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EVALUATING AUDIT QUALITY IN REMOTE AUDITING ENVIRONMENTS IN SAUDI ARABIA CONTEXT: EVIDENCE FROM DIGITAL TOOL INTEGRATION

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ABSTRACT

This study explored the effects of remote auditing on audit quality as perceived by external auditors utilizing digital transformation within the profession of auditing. The transition to remote audit procedures, influenced by technological advancements and global disruptions, presents important questions about the effectiveness and reliability of digital auditing environments. A quantitative approach to data collection was conducted by using structured questionnaires to obtain data from a total of 204 auditors, and the data was analysed using SPSS version 26 and STATA version 16. The study assessed possible direct and indirect outcomes of remote auditing and used mediating variables of ease of use, perceived usefulness, reliability, and extent of agreed-upon computer assisted audit techniques (CAATs). The study findings highlight that remote auditing has greatly impacted audit quality because of an increased efficiency and flexibility within audit procedures. Specifically, auditors have conveyed that they spend less time in travel to and from clients, have better access to client information, and have a better communication structure amongst the audit teams. All these factors have allowed a more timely and complete investigation of the client's financial documents. The use of digital tools such as data analytics, cloud-based solutions, and artificial intelligence has further enabled auditors to identify anomalies and allow comprehensive risk analysis. At the same time, there were also limitations. Auditors had restrictions from not being physically present in the due diligence process in terms of direct inspection; however, auditors also mentioned being able to professionally exercise their judgment not being face-to-face. This twofold nature of remote auditing highlights both the possibilities and the challenges of remote auditing. The move to remote auditing has important implications for stakeholders and their confidence in the audit process. By improving audit efficiency and timeliness, digital tools support improved transparency and trust in financial reports. However, there are also questions raised by regulators and the public regarding whether professional scepticism and audit assurance and credibility will completely translate to a non-physical presence. Therefore, it appears that stakeholders will need to weigh the trade-off between the efficiency of remote tools and the principles behind auditing. For practitioners, the research shows the need to invest in technology infrastructure, staff training, and secure digital platforms to help improve audit quality

in remote environments. For regulators, the study highlights the need to renew audit frameworks and guidance so that the use of digital tools meets the essential audit principles. Together, the insights offer a coherent path for auditors and oversight bodies to ensure effective use of remote auditing and sustained trust and compliance.

KEYWORDS: Remote Auditing- Quality of Audit- Digital Tools- Emerging Market- Saudi Arabia.

1. INTRODUCTION

In an era of rapid technological evolution, understanding the influence of remote audit technologies and digitalization tools on audit quality is endorsed to be a concern. Various authors like Li et al. (2023) have discussed that AI and other digital technologies disrupt industries, including auditing, to provide the answers to their efficiency and effectiveness enhancement. Advantages for auditing due to digital transformation and AI arise since traditional manual auditing approaches seem slow and diligent. On the other hand, these opportunities involve a way of enhancing audit quality with reduced costs (Li et al., 2023). The processes of remote auditing were given greater adoption during the COVID-19 pandemic; thus, it is time to examine how these remote auditing practices impacted quality. Remote auditing practice provides outcome measurement tools and supports cognition of self-management in a series of ways across enhancing the flow of outpatient services (Minarhadi et al., 2023). Moving ahead with digital auditing practice keeps in line with the rapid e-health adoption trend and is conceived to create significant ripple effects in different aspects of health care systems and business functions.

Digital technologies like AI, big data, and blockchain bring forth a massive change in the auditing domain. These technologies may serve to increase the operational efficiency, accuracy, and transparency of the audit process. AI and big data enable faster and almost comprehensive data analysis, while blockchain via validation can ensure the reliability and integrity of the audited data. But with adoption come considerable hurdles: a lack of tech-savvy auditors, data security and privacy concerns, and potential shifts in auditors ' roles affecting audit quality could all be threats posed by these technologies (Afda et al., 2024).

