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Audit quality climate in African supreme audit institutions

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Abstract

Purpose – This study aims to explore how employees of English-speaking African Supreme Audit Institutions (SAIs) perceive the audit quality (AQ) climate in their organisations.

Design/methodology/approach – Using Exploratory Structural Equation Modelling, an existing AQ climate questionnaire was shortened, refined and pilot-tested. It was then used as the research instrument for the main study survey among 13 SAIs across three African regions. A cluster analysis was conducted to provide a more nuanced view of data patterns across the African regions and SAI quality management maturity levels in this study.

Findings – Using the lens of institutional logics, this study reveals SAIs as sites of institutional complexity in Africa. Relatively positive perceptions of the AQ dimensions in African SAIs (despite contextual constraint) suggest that a bureaucratic logic dominates. Procedural and symbolic compliance prevails over substantive quality management, as transformative AQ management principles are layered onto established bureaucratic practices. Managerial logic interacts with SAIs' human capacity and digital competence constraints, and governance logic interacts with SAIs' policies and procedures. Perceptions of AQ dimensions differed according to employees' positional embeddedness (experience and job level), which was attributed to logic enactment and prioritisation.

Originality/value – This study's focus on the revised International Standard for Supreme Audit Institutions, ISSAI 140 (Quality Management for SAIs) advances public sector audit literature with conceptualisation of AQ through an institutional logic lens, the introduction of an SAI AQ climate measure and empirical examination thereof in a comparative study and insights into the translation of AQ management practices into everyday audit work through an employee perspective.

Keywords African supreme audit institutions, Audit quality climate, Public sector audit, Quality management standard, Institutional logics

Paper type Research paper



1. Introduction

Audit quality (AQ) must be pursued in the public interest to deliver high-quality audits in both the private and the public audit domains. AQ then underpins public trust in the audit profession (Simnett, 2022). It empowers the effective mandate delivery of Supreme Audit Institutions (SAIs) and contributes to enhancing the accountability and credibility of SAIs as national public audit institutions [International Organisation of Supreme Audit Institutions (INTOSAI), 2023; Organisation for Economic Co-operation and Development (OECD), 2016]. In the context of SAIs, including those in Africa, the AQ climate refers to the internal and external environment that determines how effectively an institution can deliver high-quality, impactful audits.

AQ cannot be captured in a mono-dimensional definition or metric (Detzen and Gold, 2021; Knechel *et al.*, 2013; Sulaiman, 2023). A dominant stream in the literature on private sector auditing conceptualises AQ in the context of relatively stable capital market environments. This conceptualisation uses a process-centric lens that includes audit inputs, audit process and measurable outcomes and takes into account client demand and regulatory interventions (Detzen and Gold, 2021; Francis, 2011, 2023; Knechel *et al.*, 2013).

By contrast, SAIs operate under complex institutional conditions. The complexity is characterised by heterogeneous governance systems (Hancu-Budui and Zorio-Grima, 2023), diverse structural models (Blume and Voigt, 2011; Cordery and Hay, 2022), different value delivery orientations (Cordery and Hay, 2019, 2022) and functional mandates and capabilities (Caruana and Kowalczyk, 2021; Cordery and Hay, 2025). A “one-size-fits-all” (Caruana and Kowalczyk, 2021) process-centric conceptualisation of AQ is, therefore, less dominant in the public sector auditing literature. This is because the institutional conditions (e.g. the SAI structure, legislative environment and mandates) shape auditor independence and accountability relationships (Caruana and Kowalczyk, 2021; Clark *et al.*, 2007; English and Guthrie, 2000).

Despite such differences, the normative influence of professional standards suggests that, increasingly, there is convergence between private and public sector auditing. From an institutional theory perspective, the diffusion of professional standards reflects the normative isomorphism associated with professionalisation (Mnif Sellami and Gafsi, 2019). Following the shifts from traditional public administration (PA) to New Public Management (NPM) and, more recently, New Public Governance (NPG) (Mattei *et al.*, 2021), the International Organisation of Supreme Audit Institutions (INTOSAI) has taken on a more prominent role (Cordery and Hay, 2025; Hancu-Budui and Zorio-Grima, 2023). INTOSAI has adopted soft governance mechanisms that are flexible and voluntary (Bisogno *et al.*, 2022). As a result, INTOSAI uses peer influence and consensus-based standard-setting to promote the professionalisation of SAIs and to encourage AQ management in line with the International Standards of Supreme Audit Institutions (ISSAIs). The ISSAI framework provides some normative alignment across jurisdictions (Paraponti *et al.*, 2025), even though implementation is voluntary and context-dependent. Such standardisation provides a foundation to strengthen AQ (Lagos, 2026). The international quality management standard for SAIs, ISSAI 140, was recently revised and issued, with effect from January 2025 (International Organisation of Supreme Audit Institutions (INTOSAI), 2023, 2025). The revised standard is in line with the key principles of the International Standard on Quality Management 1 (ISQM 1) used in the private sector [International Auditing and Assurance Standards Board (IAASB), 2020a]. This reflects increasing convergence between private and public sector auditing standards.

However, despite these developments, limited academic attention has been paid to trends in international standardisation and harmonisation in public sector auditing (Mattei *et al.*, 2021). This study responds to this gap by examining the AQ climate in English-speaking

African SAIs in the context of the transition to the revised ISSAI 140, which is a harmonised international quality management standard.

Although auditing standards articulate normative expectations, how they translate into practice depends on the interpretation and application of such expectations in organisational contexts. The revised ISSAI 140 reconceptualises AQ management as a systemic, organisation-wide responsibility in SAIs. This requires a proactive and risk-based quality management system that integrates AQ into all SAI activities, underpinned by a quality-oriented organisational culture ([International Organisation of Supreme Audit Institutions \(INTOSAI\), 2023, 2025](#)). The advocacy for AQ in the organisational culture of SAIs ([International Organisation of Supreme Audit Institutions \(INTOSAI\), 2023](#)) is equally applicable to private audit firms governed by the ISQM 1 [[International Auditing and Assurance Standards Board \(IAASB\), 2020a](#)]. In this context, the term “culture” refers to shared workplace values and assumptions, while the term “climate” represents their observable manifestation ([Beus et al., 2020](#); [Schein and Schein, 2017](#)). The relevance of our study is underscored by evidence from private audit firms that organisational culture influences employees’ willingness to uphold quality services ([Jenkins et al., 2008](#)) and that a strong AQ climate is essential to embed organisational AQ norms, values and behaviours in daily work activities ([Loke et al., 2022](#)). Conversely, a weak AQ climate may signal that an organisation’s commitment to quality involves mere compliance or largely superficial or symbolic adherence to a standard, rather than substantive implementation ([Maroun and Van Zijl, 2016](#)).

A growing body of research shows that organisational culture and climate influence AQ significantly in private sector audit firms ([Alberti et al., 2022](#); [Andiola et al., 2020](#)). Although the topic is still under-researched, the public sector auditing literature has already highlighted the role of an appropriate SAI culture/climate. When an SAI has an organisational culture that promotes audit integrity (professionalism and independence), this reduces the risk of corruption ([Gustavson and Sundström, 2018](#); [Lino et al., 2022](#)). An enabling SAI culture is essential to building an ethical work climate ([Loke et al., 2022](#)) and an error climate ([Lindermüller et al., 2024](#)). The studies listed here have not included empirical research on SAI climate/culture linked to AQ, despite the declared aim of ISSAI 140 to ensure systemic quality control. Therefore, our study addresses the gap by examining the AQ climate in SAIs, thereby linking formal professional standards to their organisational implementation.

SAIs conduct different types of audits, namely, financial, compliance and performance audits, that are central to public sector auditing ([Dionisijev and Bozhinovska Lazarevska, 2025](#)). Understanding the AQ climate in individual SAIs can help to strengthen the quality of all forms of public audit practices. However, the institutional complexity of public sector auditing, and the fact that the implementation of standards such as ISSAI 140 is voluntary, limits the direct transferability of insights gained from private audit firm environments. This raises an important question: is SAIs’ stated commitment to the management of quality truly translated into daily practices? [1] Our AQ climate study responds to this question by exploring how employees of English-speaking African SAIs experience their SAI’s AQ climate, thereby providing insights into how AQ is navigated in daily practice. Examining AQ through SAI employees’ perceptions (the unit of analysis of this study) provides valuable insight into how executive management policies and procedures are interpreted and enacted in daily practice. By adopting this focus, this study foregrounds an employee-centred perspective in public sector AQ research. It illuminates AQ dimensions that are well established in the private sector audit literature ([Alberti et al., 2022](#); [Andiola et al., 2020](#); [Andiola et al., 2021](#); [Christensen et al., 2021](#); [Gaynor et al., 2016](#); [Persellin et al., 2019](#);

Westermann *et al.*, 2015), but that remain underexplored in public sector auditing settings. Thus, it positions employees as key carriers and enactors of the institutional logics and organisational culture that shape AQ outcomes.

This study draws on an institutional logic perspective (Friedland and Alford, 1991), that determines the “rules of the game” (Thornton and Ocasio, 1999, p.806). Organisations rarely have a single dominant logic (Lander *et al.*, 2013) – multiple, even potentially conflicting, logics can exist in parallel for long periods (Greenwood *et al.*, 2011). The literature shows that several logics co-exist in public sector auditing, such as a bureaucratic logic, a managerial logic, a public value logic (Grossi *et al.*, 2023) and a governance logic (Diab, 2021). In addition, a professional logic has emerged from managerial logic with a propriety and adeptness behavioural orientation (Hathaway and Askvik, 2021). It pursues improved professionalism by advocating the international best practice originating from the private sector (Stewart and Connolly, 2024). Smets *et al.* (2015, p. 11) argue that logics “in action” matter. They emphasise a micro-level focus on how different logics are experienced and performed in people’s daily lives. This study, therefore, conceptualises the AQ climate in SAIs as a situated outcome of multiple, coexisting institutional logics. These logics are linked to SAI employee AQ climate dimensions that become effective in the execution and navigation of the auditors’ daily audit work.

