindfleisch et al. (2008) and Malhotra and Grover (1998) that an adequately designed cross-sectional survey is sufficient for explanatory research. Further research is required to conduct a pragmatic examination of our proposed framework, which seeks to explain the anticipated mediating effect of quality control standards compliance from a conceptual and theoretical standpoint. Further variables and proxies could be incorporated in this regard. ICAG is the sole regulator of the accounting and auditing profession in Ghana, and its QAM unit, established in 2012, assists in delivering ICAG's function of regulation and monitory mechanism over practicing firms and individual practitioners in order to meet IFAC regulatory requirements under SMO 1. In addition to its compliance functions, QAM has advisory and technical functions to perform. Future research could assess the influence of this unit in achieving audit quality in Ghana.

Author's contributions

Conception and design, data collection and analysis–R.O.A., D.A.V. and P.G.; Analysis and interpretation of data–R.O.A.; supervision and validation of the analysis–D.A.V. & K.O.A.; Drafting the paper–P.G., R.O.A., D.A.V. and K.O.A.; and Revise the paper critically for intellectual content–K.O.A and D.A.V.

Disclosure statement

No potential conflict of interest is reported by the authors.

Funding

The authors received no direct funding for this research.

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Data availability statement

The data that supports the study's findings are available on reasonable request from the corresponding author, P.G. (pgyimah@aamusted.edu.gh).

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