Verifying the blockchain technology (BT) in auditing becomes of great interest given its features of decentralization, tamper resistance, and traceability, as mentioned by Rose et al. (2023). Through consensus mechanisms and smart contracts, BT relies extensively on increasing audit data integrity and traceability for the quick identification of insights leading to audit problems, thus improving audit quality and efficiency. The current research is gradually providing an understanding of how the benefits of remote auditing and digitalization factors affect audit quality, particularly in terms of the different operational environments that large versus small firms would face. The integration of digital tools introduces a web of challenges, including disparities in technological infrastructure, organizational resistance, and varying levels of digital maturity across firms. Furthermore, the relationship between the readiness to adopt technology, auditing competency, and adapting to digital workflow processes is very poorly understood, consequently leaving critical gaps in analysing how all these influence audit outcomes regarding consistency or reliability. Furthermore, the rapidness of digitalization brings into focus wider concerns, ranging from the possible compromises to auditor independence, objectivity, and ethical standards to the danger of technorationalism at the expense of professional judgment. Different regulatory environments, different cultural contexts, and conflicting stakeholder expectations across jurisdictions only serve to serve as inhibitory amplifying feedback to the process of accelerating the harmonization of digital auditing practices. Another factor affecting the harmonization of digital auditing practices is the absence of an all-embracing framework that could consider interrelated issues, thus truncating the evolution of contextual best practices, regulations, and training models that would otherwise allow audit firms to adhere to greater-quality insurance standards in a rapidly digitalized and globally connected environment.

It is essential to determine the influence of remote auditing on audit quality due to various considerations.

- Practical Relevance: Since an increasing number of firms are adopting digital tools and remote work policies, auditing practices are being subjected to major changes. This research explores how the changes affect the prime objective of auditing.
- Technological Effect on Auditing: The research emphasizes the interaction of auditing with information technologies, giving useful insights as to how technological applications influence the audit process and outcome.
- Regulatory and Professional Standards: Regulatory authorities, including the PCAOB, IAASB, and national audit regulators, are currently reviewing standards and guidelines regarding audits performed remotely.
- Stakeholder Confidence: High-quality audits are essential for making considered decisions by investors, regulators, and clients. Whether or not remote auditing contributes to or undermines audit quality is a consideration that enables stakeholders to determine the reliability of financial information.

The primary objective is to comprehensively

evaluate the impact of remote auditing and digitalization on audit quality, with a focus on finding factors that influence their effective implementation and suggesting optimization solutions for their use across audit firms with different sizes and technological readiness levels.

The main objective can be achieved through the following sub-objectives

- To study the role of digitalization tools in enhancing audit efficiency and effectiveness, including their impact on error detection, fraud prevention, and decision-making processes.
- To identify moderating factors of technology readiness, auditor competencies, and organizational culture associated with remote auditing practices and audit quality outcomes.
- To explore different technology, regulatory, and behavioural challenges that hinder the adoption of remote auditing practices.
- To assess opportunities for improving audit risks with the application of digital tools alongside building stakeholder trust & compliance with evolving dynamic audit standards.

Suggest actionable recommendations for audit firms, regulators, and policymakers on setting up a compatible use of remote auditing and digitalization within audit practice to ensure future sustainability of high audit quality in an increasingly digitalized environment.

2. BACKGROUND

Traditionally, audit practice has included the following: on-site visits, face-to-face interviews, and physical inspections of documents. The input from information technology has certainly initiated an era of new audit practice methodology (Appelbaum et al., 2017). The major driving factor in this evolution – from that of the auditor – very simply pointed to the efficiency of an audit engagement to which implementations or review audit – some knowledge into the process applied – would be the transition within organizations' record-keeping from physical to computerized means.

Remote auditing – a term describing the audit procedures being carried out elsewhere other than on the client's premises – has experienced a great deal of acceptance in recent times. Audit assignments are conducted with the use of various digital tools and techniques, including data analytics, artificial intelligence, and cloud-based collaborative platforms. Issa et al. (2016). The phenomenon of remote auditing was a widely accepted practice that was set to win formal acceptance thereafter, especially after the COVID-19 pandemic, which restricted all kinds of travel, leaving in-person audits quite an impossible task (Eulerich et al., 2023).

The employment of digitalization tools has been transformed over the years in the auditing process, as it depicts great improvements in technology and apparent changes in the business environment. This background will examine the evolution of remote auditing and its historical origins, focusing on advanced technologies: data analytics, artificial intelligence (AI), blockchain, and cloud computing platforms. Evolution in auditing must have begun in the early twentieth century, influencing the transition from the traditional method of operating from heavy manual practice to time-honoured documentation of auditing. As business enterprises continued to grow more complex, the need arose for audits that were both systematic and efficient. The following important developments mark key milestones in this evolution.