We approached the African Organisation of Supreme Audit Institutions for English-speaking Countries (AFROSAI-E), a regional body of INTOSAI, to invite its 26 SAI members to participate in our study’s Web-based survey among the employees of these SAIs. The length of a questionnaire can be a limitation; so can its psychometric functionality, such as positively versus negatively worded items, the order of items and the categories of a Likert scale (Li, 2016; Rudolph *et al.*, 2024). Hence, we shortened and refined an existing AQ climate questionnaire, the Audit Firm Quality Climate measurement instrument (AFQC), developed by Kritzinger and Barac (2025). We used theory, item content and quality assessments, in conjunction with Exploratory Structural Equation Modelling (ESEM), as described by Swami *et al.* (2023). The AFQC measurement instrument was initially developed for both the private and the public auditing sectors: 54% of the data for the development came from the South African SAI (the Auditor-General South Africa [AGSA]) and 46% came from large private audit firms (one Big 4 and three second-tier firms) (Kritzinger and Barac, 2025). However, we wanted a shorter and simpler instrument for our survey spanning the African continent. One of the 26 SAIs in English-speaking countries participated in the pilot study in August 2024 to test the proposed revised AQ climate questionnaire. Using reliability analysis, the adapted AFQC was then finalised. Then 13 SAIs agreed to participate in the main study, [2] which was conducted from October 2024 to January 2025.

Our study makes four main contributions. First, it advances the conceptualisation of AQ in public sector auditing through an institutional logic lens during the transition to the revised ISSAI 140 quality management standard. By highlighting how the international harmonisation of quality management standards interacts with existing public sector logics, our study addresses the limited scholarly attention on how international standardisation and harmonisation trends (Mattei *et al.*, 2021) shape understandings of AQ beyond the private sector context. Second, our study extends organisational auditing research by empirically measuring the AQ climate in public sector audit environments. Using an SAI-specific AQ climate instrument across a continent sheds light on how quality management is perceived and experienced in diverse institutional settings. This represents a domain-specific addition of a climate measure to the very few climate studies in public sector auditing (Lindermüller *et al.*, 2024; Loke *et al.*, 2022). It also fills a gap in respect of comparative studies (Cordery and Hay, 2025) in the sector. Third, this

study's micro-level focus on the AQ climate as perceived by SAI employees provides a new "understanding of what SAIs actually do in practice" (Lagos, 2026, p. 3). By exploring whether SAIs' AQ management translates into their daily practice, this study extends employee-based AQ research in a private sector setting (Alberti *et al.*, 2022; Andiola *et al.*, 2020, 2021; Christensen *et al.*, 2021; Persellin *et al.*, 2019; Westermann *et al.*, 2015) to the underexplored public sector settings (Lagos, 2026). Finally, on a practical level, public sector standard-setting bodies and SAIs can benefit from the study's findings, which can inform future standard-setting and quality management practices.

The remainder of this article is divided into seven more sections following this introduction. Section 2 explains the African context of this study. Section 3 presents the relevant literature review, highlighting audit institutions' culture and climate as the AQ climate dimensions. Section 4 discusses institutional logics that we used as our theoretical framework. Section 5 presents the climate measure and sample used for this study. Section 6 gives the results, and Section 7 interprets them through an institutional logics lens. This paper's conclusion is presented in Section 8, addressing the implications of our findings for future research and practice.

2. African context of this study

The African context of our study is particularly important. Public accountability and trust in SAIs have been undermined by weak governance and corruption in many African countries (Azinogo and Erasmus, 2025). Government support for these SAIs is often limited; this is coupled with SAIs' weak institutional independence, political interference and inadequate investigative powers to act on audit findings (Azinogo and Erasmus, 2025; Reichborn-Kjennerud *et al.*, 2019). African SAIs are also known for chronic financial and human resource shortages (Azinogo and Erasmus, 2025; Isaksson and Bigsten, 2012; Wang and Rakner, 2005). Audits are sometimes conducted in high-risk environments, with high physical security risks (Auditor-General South Africa [AGSA], 2022; Omer *et al.*, 2021). Inadequate budgets (Omer *et al.*, 2021) lead to skills shortages (Azinogo and Erasmus, 2025), and African SAIs sometimes struggle to fill positions adequately (African Organisation of English-Speaking Supreme Audit Institutions [AFROSAI-E], 2025c). The resulting high employee workload further limits the performance of African SAIs, so that they cannot achieve the AFROSAI-E targets regarding the issuing of timely audit reports in accordance with ISSAI standards (African Organisation of English-Speaking Supreme Audit Institutions [AFROSAI-E], 2021, 2025b).

These challenges are compounded by outdated legislation and methodologies that hinder compliance with ISSAIs (Omer *et al.*, 2021). They are further exacerbated by limited access to modern technology and data analytics capabilities (African Organisation of English-Speaking Supreme Audit Institutions [AFROSAI-E], 2025c). Budgetary limitations and limited operational capacity also restrict investment in professional development and quality assurance processes (African Organisation of English-Speaking Supreme Audit Institutions [AFROSAI-E], 2025b). This, in turn, affects auditees and can undermine SAIs' independence (Isaksson and Bigsten, 2012).

Consequently, African SAIs are tasked with maintaining high AQ in complex, high-risk environments, where systemic corruption and resource constraints converge. This makes African SAIs vulnerable. The conditions highlight the need for a risk-based and proactive quality management standard. Many African SAIs claim alignment with ISSAI 140 (African Organisation of English-Speaking Supreme Audit Institutions [AFROSAI-E], 2025c), but their implementation of ISSAI 140 is superficial (International Organisation of Supreme Audit Institutions [INTOSAI], 2024). This gap underscores the need to strengthen AQ

governance in African SAIs by establishing a quality-oriented culture ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2023](#)) aimed at continuous improvement. However, little is known about whether global standards translate into local realities and whether quality expectations are enacted in African contexts.

3. Literature review

Like private audit firms ([Sulaiman, 2023](#)), SAIs experience increased pressure from stakeholders, who expect them to improve their AQ ([Otia and Bracci, 2022](#)). Despite this pressure, AQ is not at the core of auditing research in the public sector, as it is in the private sector ([Francis, 2023, 2024](#)). Indeed, AQ research in public sector auditing builds mainly on DeAngelo's study from 1981 ([DeAngelo, 1981](#)). He defined AQ in terms of auditor competence and independence, which makes SAI independence a key AQ consideration ([DeAngelo, 1981](#); [De Martinis and Clark, 2003](#); [Ferry et al., 2023](#); [Rahaman, 2009](#); [Skærbaek, 2009](#)).

In line with the influence of private sector auditing research, some earlier AQ studies on public sector auditing examined AQ primarily through a process-centric lens and explored the relationship between AQ determinants and the fees payable ([Basioudis and Ellwood, 2005a, 2005b](#); [Deis and Giroux, 1992](#); [Ward et al., 1994](#)). In later studies, AQ features were associated with factors relating to the underlying legislation requiring accountability to Parliament, and the independence, oversight mechanisms and mandates of SAIs ([Caruana and Kowalczyk, 2021](#); [Clark et al., 2007](#); [English and Guthrie, 2000](#)).

Researchers have emphasised drivers of high-quality audits, as contained in AQ frameworks and indicators found in the professional literature ([International Auditing and Assurance Standards Board \[IAASB\], 2020a](#); [International Organisation of Supreme Audit Institutions \[INTOSAI\], 2023](#); [Nederlandse Beroepsorganisatie van Accountants \[NBA\] and Future Accountancy Profession Working Group, 2014](#); [Public Company Accounting Oversight Board \[PCAOB\], 2015](#)), to clarify what AQ implies in private sector auditing ([Detzen and Gold, 2021](#); [Francis, 2011, 2024](#); [Montenegro and Brás, 2018](#)). This has led to a substantial body of information on AQ in private sector auditing ([DeFond and Zhang, 2014](#); [Francis, 2011, 2023, 2024](#); [Knechel et al., 2013](#); [Tepalagul and Lin, 2015](#)). These studies refer, among other things, to the auditor and client incentives that drive AQ ([DeFond and Zhang, 2014](#)).

By contrast, in public sector research, much less emphasis has been placed on traditional AQ drivers such as litigation risk, fee incentives and reputational competition in public sector auditing research. This is because SAIs do not operate in a market-based accountability environment, but in a politically embedded accountability environment ([Greenwood and Zhan, 2019](#)). Furthermore, specific political, social, cultural and economic conditions in SAIs make it difficult to achieve AQ uniformity in public sector auditing ([Caruana and Kowalczyk, 2021](#)). For example, SAIs' heterogeneity arises from conditions ([Hancu-Budui and Zorio-Grima, 2023](#)) such as the different SAI model types ([Blume and Voigt, 2011](#); [Cordery and Hay, 2022](#)), varying delivery of value judgments ([Cordery and Hay, 2019, 2022](#)) and functional capabilities ([Caruana and Kowalczyk, 2021](#); [Cordery and Hay, 2025](#)). For SAIs in African countries, the situation is particularly complex, as they often operate in jurisdictions with questionable democratic systems, their independence is sometimes unclear and they sometimes have limited resources and technical skills to conduct high-quality audits ([Wang and Rakner, 2005](#)). For example, [Isaksson and Bigsten \(2012\)](#) found that the independence of the Rwandan SAI is negatively affected by its capacity constraints and those of its auditees.