With the advent of computers in the 1960s, data processing capabilities were greatly revolutionized. By the 1980s, the use of statistical sampling techniques and basic data analytical tools to promote auditors' productivity became commonplace. This revolutionary development since the late 1990s enabled auditors to analyse data faster and in greater volumes, thereby allowing them to enhance their risk assessment and anomaly detection procedures. Thus, auditors have moved away from sampling methods and have given themselves the opportunity to conduct more thorough investigation nights into the financial records and operational performances of the entities being audited. The rise of AI and machine learning during the 21st century presents an extraordinary transformation for auditing; in a way, such technologies automate simple tasks and thus increase efficiency through pattern recognition and predictive capabilities in risk evaluation. Studies reveal that the application of AI in auditing can assist in trend and anomaly detection for historical data, which human auditors might otherwise miss, enhancing the accuracy of audit work and the reliability of audit opinion (Zhang et al., 2023). Finally, the process of continuous auditing is building on the foundations of AI, where the transaction is monitored in real-time through AI-based tools. Blockchain technology is described as a potential disruptor of the audit profession. The advent of the technology is still in its infancy, but the decentralization and ledger system that blockchain portrays could significantly enhance the verification process of transactions and, in turn, make financial

records more reliable. In addition, the transparent and immutable nature of transaction records could, in a great way, minimize fraud risk and build greater trust amongst stakeholders (Wang et al., 2023). As industries increasingly dabble in the applications of blockchain, the auditors are slowly changing their approaches to incorporate this newfound technology in their practice.

With COVID-19 serving as the stimulus, the fast tracking of remote working has effectively further encouraged the uptake of cloud-based audit platforms. These platforms allow for real-time collaboration and secure data sharing between audit teams and clients, thus optimizing workflow management. This allows an auditor to access critical information from virtually anywhere, hence improving flexibility and responsiveness (Smith et al., 2022). The cloud technology integration also allows for secure management of data, ensuring that the sensitive information is protected during auditing processes.

Today, remote auditing utilizes modern technology for efficiency and effectiveness. While requiring technical skills in data analytics, AI, blockchain, and cloud, auditors conduct their audits completely online while maintaining high standards of quality. **Some examples are**

- Continuous Auditing: Real-time monitoring of transactions through AI algorithms.
- Visualization of Data-Using advanced analytics tools for displaying complicated data in an easily digestible form to stakeholders.
- Collaborative Platform-Cloud-based solutions for seamless communication between audit teams and clients.
- Blockchain Verification-A technology that uses blockchain for the secure verification of transactions.

The influence of remote auditing and digitization tools on the quality of audits has become the intention of research and debate. Several studies observe that remote auditing can render the process more effective and efficient by cutting down travel time, permitting more access to data, and facilitating clearer communication between audit teams. However, an argument has also emerged on potential limitations posed by distance: for instance, not being able to perform physical inspections as well as missing out on non-verbal cues during client interaction. (Rose et al., 2023)

Changes in auditing practices have also been taken with regulatory bodies. The International Auditing and Assurance Standards Board (IAASB) has issued guidelines on the use of technology in auditing whereby there has to be professional scepticism as well as compliance with fundamental audit principles no matter what the tool has been associated with. Likewise, national regulatory bodies have been updating their frameworks to adapt to the changing face of auditing due to remote auditing and digitalization.

3. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

3.1. Theoretical Perspectives regarding the Relationship between Remote Audit, Digital Tools, and Audit Quality

As auditing plays an important role within the corporate governance context, it has been largely viewed through a theoretical analysis point of view to examine its role towards information asymmetries and accountability. The merger of remote auditing and digital tools brings a new perspective into traditional theories, which both support and dispute the impact of technology on audit quality.

Agency Theory, established by Jensen and Meckling (1976), serves as a basic perspective into auditing. This independence is made to prevent the information asymmetry between the two parties' shareholders, who own the firm, and management, which is the agent of the owners. Remote auditing, with those digital tools, is aligned with agency theory; through digital tools, it is now possible to enhance the monitoring facilities, allowing auditors to carry out their verification of transactions and highlight those detected variations in operations at the same time (Al Shbail et al., 2024). Hence, it can be said to support the core argument of the theory: that independent oversight reduces the risk of misaligned incentives. On the other hand, there's access to massive pools of data. This enables auditors to collaboratively provide broader conclusions that further mitigate asymmetries of information. Yet, absence from the premises may be offensive in the sense that it undermines the perception of the whole process.