Despite the above differences, SAIs are adapting to broader shifts in public sector auditing, from PA to NPM and NPG (Grossi *et al.*, 2023; Mattei *et al.*, 2021). These shifts influence AQ perspectives. NPM introduced a stronger emphasis on performance auditing, greater accountability expectations and international standards (Cordery and Hay, 2019) promoted by INTOSAI and some regional bodies (Cordery and Hay, 2025). By contrast, NPG emphasises outcomes, the quality of audit services, client satisfaction and efficiency (Mattei *et al.*, 2021). In their study on the long-standing practice of performance audits by Canadian and Danish SAIs, Hazgui *et al.* (2022) found that AQ characteristics such as reliance on norms and guidance, the use of experts and increasing staff training profiles were instrumental in promoting political neutrality and the legitimacy of audits. Furthermore, based on INTOSAI's self-reported database and a survey of its members, Cordery and Hay (2022) show that professional accreditation by INTOSAI is an AQ characteristic. Similarly, Ferry *et al.*'s (2023) global survey of all INTOSAI members indicates that SAI accountability arrangements are supported by AQ characteristics such as an SAI's structure (mandate, powers and stakeholders), capacity (independence and resources) and scope (activities and outputs).

The continued normative influence of INTOSAI (Hancu-Budui and Zorio-Grima, 2023) strengthens the expectation that SAIs will professionalise and deliver AQ in accordance with ISSAI requirements (Cordery and Hay, 2019; Ferry *et al.*, 2023). The new ISSAI 140 (International Organisation of Supreme Audit Institutions [INTOSAI], 2025) aligns public sector quality standards to private sector international auditing standards on quality management (International Organisation of Supreme Audit Institutions [INTOSAI], 2023). This indicates a shift in SAIs from traditional, post-AQ control (World Bank, 2020) to a systemic, proactive and risk-based approach to quality management that is embedded in, among other things, an SAI's organisational culture (International Auditing and Assurance Standards Board [IAASB], 2020a, 2020b). In terms of this approach, organisational culture (defined as shared meanings, values and behavioural norms; Giorgi *et al.*, 2015; Schein and Schein, 2017; Schneider *et al.*, 2013) becomes a central component of AQ management, as it would be for private audit firms (Alberti *et al.*, 2022; Andiola *et al.*, 2020). As employees interpret organisational priorities through workplace expectations (Beus *et al.*, 2020), climate studies provide insight into employees' shared perceptions of what is valued in practice (Schein and Schein, 2017). Conducting such studies can determine whether AQ is embedded in an SAI's organisational culture and expands the limited body of SAI climate research (Lindermüller *et al.*, 2024; Loke *et al.*, 2022).

From an employee perspective, ISSAI 140 shows that AQ is closely tied to employee-related aspects. These include compliance with relevant legal and ethical requirements in line with ISSAI 130 (International Organisation of Supreme Audit Institutions [INTOSAI], 2019a), independence requirements, proper supervision and review processes, adequate competence and resourcing of engagement teams (including sufficient time), as well as relevant and accurate communication about the AQ management system (International Organisation of Supreme Audit Institutions [INTOSAI], 2023). In public sector auditing, institutional independence is a central concern (Bringselius and Lemne, 2017). Prior AQ research in this area, therefore, focuses strongly on independence (De Martinis and Clark, 2003; Ferry *et al.*, 2023; Skærbæk, 2009). SAIs' operating capacity, which refers to competent employees and tools, has so far received less attention in public sector AQ debates, although it also is essential to delivering AQ (Cordery and Hay, 2019). For example, Lee *et al.* (2016) surveyed Taiwanese government auditors and found that employees' professional development (including organisational culture and training) and self-efficacy (including professional experience) affect AQ.

Likewise, private sector audit studies show the importance of employee-related aspects in achieving AQ, such as supervision and review (Andiola *et al.*, 2020, 2021; Westermann *et al.*, 2015) and the visibility of and compliance with firm policies and procedures based on standards (Aobdia, 2019; Gaynor *et al.*, 2016). Employee resources, training and ethical behaviour (Alberti *et al.*, 2022; Christensen *et al.*, 2021; Persellin *et al.*, 2019) also play a role. Insights into how employee-related aspects influence AQ in public sector auditing are valuable, especially for developing countries that face serious constraints in the number, experience and training of employees (Isaksson and Bigsten, 2012).

The aforementioned aspects are closely aligned with the AQ climate dimensions explored in this study, which are AQ visibility, compliance with policies and procedures, training and innovation, supervision and feedback, ethical behaviour and work pressure. These dimensions were incorporated into the AFQC measurement instrument developed by Kritzinger and Barac (2025). This study has used a revised version of this instrument to capture whether AQ is reflected in African SAIs' organisational culture.

4. An institutional logics lens for this study

In this study, we use an institutional logic perspective (Friedland and Alford, 1991). This perspective is seen as a "field's organizing principles" (Smets *et al.*, 2015, p. 4). It formed a theoretical framework for our study that set out to identify how SAIs (organisations) and their employees (individuals) behave and relate to each other (Grossi *et al.*, 2023; Lander *et al.*, 2013). Institutional logics refer to the taken-for-granted and apparently self-evident social prescriptions (Bévoort and Suddaby, 2016). Organisations adhere to this to obtain the necessary endorsement and to interpret the social world appropriately (Greenwood *et al.*, 2011).

Shifts in public auditing reflect the influence of the three dominant paradigms of PA, NPM and NPG, each associated with distinct institutional logics (Grossi *et al.*, 2023; Mattei *et al.*, 2021). Under the PA paradigm, SAIs operate primarily in line with a bureaucratic logic, characterised by compliance with regulations and procedural accountability (Grossi *et al.*, 2023; Mattei *et al.*, 2021). From an NPM perspective, managerial logic is the central orientation (Mattei *et al.*, 2021). It seeks to improve the performance, efficiency and effectiveness of public sector organisations by encouraging the adoption of private sector-associated practices – in other words, the emphasis is on internal control/audit and audit standards (Mattei *et al.*, 2021). In NPG, the citizen becomes central to the public value logic, that focuses on outcomes such as the quality of audits and customer satisfaction (Mattei *et al.*, 2021). The shift from PA to NPM and NPG has expanded the meaning of AQ from compliance with rules and procedures to add performance assessment and, increasingly, auditing's contribution to public value and social outcomes (Mattei *et al.*, 2021).

Organisations operate under conditions of institutional complexity, and a single logic rarely dominates (Lander *et al.*, 2013). Institutional logics associated with PA, NPM and NPG co-exist in public sector organisations (Gisch *et al.*, 2023; Stewart and Connolly, 2024). Established institutional logics may persist, but new logics emerge as a response to institutional adjustments caused by exogenous changes, institutional entrepreneurship and improvisations in microprocesses and practices (Micelotta *et al.*, 2017). Institutional logics typically do not change through sudden replacement (Gisch *et al.*, 2023; Greenwood *et al.*, 2011; Meyer *et al.*, 2014). Change is brought about by gradual reconfiguration as one logic gains dominance or when multiple logics coexist, compete and rebalance within organisational fields over time (Cervi and Christopoulos, 2024; Stewart and Connolly, 2024). Research shows that organisations incorporate elements of new logics through processes of layering (sedimentation) (Meyer *et al.*, 2014), hybridisation (a combination of elements) and selective coupling (Pache and Santos, 2013).

Research in the African context shows that different institutional logics tend to coexist in public accountability organisations. Examples include kinship, bureaucratic, development management, professionalism (Hathaway and Askvik, 2021) and governance logics (Diab, 2021). The logic underlying assumptions differs: kinship logic is based on mutual obligations between individuals and gift-giving, bureaucratic logic on hierarchical division of labour and standardisation, development management logic on private sector approaches to development processes, professionalism logic on professional affiliations and orientation and governance logic on government regulation (Diab, 2021; Hathaway and Askvik, 2021).

With such institutional logic multiplicity, it seems that an organisation can participate simultaneously in different games in different places. However, sometimes “playing by the rules of one ‘game’ breaks the rules of another” (Smets *et al.*, 2015, p.8). Focusing on employees as “micro-foundations of institutional processes” (Smets *et al.*, 2015, p.9), AQ climate in SAIs arises from the coexistence and interaction of multiple institutional logics that give meaning and legitimacy to quality control practices. The coexistence of multiple logics may, therefore, include different AQ expectations, ranging from procedural compliance and professional standards to performance evaluation and broader public value considerations. Exploring the AQ climate through an institutional logic lens thus provides insight into how these competing expectations shape perceptions of AQ in SAIs.

5. Climate measure and sample

For the purposes of our study, we revised the AFQC measurement instrument originally developed by Kritzinger and Barac (2025) using data sets with responses from large South African private audit firms and the country’s SAI. Supported by literature (Arnett *et al.*, 2003; Wieland *et al.*, 2018), Kritzinger and Barac (2025) subsequently recommended the development of shorter, more time-efficient and validated version of the AFQC measurement instrument. This could improve response rates and data quality, particularly in African SAIs where employees often work under time and capacity constraints (Azinogo and Erasmus, 2025; Isaksson and Bigsten, 2012; Wang and Rakner, 2005).

5.1 Shortening and refining the existing audit quality climate questionnaire

Following on from Kritzinger and Barac (2025) study, the current study re-analysed the 1,893 responses used in the confirmatory AFQC measurement model that they developed originally. Their AFQC items were systematically revised for this study, using item content quality indicators and the ESEM methodology, implemented with a theory-based *a priori* factor structure and confirmatory target rotation. ESEM was chosen for its ability to integrate the flexibility of exploratory factor analysis in estimating cross-loadings with the validation rigour of confirmatory factor analysis (CFA). This framework strikes a balance between parsimony and fidelity, yielding a more accurate latent structure to support both theoretically and empirically grounded measurement refinements (Swami *et al.*, 2023). Mplus Version 8.11 was used to estimate the ESEM model with the unweighted least squares mean and variance-adjusted estimator, that is suitable for analysing Likert-type items that do not follow a normal distribution (Muthén and Muthén, 2017).

The original AFQC measurement instrument’s 33-item ESEM model displayed a very good fit [$\chi^2(345) = 1,100.71$, RMSEA = 0.03, CFI = 0.98 and TLI = 0.97] (Supplementary Material). Six significant specific factors were confirmed, and these correspond to the six dimensions found in Kritzinger and Barac (2025) study. The discriminant validity of the model was further supported by the fact that factor intercorrelations did not meaningfully exceed 0.70. Moreover, the items loaded primarily on their intended factors and not

substantially (e.g. $\lambda < 0.30$) on others, which indicates a simple structure and strengthens evidence for discriminant validity (Swami *et al.*, 2023).

In the shortening and refinement process, item-level statistics from the abovementioned ESEM model and item content evaluation were combined to retain conceptually valid items, while reducing the risk of excluding potentially sound indicators because of sample- or model-specific idiosyncrasies. All the items in the revised version were systematically reviewed for conceptual relevance, clarity, specificity and distinctiveness. This was done to ensure comprehensive and representative coverage of the construct, regardless of the size of their primary factor loadings. Particular attention was given to items displaying statistically significant correlated residuals (Modification Indices, $MI \geq 10$, or Expected Parameter Change, $EPC \geq 0.10$), which may indicate localised model misspecification (Hair *et al.*, 2018; Kline, 2016; Saris *et al.*, 2009). We also considered items with notable cross-loadings (e.g. $\lambda \geq 0.20$) that may compromise construct distinctiveness (Hair *et al.*, 2018; Kline, 2016). Negatively worded items were flagged for revision or removal, as they often increase cognitive load and can introduce method bias that compromises validity (Zeng *et al.*, 2020).

Eight negatively worded items were then rephrased in the positive form, for example, “My firm pays no attention to the work/life balance of its employees” was changed to “My firm pays sufficient attention to the work/life balance of its employees” (Supplementary Material). Ten items were excluded altogether (Supplementary Material). All the items which were removed had flagged correlated residuals ($MI \geq 10$), indicating potential item misspecification and method bias (Hair *et al.*, 2018; Kline, 2016). The items removed (Supplementary Material) were excluded on the basis of content evaluation (conceptual redundancy), supported by evidence of notable cross-loadings, weaker primary loadings (e.g. $\lambda \leq 0.60$) and significant item misspecifications (flagged correlated residuals). For instance, Item Q25 (Factor 5 – training and innovation) displayed a modest loading ($\lambda = 0.60$) and significant misspecification ($MI = 16.21$ and $EPC = 0.12$). Item Q25 was removed because, in addition to its problematic statistical misspecification, the statement in Q25 (“My firm promotes a culture of lifelong learning”) was deemed vague and conceptually redundant, as it reflects a general view that lacks behavioural specificity and may not accurately mirror employees’ direct experiences.

In addition, as part of the continuous iteration process to develop a shortened, more time-efficient and validated version of the original AFQC measurement instrument developed by Kritzinger and Barac (2025) and to boost its psychometric functionality (Li, 2016; Rudolph *et al.*, 2024), additional refinement of the original AFQC measurement instrument was achieved. Ordered items were blocked (see the question numbers in supplementary material for the differences), and a six-point Likert scale was used (1 = definitely false; 2 = mostly false; 3 = somewhat false; 4 = somewhat true; 5 = mostly true; and 6 = definitely true) instead of the four-point Likert scale in the original AFQC model.

As a result of the statistical item-level validity analysis and iteration process described above, 23 items were retained in the revised version for the pilot study, instead of the original 33 items (Supplementary Material), ensuring theoretical breadth and sufficient representation per dimension. A pilot and main study were conducted to evaluate and confirm the measurement model of the revised AFQC further.

5.2 Data collection

After obtaining the necessary institutional consent from AFROSAI-E and ethical consent from the university’s research ethics committee, the survey was administered. Respondents were assured that all information would be treated as confidential and that participation was voluntary. They could withdraw at any time. All 26 AFROSAI-E member SAIs

(Supplementary Material) were approached to participate. AFROSAI-E facilitated the survey. SAIs were requested to provide relevant employee demographic information, and survey information was distributed to their human resource departments by AFROSAI-E. Of the 26 AFROSAI-E member SAIs, 17 provided the required information by the stated deadlines. Of these, one participated in the pilot study, and the other 16 in the main study. For both the pilot and main studies, email communication with instructions and a link to the Web-based questionnaire were used to distribute the survey information via AFROSAI-E. The researchers monitored responses and made follow-up requests (two to four per SAI) to AFROSAI-E to encourage participation. For the sake of confidentiality, individual SAIs in AFROSAI-E cannot be named in the article. The presentation and discussion of our results are done in a regional context, according to AFROSAI-E’s three SAI regional categories in Africa (southern, eastern and western Africa) to help us identify geographical patterns and disparities and support targeted recommendations.

5.3 The pilot study

The refined AFQC questionnaire used in our pilot study included questions about the following:

- the respondent’s profile (gender, age and job level);
- the respondent’s perceptions of the maturity level of the SAI’s quality management approach (Level 1 = *ad hoc*, Level 2 = reactive, Level 3 = proactive, Level 4 = integrated and Level 5 = strategic, as a fundamental element of the SAI’s culture and strategy), in addition to; and
- the 23 items (AQ climate statements), as described in the section above.

Table 1 shows the Cronbach’s alpha reliability scores for the pilot study. All values were acceptable ($\alpha > 0.70$), except for the “work pressure” dimension, which was low, because of weak internal consistency ($\alpha = 0.59$). Nonetheless, the “work pressure” dimension was retained in the model, because the professional literature shows that high workloads limit the performance of African SAIs (African Organisation of English-Speaking Supreme Audit Institutions [AFROSAI-E], 2021). However, we reconsidered the wording of the existing items in this dimension (e.g. “My SAI pays sufficient attention to the work/life balance of its employees” was changed to “My workload allows for a good work/life balance”) and we added two new items (“My daily work schedule is manageable” and “My performance targets are realistic”) to boost validity (Kline, 2016) (Supplementary Material). This aim was achieved, as is shown (Table 1) by the improved and acceptable Cronbach’s alpha value of 0.773 in the main study.

5.4 The main study

The changes in the “work pressure” dimension statements, as described in the section above (see also Table 1 and Supplementary Material), brought the total number of items in the revised AFQC to 25 (up from 23 items). Overall, the validity statistics for the revised AFQC instrument used in the main study were consistent with those of the pilot study. The Cronbach’s alpha measure for five of the six dimensions improved in the main study, and all values exceeded 0.7, which is above the generally accepted limit (Field, 2018; Kline, 2016). The values ($\alpha = 0.773\text{--}0.908$) indicate satisfactory to excellent internal consistency across all the dimensions of our study’s revised 25-item AFQC (Table 1).

The revised AFQC with the 25-item ESEM model, based on 710 responses, displayed very good fit [$\chi^2(165) = 574.82$, RMSEA = 0.06, CFI = 0.99 and TLI = 0.97]. The model identified six significant specific factors that correspond to the six dimensions identified in

Table 1. Audit quality climate dimensions

AQ climate Nr dimension	Nr items		Explanation	Cronbach's alpha	
	Pilot	Main		Pilot	Main
1 Supervision and feedback	4	4 (No change)	Supervisors are competent and supportive; they understand employees' needs and their challenges to deliver AQ, and they provide feedback to employees on their job performance	0.890	0.825
2 SAI policies and procedures	5	5 (No change)	The SAI has policies and procedures aimed at quality and compliance by employees and these are non-negotiable	0.797	0.865
3 Visibility of quality	4	4 (No change)	Quality-related goals and requirements can be clearly seen, are known to employees and are reviewed regularly	0.866	0.888
4 Work pressure	4	6 (Changed wording of the 4 and added 2)	The SAI exerts reasonable pressure on employees to achieve targets	0.591	0.773
5 Training and innovation	3	3 (No change)	The SAI invests in employee development through training, new technologies and innovative audit approaches	0.878	0.883
6 Ethical behaviour	3	3 (No change)	The SAI emphasises and encourages ethical behaviour	0.877	0.908
Total items	23	25			

Source(s): Authors' own work

Kritzing and Barac (2025) study (Supplementary Material). Similar to the original AFQC measurement instrument, our study's revised AFQC distinguishes six AQ climate dimensions (Table 1). These dimensions are suitable for examining the AQ climate in public sector auditing and well supported by the mature private sector auditing literature (Andiola *et al.*, 2020; Andiola *et al.*, 2021; Aobdia, 2019; Christensen *et al.*, 2021; Gaynor *et al.*, 2016; Persellin *et al.*, 2019; Westermann *et al.*, 2015).

Items loaded mainly onto their intended factors and not substantially on others (e.g. $\lambda < 0.30$) (Supplementary Material). This indicates a simple structure and strengthens the evidence for the discriminant validity of our model (Swami *et al.*, 2023). The inter-factor correlations were mostly below 0.70, also suggesting that distinct factors were present in the model (Marsh *et al.*, 2014). Because ESEM estimates cross-loadings, the traditional Fornell–Larcker criterion (which compares average variance extracted among factors in CFA) was not used, as it is not appropriate for models that allow cross-loading indicators (Marsh *et al.*, 2014).

There were two exceptions: Item Q14.1 from Factor 2 (Audit firm/SAI policies and procedures), which states “Communication concerning quality control policies and procedures is regular and widely shared” loaded significantly ($\lambda = 0.46$) on Factor 3 (Visibility of quality), which is conceptually related. As it reflects a key aspect of communicating quality control policies and its cross-loading is interpretable within ESEM, we chose to retain the item to maintain content coverage. In addition, Item Q16.1 from Factor 4 (Work pressure), which states “I experience reasonable work pressure” displayed a marginal factor loading ($\lambda = 0.28$). The item content was considered theoretically relevant and it was retained. These two items could be revisited in future research. Overall, the

structure of the revised AFQC is clear and interpretable within the ESEM framework for the purposes of this study.