Furthermore, the Technology Acceptance Model (Davis, 1989) deals with how auditors and audit offices adopt digital tools. TAM has shown the perceived usefulness and ease of use as the two critical determinants for the acceptance of a particular technology by users. Auditors assuming digital tools to enhance their efficiency and effectiveness (Afda et al., 2024) are more open to remote auditing practice. On the contrary, TAM also has disadvantages; for instance, if auditors perceive remote auditing as difficult to use or time-

consuming, the success of the adoption would not happen. This theoretical view supports the premise that for technology to improve audit quality, it must not only add value but also be easy to use and seamlessly integrated into the audit workflow. Yet, this model didn't counter broader issues like organizational resistance and regulated restrictions. Therefore, it limits any generalizing of the explanatory power in that space. The Resource-Based View developed by Barney (1991) emphasizes that resources and capabilities unique to a firm are crucial for competitive advantage. In the case of audit firms, digitalization tools and infrastructure that can enhance an audit's quality become a strategic asset. Human capital, the skills and flexibility of auditors in using such tools, forms a resource that can be equally important (Li et al., 2023). The RBV also serves to illustrate inequalities between firms. Large firms with high technology investments may produce audit differences that small firms cannot, which is in accordance with RBV's idea that firms that do not have the needed resources will not compete effectively. The RBV, however, doesn't account for external challenges such as regulatory mandates and market interactions that can also change the game on remote auditing.

Contingency theory/institutional theory (Otley 1980) supports the notion that one-big-solution-fits-all approaches will ultimately not succeed. The theory argues that the procedures of auditing work well or poorly depending on how well the auditing approach fits into the situation. This theory applies well to remote auditing since the success of remote auditing is conditional upon many variables, such as firm culture, size of firm, and technological capabilities, all affect how far remote auditing is put into practice. Industries with good technological infrastructure would benefit from remote auditing more as compared to those functioning less in a technologically developed environment (Minarhadi et al., 2023). But this further complicates the way we assess technology's effect on audit quality, since it would be hard to come up with geocentric conclusions that hold in all scenarios.

Within which the success dimensions of auditing, according to the DeLone and McLean (1992, 2003) **Information Systems Success Model, operate, include**

- System Quality: Reliable and functional digital tools increase the reliability of audit processes and therefore reduce errors and inefficiencies from manual audit execution.
- Information Quality: More accurate and timely data collection through digital tools provides better stronger evidence for auditing.
- Service Quality: Good IT support enables seamless implementation and smooth running of remote auditing systems.

The model demonstrates how technology positively affects the quality of the audit. However, it also alerts to threats. Poor reliability of the system or data can severely downgrade audit quality, further implying that these tools require appropriate maintenance or validation before acceptance.

Sweller's (1988) Cognitive Load Theory investigates the external influences of technology on auditors' mental processes. For instance, auditors are in charge of going through the entire process at a distance while making use of several digital tools involved in the auditing process. This will make their cognitive load heavier and lead to the deterioration of their judgment and decision-making in action. So, with this new paradigm of work, the complexity of tasks in a digital environment can require further cognitive resources and thus affect the maintenance of high-quality audits. That is, Cognitive Load Theory questions the assumption that much technology must improve outcomes. Indeed, while using digital tools may enhance efficiency, their improper design or excessive complexity may nullify all benefits.

3.2. Empirical Literature Review

Digital transformation has recently revolutionized the auditing process, significantly changed both external and internal auditing infrastructures, and fast-tracked the acceptance of remote auditing. Different studies argue that remote audits can improve audit quality due to the further efficiency increase, data accessibility, and technological integration in the audit work (Alma'aitah et al., 2024; Al Shbail et al., 2024). In contrast, some of the researchers argue about its adverse effects, such as less access to physical evidence and a lower auditor-client interaction (Appelbaum et al., 2020; Albitar et al., 2021). In addition, the impact of remote audits on audit quality is found to be statistically non-significant by several researchers, suggesting that how an audit is delivered has no effect on its results (Saputro & Mappanyukki, 2022; Castka et al., 2021). Thus, the evident inconsistencies in the literature reflect the importance of understanding the contexts for which remote auditing will facilitate or impair audit quality. Few studies have methodically explored the moderating role of digital tools in this regard – also a major gap addressed in this study.