In considering the survey’s results, the response rate in our study may have been negatively affected by the fact that the new ISSAI 140 only came into effect on 1 January 2025 ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2023](#)). Therefore, some SAIs may not have felt comfortable providing information on it at that stage. Our data collection took place between October 2024 and January 2025, which was regarded as the ISSAI 140 implementation stage (October to December 2024) and the first month in the post-implementation stage (January 2025). As indicated in [Table 2](#), of the 16 SAIs that participated in our main study, three were removed because of a poor response rate (15% or less). As a result, only half (13 / 26) of the AFROSAI-E members participated fully in the study, which can be considered a limitation of this study. However, our SAI participation rate (50%) compares well with the rate in previous surveys of SAIs, such as the study by [Cordery and Hay \(2022\)](#), where only 28 SAIs out of 200 participated, representing approximately only 14% of the INTOSAI’s full membership.

Furthermore, the adequacy of the achieved response rate was assessed according to the standard sample size formula for proportions with finite population correction ([Cochran, 1977](#); [Israel, 2013](#); [Krejcie and Morgan, 1970](#)). For the target population in the 13 participating SAIs whose data could be used, $n = 1,991$ (refer to [Table 2](#)), at a 95% confidence level, $\pm 5\%$ margin of error and $p = 0.50$, a minimum of approximately 323 valid responses was required. Our study’s effective sample of 710 valid responses (approximately 35.7%) exceeds this criterion and provides sufficient statistical precision for population-level inferences. Subregional analysis showed adequate coverage of southern and eastern Africa, with western Africa slightly below the $\pm 5\%$ precision threshold.

Response rates of 30%–40% are generally acceptable in large-scale organisational surveys, such as in our study, when they are supported by an adequate sample size and demographic representation ([Baruch and Holtom, 2008](#); [Dillman *et al.*, 2014](#)). The demographic information from the participating SAIs shows that the gender and job-level distributions of respondents are comparable to those of the target population. [Table 3](#) shows that the sample demonstrated good gender representation, with men accounting for 50% (55% in the population), and women accounting for 48% (45% in the population). Across the regions, the distribution remained broadly similar, with slightly higher deviations for the western region. Job levels were fairly well represented in the sample: juniors accounted for 39% (39% in the population), mid-level employees for 33% (37% in the population) and seniors for 28% (24% in the population). Most regional job-level distributions were closely

Table 2. Data attrition

Description	No.
Individual SAIs of AFROSAI-E	26
Individual SAIs of AFROSAI-E responded	17 (1 pilot study, 16 main study)
(Minus) SAIs with poor response rate	3
Total SAIs in the main sample	13
Total target population in 13 SAIs	1,991
Total responses from 13 SAIs	795
(Minus) unusable responses	85
Total valid responses for 13 SAIs	710

Source(s): Authors’ own work

Table 3. Demographic profile and representation

Demographic profile	Targeted employees (n)	Responses (n)	Response rate	Unusable responses	Effective Sample	Effective Response rate
<i>Southern Africa (6 from 11 SAIs = 47% of effective sample)</i>						
Total	1 062	372	35%	41	331	31.1%
Female	553 (52.1%)				197	59.5%
Male	509 (47.9%)				128	38.7%
Prefer not to say	–				6	1.8%
Junior level (<3 years)	265 (24.9%)				102	30.8%
Mid-level (3–10 years)	397 (37.4%)				98	29.6%
Senior level (>10 years)	400 (37.7%)				131	39.6%
<i>Eastern Africa (5 from 10 SAIs = 43% of effective sample)</i>						
Total	769	343	45%	37	306	39.7%
Female	277 (36.1%)				102	33.3%
Male	492 (63.9%)				198	64.7%
Prefer not to say	–				6	2.0%
Junior level (<3 years)	424 (55.1%)				155	50.6%
Mid-level (3–10 years)	286 (37.2%)				105	34.3%
Senior level (>10 years)	59 (7.7%)				46	15.1%
<i>Western Africa (2 from 5 SAIs = 10% of effective sample)</i>						
Total	160	80	50%	7	73	45.6%
Female	68 (42.5%)				43	58.9%
Male	92 (57.5%)				30	41.1%
Junior level (<3 years)	87 (54.4%)				22	30.1%
Mid-level (3–10 years)	49 (30.6%)				32	43.8%
Senior level (>10 years)	24 (15.0%)				19	26.1%
<i>All regions (13 from 26 SAIs = 100% of effective sample)</i>						
Total	1 991	795	40%	85	710	35.7%
Female	898 (45.1%)				Representation	
Male	1 093 (54.9%)				342 (48.2%)	
Prefer not to say	–				356 (50.1%)	
Junior level (<3 years)	776 (39.0%)				12 (1.7%)	
Mid-level (3–10 years)	732 (36.7%)				279 (39.3%)	
Senior level (>10 years)	483 (24.3%)				235 (33.1%)	
					196 (27.6%)	
Source(s): Authors' own work						

aligned with the population, but the western region displayed somewhat larger deviations, particularly at the senior level.

In addition to the above, to assess potential non-response bias, a wave analysis (Armstrong and Overton, 1977; Rogelberg and Stanton, 2007) was conducted in each region. This involved comparing the first 10% of responses that were received to the final 10%. The time that elapsed between the responses of these groups ranged from two to three weeks across the regions. No statistically significant differences were observed for the six dimensions between the early and late respondents per region, suggesting that there was limited evidence of non-response bias. However, the relatively short time span between the waves (two to three weeks) might have lessened the discriminatory power of the non-response bias analysis.

To maintain confidentiality, the data were analysed according to the three regions of AFROSAI-E: southern, eastern and western Africa. As noted above, three of the SAIs with a response rate of 15% or less (including the unusable responses) were removed, resulting in an overall sampling frame of 13 SAIs with a total of 1,991 targeted employees, where 795 responded (a 40% response rate). During data cleaning, 85 unusable individual responses were removed, resulting in 710 responses with an effective response rate of 35.7% (Table 3).

Table 3 shows the demographic profile of the final sample of 710 employees in our study. In terms of more granular detail, six of 11 SAIs participated in our study in the southern region, five of ten SAIs in the eastern region and two of five SAIs in the western African region. Furthermore, 331 usable responses received out of the total of 710 (47%) came from the southern region, 306 responses (43%) from the eastern region and 73 responses (10%) from the western African region.

The effective sample had an almost equal gender distribution (48% female, 50% male; 2% opted not to say). Most participants (39%) held junior-level positions (less than 3 years of audit experience), while 33% occupied mid-level positions (3–10 years of audit experience) and 28% were senior-level professionals (more than 10 years of audit experience). As is shown in Table 3 and discussed above, the regional gender and job-level distributions align well with those in the population. The exception is the western region, where larger deviations were observed, particularly in gender and senior job-level representation. Further (unpublished) data revealed that most respondents (72%) were 30 years or older and were mostly (90%) involved in audit engagements, with only 10% working mostly in other engagements.

6. Presentation of the results

6.1 Regional perceptions on supreme audit institutions audit quality climate dimensions

The (unpublished) overall descriptive data reveal that the mean across all dimensions was 4.44, with a standard deviation of 0.89, using a six-point Likert scale. This indicates that respondents regarded the statements in the revised AFQC used in our study as being between somewhat true and mostly true on average across all six dimensions and across all African regions. In Table 4, ethical behaviour attracted the highest mean across all regions ($M = 4.74$, $SD = 1.13$), indicating relatively strong agreement between respondents. Training and innovation had the lowest mean score ($M = 3.96$, $SD = 1.31$), indicating more critical perceptions of this dimension among the respondents.

The individual means and standard deviations for each dimension per region are shown in Table 4. Higher mean scores were reported in the eastern region for the four dimensions (SAI policies and procedures, visibility of quality, training and innovation and ethical behaviour), followed closely by the western region. The western region had the highest mean score for one dimension, namely, supervision and feedback, with the eastern region following very closely behind. For the work pressure dimension, the southern region had the highest mean score. Such variances in the regions indicate potential regional similarities but also some

Table 4. Descriptive statistics: audit quality climate dimensions per region

AQ climate dimension	Southern (M/SD) ^a	Eastern (M/SD) ^a	Western (M/SD) ^a	Total (M/SD) ^a
Supervision and feedback	4.48/1.04	4.75/0.84	4.76/0.99	4.63/1.01
SAI policies and procedures	4.24/1.12	4.82/0.82	4.77/0.71	4.54/1.01
Visibility of quality	4.00/1.23	4.80/0.93	4.54/0.87	4.40/1.14
Work pressure	4.73/1.00	4.36/0.83	4.60/0.74	4.39/0.91
Training and innovation	3.60/1.34	4.31/1.23	4.14/1.08	3.96/1.31
Ethical behaviour	4.40/1.26	5.05/0.90	4.96/1.00	4.74/1.13

Note(s): ^aM = mean; SD = standard deviation

Source(s): Authors' own work

differences in the perceptions of the survey participants. The Welch test confirmed statistically significant group differences, at a 1% level or less, across all dimensions: supervision and feedback [$F(2, 217.73) = 6.81, p = 0.001$], SAI policies and procedures [$F(2, 225.57) = 29.99, p < 0.001$], visibility of quality [$F(2, 217.38) = 42.91, p < 0.001$], training and innovation [$F(2, 216.58) = 24.44, p < 0.001$] and ethical behaviour [$F(2, 204.80) = 28.69, p < 0.001$]. There was one exception, namely, work pressure [$F(2, 218.61) = 3.13, p = 0.046$]. Variation for all dimensions across regions was, therefore, statistically significant, but differences for the work pressure dimension were less significant.

Further analysis using the Games-Howell *post hoc* test (Table 5) revealed multiple significant pairwise differences between the three regions. There were significant differences, at a 5% and a 10% level, between the southern region and both the eastern and western regions across all dimensions (except work pressure) using the revised AFQC instrument of our study. Respondents in the southern region tended to have more critical views of their SAIs' AQ climate, held less favourable perceptions and scored lower on all AQ climate dimensions (except for work pressure) than the other two regions. Similarly, the eastern region's respondents seemed to disagree more with the work dimension of their SAIs' AQ climate.

6.2 General perception of the maturity level of supreme audit institutions' quality management

Respondents were further asked to indicate the maturity level of their SAI's quality management approach. Five levels were identified and distinguished in our revised

Table 5. Multiple pairwise comparison: audit quality climate dimensions and regions

AQ climate dimension	Region (I)	Region (J)	Games-Howell mean difference (I-J)
Supervision and feedback	Southern	Eastern	-0.28*
		Western	-0.27*
SAI policies and procedures	Southern	Eastern	-0.59*
		Western	-0.53**
Visibility of quality	Southern	Eastern	-0.80**
		Western	-0.54**
Work pressure	Eastern	Western	-0.24*
Training and innovation	Southern	Eastern	-0.70**
		Western	-0.53*
Ethical behaviour	Southern	Eastern	-0.64**
		Western	-0.56**

Note(s): * = mean difference is significant at the 0.05 level, and ** = mean difference is significant at the 0.01 level

Source(s): Authors' own work

measurement instrument: *ad hoc* (there are no formal quality control policies and procedures), reactive (there are some basic quality management policies and procedures, but these are used reactively when quality-related issues arise), proactive (quality management is a separate function with established and documented quality control policies and procedures), integrated (quality management is systemic and integrated into the SAI's core operations and processes) and strategic (quality management is a fundamental element of the SAI's culture and strategy).

To determine whether respondents' perceptions of their SAIs' quality management maturity were associated with their perceptions of the AQ climate dimensions, the analysis was conducted on the study's full data set of 710 responses, rather than by region. Descriptive data in Table 6 show the following: 44 (6.2%) respondents considered their SAIs' quality management maturity to be at an *ad hoc* level, while 144 (20.3%) respondents saw it as being at a reactive level; 209 (29.4%) respondents at a proactive level; 169 (23.8%) respondents at an integrated level; and 144 respondents (20.3%) at a strategic level. Table 6 shows the individual means and standard deviations for each dimension according to the five quality management maturity levels.

Furthermore, the Welch test confirmed statistically significant group differences, at less than a 1% level, across all dimensions and maturity levels: supervision and feedback [$F(4, 218.60) = 27.00, p < 0.001$], SAI policies and procedures [$F(4, 215.60) = 42.48, p < 0.001$], visibility of quality [$F(4, 219.85) = 57.84, p < 0.001$], workload [$F(4, 217.62) = 13.92, p < 0.001$], training and innovation [$F(4, 221.87) = 32.06, p < 0.001$] and ethical behaviour [$F(4, 220.22) = 36.72, p < 0.001$]. Thus, variation across maturity levels was statistically significant for all dimensions. As respondents' SAI quality management maturity levels became higher, the mean of the dimensions also became higher across all regions in Africa. For example, all responses indicating a strategic level of maturity in Table 6 show higher means per AQ dimension than for responses indicating an *ad hoc* level of maturity.

Several significant pairwise differences between the five maturity levels were revealed by *post hoc* analyses using the Games-Howell test (Table 7). The results show statistically significant differences between most maturity levels, especially between the lower (the *ad hoc* and reactive levels) and the higher levels (the proactive, integrated and strategic levels). This indicates that respondents who rated their SAI quality management maturity level higher had more favourable perceptions of the AQ climate dimensions.

Table 6. Audit quality climate dimensions per quality management maturity level

	Ad hoc (M/SD) ^a 6.2% <i>n</i> = 44	Reactive (M/SD) ^a 20.3%, <i>n</i> = 144	Proactive (M/SD) ^a 29.4%, <i>n</i> = 209	Integrated (M/SD) ^a 23.8%, <i>n</i> = 169	Strategic (M/SD) ^a 20.3%, <i>n</i> = 144
AQ climate dimension					
Supervision and feedback	3.84/1.25	4.13/1.00	4.56/0.81	5.03/0.85	4.98/0.99
SAI policies and procedures	4.63/1.01	3.15/1.46	3.97/1.01	4.59/0.74	4.89/0.70
Visibility of quality	2.82/1.29	3.66/1.11	4.49/0.89	4.78/0.90	5.04/0.83
Work pressure	4.40/1.14	3.57/1.24	4.13/0.99	4.39/0.74	4.53/0.81
Training and innovation	2.79/1.34	3.24/1.38	3.99/1.06	4.27/1.13	4.64/1.21
Ethical behaviour	3.53/1.33	4.10/1.22	4.78/0.97	5.07/0.89	5.29/0.87

Note(s): ^aM = mean; SD = standard deviation; and *n* = number of responses per quality management maturity level

Source(s): Authors' own work

Table 7. Multiple pairwise comparison: AQ climate dimensions and SAI quality management maturity levels

AQ climate dimension	Region (I)	Region (J)	Games-Howell mean difference (I-J)	Region (K)	Region (L)	Games-Howell mean difference (K-L)
Supervision and feedback	Ad hoc	Proactive	-0.72*	Reactive	Proactive	-0.43**
		Integrated	-1.18**		Integrated	-0.90**
		Strategic	-1.14**		Strategic	-0.85**
SAI policies and procedures	Ad hoc	Reactive	-0.82**	Reactive	Proactive	-0.62**
		Proactive	-1.45**		Integrated	-0.92**
		Integrated	-1.75**		Strategic	-1.09**
Visibility of quality	Ad hoc	Strategic	-1.91**	Reactive	Proactive	-0.82**
		Reactive	-0.83*		Integrated	-1.12**
		Proactive	-1.66**		Strategic	-1.37**
Work pressure	Ad hoc	Integrated	-1.96**	Reactive	Proactive	-0.82**
		Strategic	-2.21**		Integrated	-0.39*
		Proactive	-0.83*		Strategic	-0.59**
Training and innovation	Ad hoc	Integrated	-0.96**	Reactive	Proactive	-0.75**
		Strategic	-1.16**		Integrated	-1.03**
		Proactive	-1.20**		Strategic	-1.40**
Ethical behaviour	Ad hoc	Integrated	-1.48**	Reactive	Proactive	-0.68**
		Strategic	-1.85**		Integrated	-0.97**
		Proactive	-1.25**		Strategic	-1.19**
		Integrated	-1.54**			
		Strategic	-1.76**			

Note(s): *= mean difference is significant at the 0.05 level, and **= mean difference is significant at the 0.01 level

Source(s): Authors' own work

6.3 An integrated view on audit quality climate dimensions

To integrate the results on regional perceptions of SAI AQ climate dimensions (Section 6.1), SAI quality management maturity (Section 6.2) and respondents' demographic characteristics, an exploratory cluster analysis was conducted. This analysis sought to uncover patterns (or structures) in respondents' perceptions across the six dimensions. The analysis identified groupings of respondents based on their scores across the six dimensions and their background profile information. Unlike the earlier regional analysis, these groupings were not predetermined.

We followed a two-step cluster analysis method, which allowed simultaneous analysis of both categorical and continuous data (self-reported and behavioural data to score the dimensions) (Rundle-Thiele *et al.*, 2015). The first step was to split the data set into pre-clusters that construct a cluster features tree (Okazaki, 2007). In the second step, the pre-clusters were grouped using a standard hierarchical clustering algorithm (Norusis, 2011). A variety of solutions with different numbers of clusters were produced, based on model fitting criteria such as the Schwarz's Bayesian information criterion (BIC), to combine the sub-clusters into optimal final clusters. The BIC balances model fit and simplicity by avoiding the arbitrariness of traditional clustering techniques (Chiu *et al.*, 2001; Norusis, 2011). The lowest BIC was used to eliminate variables from the analysis (Norusis, 2011). The silhouette score, that measured the cohesion and separation of each cluster, had to be higher than

the required level of 0.0, to validly represent the within-cluster and the between-cluster distance (Norusis, 2011).

Our two-step cluster analysis was based on the following variables: the six dimensions, region, the maturity level of SAIs' quality management and respondents' job level and age. Two clusters were formed (Figure 1). Region was seen as most important element to form the clusters. The silhouette score amounts to 0.2, indicating that the cluster solution is of fair quality.

Figure 1 shows that Cluster 1 comprised 55% (390) of the study's respondents, where 76% were from the southern region. Most of them (42%) were older respondents (aged between 41 and 50 years) and employed at a senior job level (50% had more than ten years' experience). Considering the distribution of responses across the five maturity levels of their SAI's quality management approach, almost two thirds of them (61.5%) perceived their SAIs' quality management maturity to be at a reactive or proactive level (Levels 2 and 3 of the five levels). This cluster's perceptions resulted in the following means for the six dimensions: supervision and feedback (4.38), SAI policies and procedures (4.20), visibility of quality (3.96), work pressure (4.23), training and innovation (3.55) and ethical behaviour (4.34).

Cluster 2 comprised 45% (320) of the study's respondents, where 76% came from the eastern region (Figure 1). Most respondents (52%) were young (not more than 30 years of age) and employed at a lower job level (64% were at entry level to mid-associate level, with fewer than three years of experience). Considering the distribution of responses across the five maturity levels of their SAI's quality management approach, almost two thirds of them (64%) perceived their SAIs' quality management maturity to be at an integrated or strategic level (Levels 4 and 5 of the five levels). This cluster's perceptions resulted in the following means for the six dimensions: supervision and feedback (4.92), SAI policies and procedures (4.96), visibility of quality (4.93), work pressure (4.58), training and innovation (4.47) and ethical behaviour (5.21).