3.2.1. The Relationship between Remote Audit and the Quality of Audit

The traditional auditing practices have been

transformed to a new context due to the rapid technology advancement, leading to the emergence of remote auditing as a viable and efficient alternative to on-site audits. Remote auditing enables auditors to perform their duties using digital tools and virtual communication, offering potential benefits such as enhanced efficiency, increased accessibility to data, and improved oversight capabilities. Proponents argue that remote auditing can positively influence audit quality by enabling auditors to utilize advanced technologies and digital frameworks to identify and address risks more effectively. Moreover, as organizations increasingly adopt digital solutions, remote auditing aligns with modern business environments, potentially reshaping the standards of audit quality. However, understanding the specific mechanisms and conditions under which remote auditing improves audit outcomes remains a key area of investigation.

Al Shbail et al. (2024) analyze how non-Big 4 audit firms realize improved audit quality through remote auditing and auditor competencies. Throughout collecting data using a questionnaire targeted at auditors from non-Big 4 Jordanian firms, qualitative analysis of responses was performed to assess the variables in question. The findings reveal that remote auditing enhances audit quality, especially when auditors have adequate technical expertise combined with sound communication and professional scepticism. It affirms investment in capability development for non-Big 4 auditors since such competencies are the backbone to exploitation for remote auditing. Setiyawan (2014) analysed the influence of remote auditing on internal audit quality in the post-pandemic era, considered auditor competence and time budget pressure as possible moderating factors. By surveying 76 internal auditors from East Java, Indonesia, data were collected through a Likert scale questionnaire, which were subsequently analyzed using SmartPLS and Structural Equation Modelling (SEM). Results show the remote auditing and internal audit quality are positively correlated but not moderated by either auditor competence or time budget pressure. Thus, the study suggests that remote auditing probably does maintain an overriding positive influence on internal audit quality irrespective of certain contextual pressures, representing a progressive and optimistic shift towards remote audit practices within the internal audit function. Rachmad et al. (2023) conducted research on the combined roles of remote auditing with computer-assisted audit techniques and professional doubt in influencing audit quality in public accounting firms. Questionnaires were sent to 100 external auditors in DKI Jakarta, and the data were analysed using IBM SPSS 26. The findings revealed that "remote auditing" positively affects the quality of audit, and further improvements can be seen with the integration of computer-assisted audit techniques (CAATs) and professional doubt. It shows that improvement can be achieved through a combination of new technology tools with professional judgment in audit outcomes. Hence, it has better results by integrating digital techniques with auditor competencies for maximizing quality audits in a remote environment. The flexibility gained through remote auditing has a positive influence on job satisfaction and work-life balance for auditors, which indirectly contributes to the quality of audit work. As per Lorentzon et al. (2024), the possibility of working from outside the office lessens employee burnout, which is particularly noticeable in auditors, keeping them more productive and attentive to detail with respect to the audit. The study would argue that this, in effect, allows remote auditing to create a more favourable work environment and, hence, should keep the benefits of high audit quality.

On the other hand, an emerging body of research indicates that remote auditing might be detrimental to important aspects of audit quality. The absence of a physical presence may restrict the ability of the auditor to observe, in person, the operation of controls, execute tests as of a date, and meet in person with audit team members with whom the auditor would normally meet in person at the audit's milestone meetings. In addition, technological constraints, cybersecurity threats, and lack of access to certain sensitive documents could also challenge the overall effectiveness of the audit. Some studies revealed a negative effect of remote auditing on the quality of the audit by focusing on the potential limitations of evidence collection by auditors in digital audit environments. By highlighting challenges and limitations related to the remote audit process, this study adds new insights to the current discussion about the quality of the audit when auditors are practicing remotely more. It is the critics' opinion that audit evidence that is not collected directly and on-site can suffer, raising difficulties for auditors in assessing complex or high-risk situations. Moreover, the lack of an actual setting can inhibit communication flow between the auditor and the client, delaying necessary discussions concerning the task at hand and possibly impinging on the quality of audit procedures. Thus, these issues require motivated consideration as to whether remote auditing may at all preserve the quality of accuracy,

independence, and professional scepticism associated with traditional audits. As firms increasingly adapt to conducting practices remotely, such an approach in addressing these concerns is vital to preserving the integrity of audits.