The above findings show that Cluster 2 (mostly from the eastern region) rated the six AQ climate dimensions higher than Cluster 1 (mostly from the southern region), and they also perceived the SAIs' quality management maturity to be higher. Although regional connectivity was the most important determinant, most of the respondents in Cluster 2 were younger and functioned at lower job levels with fewer years of experience than their counterparts in Cluster 1. The more favourable perceptions regarding the AQ climate dimensions and SAI quality management levels therefore came from younger employees with less seniority and work experience. Cluster analysis, thus, uncovered two distinct subgroups for a more nuanced view of data patterns across regions and SAI quality management maturity levels.

Further (untabulated) statistical analysis was performed to confirm the distinctness of the two clusters. A Chi-Square Test of Independence was performed to examine the association between the two clusters we had identified and three categorical variables: region, age and job level. We found statistically significant relationships between SAIs' quality management maturity and all three categorical variables – the three regions [$\chi^2(2, n = 710) = 313.31, p < 0.001$], age [$\chi^2(2, n = 710) = 282.64, p < 0.001$] and job level [$\chi^2(2, n = 710) = 253.18, p < 0.001$]. The results of *t*-tests also confirmed statistically significant differences ($p < 0.001$) between the clusters regarding all six AQ climate dimensions. Thus, the results supported statistically significant differences between all the variables for the two clusters.

7. Discussion of the results through an institutional logic lens

To address the limitations identified by Kritzinger and Barac (2025) in the original AFQC measurement instrument used in their study, our study shortened and refined the original

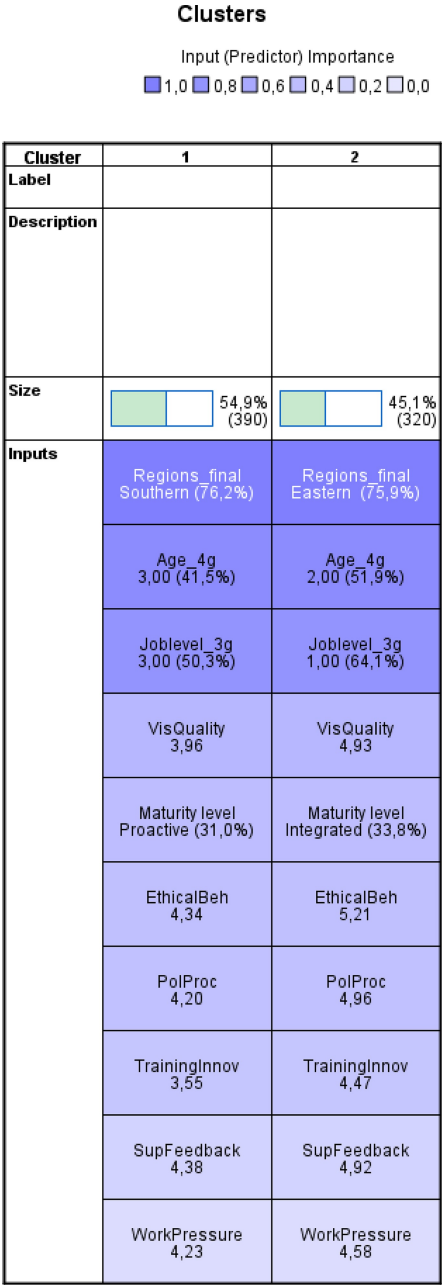


Figure 1. Two-step cluster analysis
Source: Figure by authors

instrument. In doing so, we have explored how employees of English-speaking African SAIs experienced the AQ climate in SAIs in a period when the revised standard (ISSAI 140) was also in its final phase of implementation by the SAIs. As our shortened and refined questionnaire displays satisfactory internal consistency (Cronbach's alpha values > 0.7) across all AQ dimensions, this study enables a comparative analysis of African SAIs, which is underreported (Cordery and Hay, 2025) in the limited literature on public sector auditing in Africa (Mattei *et al.*, 2021). With its focus on the recently revised ISSAI 140, this study's results show how a harmonised AQ standard is interpreted and experienced across diverse national contexts, an area that remains under-researched in international public sector auditing (Lagos, 2026).

Our study draws on the institutional logics' theory (Friedland and Alford, 1991) and views SAIs as sites of institutional complexity where multiple, often competing, logics coexist and govern the SAIs' structures and practices (Thornton *et al.*, 2012). For SAIs, this includes bureaucratic logic (Grossi *et al.*, 2023; Mattei *et al.*, 2021), governance logic (Diab, 2021), managerial logic (Grossi *et al.*, 2023; Mattei *et al.*, 2021) and professional logic (Hathaway and Askvik, 2021). SAI employees, who are seen as the micro-foundations of SAIs' institutional life (Smets *et al.*, 2015), deal with those multiple coexisting logics in their daily activities. Because the AQ climate reflects employees' shared perceptions (Schein and Schein, 2017), the climate dimensions show not only organisational routines but also how employees navigate the intersecting logics in their daily work. Our study shows that all six AQ climate dimensions appear to be relevant for SAIs in Africa, and even though there were statistically significant differences for all dimensions across regions and the mean scores varied from reasonable to high (64% to 83%). The AQ climate dimensions reveal different institutional logics that need to be balanced in practice.

The *bureaucratic logic* with a compliance orientation is relevant for all six AQ climate dimensions when SAI leadership and employees are inclined simply to follow rules and controls, which can lead to apparent or token compliance with a standard. The quite high mean scores for all the dimensions (mean 4.45 = 74%) in our AQ climate survey may reflect a bureaucratic logic, where legitimacy is sought by demonstrating merely formal compliance. This finding should be read in the challenging context of African SAIs, who face, for example, questionable democratic systems, weak institutional independence and limited capacity and other resources (Azinogo and Erasmus, 2025; Isaksson and Bigsten, 2012; Reichborn-Kjennerud *et al.*, 2019; Wang and Rakner, 2005). We would also suggest that the high mean scores obtained were because the respondents were familiar with the survey's dimensions. These topics had already been covered in the previous ISSAI 140 (International Organisation of Supreme Audit Institutions [INTOSAI], 2019b), formerly known as ISSAI 40 and endorsed in 2010 (renamed in 2019 to ISSAI 140 with editorial changes) (International Organisation of Supreme Audit Institutions [INTOSAI], 2023). Because the SAIs were in the process of transitioning to the new ISSAI 140 at the time of our survey, the newer proactive risk-based quality management approach with substantive, embedded AQ practices was not yet well established.

In sum, we believe that, bearing in mind the bureaucratic logic, the application of new ISSAI 140 was procedural and symbolic rather than substantive, at least during its implementation (in the last two months before the effective date). This compliance orientation is consistent with the traditional PA paradigm, in which rule and procedure compliance, as well as established procedures, form the mechanisms of accountability (Grossi *et al.*, 2023).

We expected the *professional logic* linked to the AQ climate dimensions to be reflected positively in the mean scores, provided that the systems and processes were of sufficient

quality. However, for SAIs (in general), this was not necessarily true. According to INTOSAI's (2024, p.45) Global SAI Stocktaking Report (GSR) 2023 report, SAIs make efforts "to put in place standards and systems, [but] these systems and processes are not always of sufficient quality". In its 2024 State of the Region: ICBF Self-assessment Report, [African Organisation of English-Speaking Supreme Audit Institutions \(AFROSAI-E\), \(2025a, p.10\)](#) acknowledged that "quality management should be institutionalised beyond compliance to become an integral part of the work culture". Without substantive quality systems and processes, the mean scores of AQ climate dimensions should appear low from a professional logic perspective. While the importance of systems and processes on AQ is well established in private sector auditing research ([Andiola and Bedard, 2018](#); [Andiola et al., 2021](#); [Ater et al., 2019](#); [Brown et al., 2019](#); [Griffith et al., 2020](#); [Westermann et al., 2015](#)), the employee-centred perspective through which they are experienced remains underexplored in public sector AQ research ([Lagos, 2026](#)).

Integrating ISSAI principles into AQ systems and the processes of daily audit work will promote alignment with international quality management standards, thereby "reflecting real practice rather than symbolic commitment" ([Paraponti et al., 2025, p.15](#)). However, our findings suggest that this may not be the case for participating African SAIs. The high mean scores shown in our study, despite evidence of weak quality systems and processes in the GSR2023 report ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2024](#)), indicate a compliance orientation that may be procedural rather than substantive. This finding is consistent with broader research on NPM reforms that shows that organisations often exhibit symbolic or procedural compliance when institutional changes do not coincide with changes in underlying work practices ([Gisch et al., 2023](#)).

The *performance-oriented managerial logic* is linked to two dimensions. First, the work pressure dimension displayed contrasting average scores. The eastern region had the lowest work pressure mean score of all the regions, whereas the region's scores on all other dimensions were higher than those for the other regions. The opposite was true for the southern region. According to [African Organisation of English-Speaking Supreme Audit Institutions \(AFROSAI-E\) \(2021\)](#), African SAIs completed and submitted only 60% of their audits on time. The delays can be attributed to workload-related attributes, such as capacity, staffing and governance structure constraints.

The second dimension linked to managerial logic is the training and development dimension, which had the lowest average score (66%) across all regions ([Table 4](#)). The low average score is perhaps related to several challenges faced by African public sector auditors in acquiring new technology skills ([Otia and Bracci, 2022](#)). Many African SAIs operate in contexts with insufficient budgets and more corruption, which is strongly associated with insufficient capacity, both in terms of staff numbers and competencies ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2024](#)). They also rely on manual processes and outdated systems ([African Organisation of English-Speaking Supreme Audit Institutions \[AFROSAI-E\], 2025c](#)). Most of them lack the technological infrastructure, data analytics capacity and technical expertise required to produce high-quality and relevant audit reports ([African Organisation of English-Speaking Supreme Audit Institutions \[AFROSAI-E\], 2025c](#)). As a result, SAIs' operational capacity and their ability to invest in professional development and quality assurance processes remains severely limited ([African Organisation of English-Speaking Supreme Audit Institutions \[AFROSAI-E\], 2025b](#)), as is documented in our results.

The dimension with the highest average score (79%) was ethical behaviour. *Professional logic* is linked to the ethical behaviour dimension, so a high mean score was to be expected, considering that the formal adoption of ethical frameworks (e.g. a code of ethics) should also

lead to effective implementation. Ethical frameworks have been adopted by most African SAIs (74%), but adoption is not always accompanied by enforcement and monitoring, especially in continents such as Africa ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2024](#)). Africa is known to have higher corruption risks; indeed, according to [International Organisation of Supreme Audit Institutions \(INTOSAI\) \(2024\)](#), the presence of an effective enforcement and monitoring system is inversely correlated to levels of corruption in these countries. Therefore, the high mean score for the ethical behaviour dimension obtained in our study may indicate merely symbolic commitment, rather than fully institutionalised practices. Again, it seems that a “tick the box” approach is adopted by SAIs’ employees to avoid penalties or other negative consequences.

In addition to bureaucratic and professional logic, the *governance logic* is relevant to the SAIs’ policies and procedures dimension. SAIs must embody coercive and normative influences toward meeting recognised standards and practices to claim legitimacy ([Cordery and Hay, 2022](#)). Such normative influences are evident from the GSR2023 report, showing that 96% of AFROSAI-E SAIs have adopted ISSAIs as authoritative auditing standards ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2024](#)), which could explain why the SAI policies and procedures dimension is one of the dimensions with the highest mean scores (76%, [Table 4](#)). However, adoption requires ISSAIs to be used as a foundation for audit practices ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2024](#)), but it may remain merely a compliance application if the bureaucratic logic dominates. As the legal foundation for adopting ISSAIs influences the approach taken by SAIs ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2024](#)), governance logic (which is oriented towards government regulation) takes effect. Only 39% of AFROSAI-E SAIs have established a legal basis (a coercive requirement) for adopting ISSAIs ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2024](#)), suggesting that high mean scores for the SAI policies and procedures dimension may be attributed more to a bureaucratic than to a governance logic.

Furthermore, in our study, managerial logic interacts with the SAIs’ human capacity and digital competency limitations and governance logic interacts with their policies and procedures. Notwithstanding shifts in public sector auditing over many years from PA to NPM and NPG ([Grossi et al., 2023](#); [Mattei et al., 2021](#)), this study’s findings show that AQ climates in African SAIs are shaped by the coexistence of multiple institutional logics. This is consistent with the institutional logic literature, which views the coexistence of multiple institutional logics as a long-term occurrence ([Wu et al., 2023](#)). It is also consistent with previous research showing that multiple logics coexist especially in public sector auditing settings ([Grossi et al., 2023](#)). Our results suggest that AQ practices in African SAIs reflect a “‘sedimentation’ or ‘layering’ process” ([Meyer et al., 2014](#)) of institutional logic. While the revised ISSAI 140 promotes a systemic, proactive and risk-based approach to AQ management that is embedded in, among other things, the organisational culture ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2023, 2025](#)), its early implementation appears to have been enacted through a dominant bureaucratic logic with a compliance orientation. This suggests that revised ISSAI 140 AQ management principles do not challenge established bureaucratic practices, but are rather layered on top. Based on our finding that SAIs comply formally with quality management (ISSAI 140), this suggests a pattern of procedural and symbolic conformity rather than substantive quality management. This finding resonates with the study by [Grossi et al. \(2023\)](#), which shows the coexistence of multiple institutional logics in public sector auditing. They found new audit approaches in the European Court of Auditors did not replace the existing bureaucratic practices, but were layered on top of them.

Two contextual factors appear to reinforce a pattern of sedimentation in our study. First, ISSAIs are not legally enforced and their implementation relies mainly on normative influence (Hancu-Budui and Zorio-Grima, 2023). Second, given the significant resource and capacity constraints of African SAIs (Isaksson and Bigsten, 2012; Wang and Rakner, 2005), their ability to implement the comprehensive AQ management systems envisaged by the revised ISSAI 140 may be perhaps limited.

An interesting finding revealed through the cluster analysis was that respondents who perceived their SAI's quality management to be at a higher maturity level had more favourable perceptions regarding AQ climate dimensions. These respondents tended to be younger, employed at lower job levels and less experienced. As institutional logics represent organising principles in a particular field (Smets *et al.*, 2015), actors enact and prioritise multiple co-existing logics in daily work (McPherson and Sauder, 2013), according to work roles (Smets *et al.*, 2015) and their organisational positions (Suddaby *et al.*, 2009). Hence, differences in respondents' perceptions may occur as a result of employee embeddedness. The higher mean scores for the AQ climate dimensions allocated by less experienced, lower-level employees can be attributed to their socialisation into a bureaucratic logic that equates compliance and procedural completion with quality. More experienced higher-level employees may be more aware of the gap between procedural/symbolic compliance and substantive quality management.

To evaluate the sensitivity of the six AQ dimensions to age/job-level differences, multigroup CFA measurement invariance analyses were conducted. The results for both age and job levels supported metric invariance. This demonstrates that the dimensions were interpreted equivalently across age/job-level groups and that age/job level did not bias the measurement structure. However, statistically significant non-invariance in structural covariances suggests that the pattern of relationships between the constructs was sensitive to respondents' age/job level. By contrast, the non-invariance of residual variances reflected age/job-level differences in terms of measurement precision, but did not compromise the comparability of the underlying structural associations.

8. Conclusion

This study set out to explore how employees of English-speaking African SAIs experienced the AQ climate in SAIs during the transition to the revised ISSAI 140. Using the lens of institutional logics and empirical evidence from the AQ climate survey, our study revealed that SAIs were sites of institutional complexity where there was some interplay of coexisting logics on AQ climate. The findings suggested that the early implementation of the revised ISSAI 140 in the participating SAIs was enacted through a dominant bureaucratic logic with a compliance orientation. Consequently, transformative AQ management principles did not challenge established bureaucratic practices, but were rather layered on top of established practices. Therefore, formal compliance with quality management (ISSAI 140) appeared to have been procedural and symbolic rather than substantive. This was evident especially among less experienced staff at lower job levels, who largely resonate with a bureaucratic logic. Senior employees (in higher job levels and with more experience) held a more sceptical view of the AQ climate dimensions, which indicated the need for a professional logic to maintain SAI legitimacy. Although the effective response rate of 36% in our study was higher than that of other comparable studies, the response rate can be seen as a limitation against which the results must be interpreted.

By conceptualising AQ through the lens of an institutional logics lens, this study advances public sector auditing research by illuminating how competing institutional logics (bureaucratic, professional, managerial and governance) shape understandings of AQ during

transition periods. Empirically, this study extends organisational auditing research by measuring the AQ climate in SAIs with a suitable questionnaire and capturing employees' perceptions of how AQ management principles are translated into daily audit practices. In doing so, this study provides micro-level insights into how SAIs operationalise AQ in practice, thereby presenting a broader understanding of what SAIs actually do in practice.

From a practical perspective, strengthening AQ requires a shift from procedural and symbolic to substantive implementation of quality management by moving from a traditional quality control model – in the previous ISSAI 140 ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2019b](#)) – to a more dynamic, risk-based quality management approach, as advocated in the new ISSAI 140 ([International Organisation of Supreme Audit Institutions \[INTOSAI\], 2023](#)). As the coexistence of the aforementioned institutional logics is likely to continue ([Grossi et al., 2023](#)) with the establishment of the revised ISSAI 140 and transformative AQ management principles are likely to continue to be layered, strong SAI leadership, supported by strong external oversight, is required, as these logics can shape how reforms are interpreted, adopted and embedded in practice.

As with all studies, the limitations of this study open up areas for future research. Our study was limited to English-speaking African SAIs and data analysis was based on results from half of the SAI bodies in Africa. AFROSAI-E members operate predominantly under the Westminster model. However, research has shown differences when SAIs operate under other model types, such as the Court/Judicial and Board/Collegiate models ([Blume and Voigt, 2011](#); [Cordery and Hay, 2022](#)). Future comparative studies across different SAI models and governance contexts can expand insights from our study on how the interaction between multiple logics shapes SAIs' AQ management. Also, our study was based on the early implementation of the revised ISSAI 140. Future longitudinal studies could investigate how the transition to the standard develops over time and whether the layering of institutional logics gives way to more proactive and risk-based quality management practices.

Furthermore, our study showed that the training and innovation AQ dimension received the least support. The three statements of the dimension all relate to training on new technology (such as data analytics). Given that digital transformation is a “black box” in public audits, with few studies thus far providing empirical insights ([Grossi et al., 2023](#)) and that this transformation has an impact on AQ ([Lugli and Bertacchini, 2023](#)), future studies should examine the impact of digital transformation and its development on SAI cultures/climates. Finally, qualitative studies can deepen understanding of how AQ management frameworks are enacted in daily audit work, whereas quantitative studies could examine the relationship between the AQ climate and audit outcomes, including performance audit effectiveness.

Notes

- [1.] According to *ISSAI 140 – Quality Management for SAIs*, the SAIs' system of quality management generally addresses the following interconnected components in a continual and iterative manner: an SAI's risk assessment process; governance and leadership; relevant ethical requirements; acceptance, initiation and continuance of engagements; performing engagements; SAI resources; information and communication; and a monitoring and remediation process. According to par 08 of ISSAI 140, SAIs' quality management policies and procedures are expected to assign and define the responsibilities for quality and quality management in individual audits (INTOSAI, 2025).
- [2.] Of the 26 SAIs in African English-speaking countries, only 17 participated. However, data from only 14 were used – from the one that participated in the pilot study and from 13 in the main study. The remaining 12 SAIs were not included in the study results (nine did not respond to the

request to participate, and the data of the last three were removed because of a poor response rate of 15% or less).

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Supplementary material

The supplementary material for this article can be found online.

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