Hsieh et al. (2024) focus on audit quality issues caused by remote work arrangements with an analysis of technology competency as a potential moderator. The study uses a rich dataset across U.S. public companies, observing firm-year spans from 2017 to 2020, to evaluate the technology competencies of clients and the effect those competencies had on audit outcomes using the Dechow (1995) and the Kothari (2005) models. The results show that where technology competency is considered high, it can alleviate the adverse effect remote auditing has on audit quality, especially with clients being Big 4 firms and for those with less contact or presence. This paper thus addresses the issue of ready technological capability and its leverage to sustain the high standards of auditing under remote working. One of the big concerns in remote auditing is an even more intense scrutiny of the authenticity and reliability of audit evidence. Appelbaum et al. (2020) argue that in the absence of auditors obtaining the availability of original documents exercised by auditors, the quality of the evidence might become questionable during a remote audit due to the increased risk of working with less secure digital copies. The International Auditing and Assurance Standards Board (IAASB) further states that such limitations can seriously impact audit integrity and pose a threat to the professional judgment of auditors in relation to significant accounts.

Effective communication between auditors and clients is the key to ensuring quality audits. According to Albitar et al. (2021), the disruption of the flow of communication with companies, especially those unfamiliar with virtual collaboration, caused delays and reductions in the efficiency of audit procedures: whatever distance the work-from-home realized, the norm of always-having-their-heads-in-face-with-other-individuals caused people to have even deeper conversations regarding the conduct of the audit. Furthermore, the lack of interaction makes timely discussions on important audit matters difficult for auditors.

There has been debate on whether remote auditing really enhances audit quality. Some literature proposes its advantages, while others focus on its disadvantages, yet much of the new evidence suggests remote auditing may not be a game changer for audit quality. If anything, these observations raise questions about the assumption that advancements in technology automatically lead to better audit outcomes by imparting significance to the difference between perceived and actual quality: remote auditing, quite frequently, constitutes the performance of a highly structured compliance check, using rather established methodologies, and is likely to generate similar results without consideration of the auditing medium. In view of this, the area of investigation of remote auditing and audit quality would need to be explored further to separate the subtle factors that contribute to or hinder its performance across various audit situations. Quick et al. (2023) conduct an archival literature review on the outcomes of auditor-provided non-audit services (NAS) on audit quality and cover 124 publications across 44 journals, dating from 1985 to 2022. The structured literature review examined the methodologies and findings of prior studies and opined that NAS may affect perception of audit quality, but there is hardly any evidence of direct detrimental effect on factual audit quality. The review also stresses a very fine line between perceived and factual audit quality and the myriad factors affecting auditor independence and quality standards.

The authors propose regulatory consideration to justify the distinctions as audit practice requirements against ethical concerns surrounding NAS. Studies show that remote auditing supposedly requires the auditor to maintain professional doubt yet does not enhance audit quality. Professional doubt was constant both in a remote audit and in a conventional audit (Saputro and Mappanyukki 2022), meaning that the use of digital tools doesn't automatically improve the detection of inconsistencies in financial reporting. According to Castka et al. (2021), the outcomes of compliance reporting showed no significant difference when audits were conducted virtually during the pandemic. This effect was nil, as compliance checks are sophisticated by their inherent nature and remain unchanged regardless of the audit medium. There were also no marked improvements in stakeholder trust for remote or traditional audits – this means adoption of remote audit technologies was not going to improve perceptions of auditors' quality.

To adequately address the regulatory concerns citizens, have about such distinctions, the authors suggest that they address in their regulations the balance between practical audit efforts and ethical concerns on NAS. That even though remote audits require the auditor to maintain professional scepticism, studies show it does not necessarily fuel

audit quality. Saputro and Mappanyukki (2022) say that professional scepticism is constant in both remote audits and conventional audits, which means that the challenge from digital tools does not automatically mean detecting inconsistencies in the financial reporting. Castka et al. (2021) reported that remote audits did not have a significant effect on the results of compliance reporting during the pandemic. That insignificant effect was said to have resulted from the systematic nature of compliance checks whereby the audit medium did not alter the compliance check process. More importantly, there were no differences found in improvements between stakeholder trust for remote and traditional audits, indicating that the adoption of remote audit technologies would not inherently improve the public perception of audit quality. **The following hypothesis can be formulated as follows**

H1: Conducting audits remotely has positive effect implications for audit quality.

3.2.2. Moderating Role of Digital Tools on the Relationship between Remote Audit and the Quality of Audit

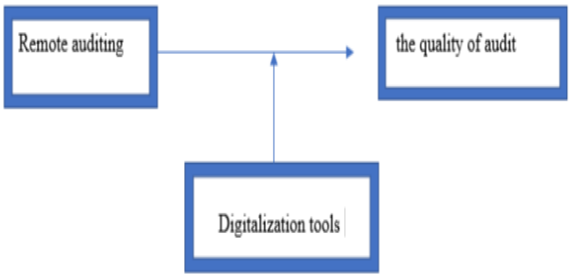

Figure 1: Moderating Role of Digitalization between Remote audit and audit Quality.

The digital transformation of auditing processes has expedited the movement away from traditional on-site audits to remote practice. Remote auditing is defined as the use of digital platforms, virtual communications, and cloud-based systems to carry out some or all audit tasks, without an auditor's physical presence at the client site. Although remote auditing provides operational flexibility and efficiency, it remains a topic of debate regarding its effects on audit quality.

Some authors in the literature indicate that remote auditing positively correlates with audit quality, especially if audits are being carried out on structured digital frameworks. Alma'aitah et al. (2024) attempt to examine how remote auditing could impact audit quality, particularly looking at technology readiness as a moderator in that relationship. The researcher captured data from 360 audit professionals in Jordan, collecting a final set of valid responses totalling 208 for analysis using SmartPLS and structural equation modelling techniques thereafter through adoption of a structured questionnaire survey approach. According to findings, there is a direct positive effect of remote auditing on audit quality because of the high technology readiness of the clients. In contrast, the technology readiness of the audit firm did not have a significant impact on this relationship. These findings indicate the importance of technology on the client side, implying that firms should rather invest more in technology that faces the client to achieve maximum benefit from remote audit settings.

Alma'aitah et al. (2024) demonstrated that remote auditing improves audit quality, particularly when client organizations have high technological readiness. This indicates that clients' technological maturity plays a crucial role in ensuring smooth data sharing, on-time responses, and open communication that could lead to better audit processes. Similarly, Rachmad et al. (2023) argued that computer-assisted audit techniques (CAATs), in conjunction with remote auditing, enhance audit quality by allowing better data analysis and better risk detection.

Importantly, the role of digital tools as moderators in this relationship has been illuminated by recent empirical studies. In their investigation of U.S. public companies, Hsieh et al. (2024) found that advanced technology competency—especially among clients—can mitigate the deteriorating impact of remote auditing on audit quality. This implies that the successful application of remote audit practices arises not solely from the geographical location of the auditors but also from the digital infrastructures and collaborative platforms available for the purposes of information verification. Hence, secure cloud-based audit software, real-time data analytics, and encrypted communication platforms are facilitators that reduce information asymmetry and enhance reliable access to evidence. The mere presence of remote auditing is not good by itself, but in association with the robust digitalization strategies, Appelbaum et al. (2020) observed that poor access to original documents and lack of security frameworks in digital forms might have implications for the quality of audit evidence. However, with the lack of tactile inspection and face-to-face interaction, this may hinder professional judgment, especially when it concerns complex or high-risk audits. Meanwhile, the International Auditing and Assurance Standards

Board (IAASB) flags the importance of maintaining audit integrity and documentation standards in digital environments, insisting that technological tools develop and are consistent with professional auditing standards to sustain the quality. The mere presence of remote auditing is not good by itself, but in association with the robust digitalization strategies, Appelbaum et al. (2020) observed that poor access to original documents and lack of security frameworks in digital forms might have implications for the quality of audit evidence. However, with the lack of tactile inspection and face-to-face interaction, this may hinder professional judgment, especially when it concerns complex or high-risk audits. Meanwhile, the International Auditing and Assurance Standards Board (IAASB) flags an importance of maintaining audit integrity and documentation standards in digital environments, insisting that technological tools develop and are consistent with professional auditing standards to sustain the quality.

Digital tools have an influence on auditor behaviour and audit execution as well as serve functions as catalysts of professional scepticism and judgment. For instance, Lorentzon et al. (2024) observe that remote auditing environments with efficacious digital systems mitigate the onset of burnout in auditors and enhance job satisfaction, which indirectly improves their attention and diligence during auditing. Setiyawan (2014) emphasizes the importance of technological support systems in sustaining the quality of audits within the internal audit function, which often deals with time budget pressure and complex work tasks. Digital tools have an influence on auditor behaviour-audit execution as well as serve functions as catalysts of professional scepticism and judgment. For instance, Lorentzon et al. (2024) observe that remote auditing environments with efficacious digital systems mitigate the onset of burnout in auditors and enhance job satisfaction, which indirectly improves their attention and diligence during auditing. Setiyawan (2014) emphasizes the importance of technological support systems in sustaining the quality of audits within the internal audit function, which often deals with time budget pressure and complex work tasks.

While there are encouraging findings, some studies neither support nor deny the effect of remote auditing on audit quality, even with digital tools. Saputro and Mappanyukki (2022) demonstrate this when they say that even though professional scepticism is supported by digital platforms, it does not change the detection of irregularities by auditors compared to traditional settings. Castka et al. (2021) argue that reliance upon the high procedural nature of compliance audits severely limits the potential for any added value that has been created by digitalization, given that the structure and outcome may remain constant, irrespective of the medium.

From this literature, it can be gathered that the quality improvement prospect of remote auditing depends on the effective and uniform deployment of digital tools that will act as conduits for communication and data access. However, these tools also serve as moderators that determine how remote audits are conducted and how effectively auditors can execute their duties. Future studies should delve more into which exact digital platforms, technological competencies, or innovations at the process level are most efficient in closing the gap between traditional and remote audit quality. This will lead to the establishment of models of best practices to ensure audit quality isn't compromised in tandem with a rapidly digitizing audit environment.

Even if there are many studies talking about the effect that distance audit engenders in audit quality, results have not been able to reach generality because of the division and specificity to contexts. Thus, some of the studies have pointed out, for example, that when audit outcomes improved because of digitalization and flexibility, they were reported (e.g., Alma'aitah et al., 2024; Rachmad et al., 2023), while others point out that reliability of evidence and barriers in communication were major issues in the remote setting (Appelbaum et al., 2020; Hsieh et al., 2024). Additionally, the third stream of research reports no significant relationship between remote auditing and audit quality. This shows the structural audit procedures would nullify contextual changes initiated by remote technologies brought out by Saputro and Mappanyukki (2022) and Castka et al. (2021). All these contrasting views claim insignificant literature has been dedicated to exploring the ways by which remote auditing links to audit quality, particularly through the mediating role of digital tools and readiness. Instead, most previous studies discuss auditors' capabilities or client characteristics in isolation, as opposed to considering the whole digital ecosystem important in shaping remote audit practices. Thus, the study addressed the gap introduced by research into the effects presented at different levels in the process about separated features existing at all the auditor-client-factor levels. **The following hypotheses can be formulated as follows**

H2: Do the digitalization tools mediate the

relationship between remote auditing and the quality of the audit?

H2a: Does the intensive use of digital tools in remote auditing enhance the audit quality?

H2b: Do digital tools enhance the audit quality through perceived usefulness, reliability, and ease of use of digital tools?

4. RESEARCH METHODOLOGY

4.1. Research Methodology

This research revolves around the examination of how remote auditing affects audit quality and how this relationship is moderated by digital tools. Digital tools here are not considered direct determinants of audit quality but rather contingent enablers; that is, their presence enhances or weakens the strength of the relationship between the auditing approach (remote) and the audit outcomes (quality). This framework also acknowledges the important contextual variables, such as auditor competencies and client technological readiness, which may operate as moderating variables.

This research adopts a quantitative empirical approach, emphasizing objective reality and regular phenomena. This leads towards the statistical evaluation of how remote auditing supported by digitalization tools affects the quality of auditing practice. Quantitative methods are used so that the results may be replicated and generalized, with structured questionnaire utilized to collect primary data and statistical analysis executed using STATA v16. Cross-sectional design is applied, collecting responses at a single moment in time to evaluate patterns and relationships between latent constructs within the proposed model.

4.2. Population and Sample

The target population is composed of auditors functioning under different environments of auditing – Big Four, international, and local firms, that have adopted automated audit tools in Saudi Arabia. Such a population is targeted because they are familiar with audit tools and arguably have heterogeneous exposure to digital audit processes. There were 204 valid responses collected via a structured online questionnaire. The sampling frame was auditors within Saudi Arabia, recruited intentionally to ascertain that candidates would have a background relevant to remote audit technologies.

The idea of using intentional sampling was decided for the purpose of achieving the inclusion of auditors across firm sizes (Big 4, mid-tier, and local firms) and sectors within Saudi Arabia. It is recognized that intentional sampling can introduce selection bias; however, I minimized this potential bias by making sure his sample framed a broad proposal about auditors, auditors from a variety of geographic regions, and auditor professional roles. Therefore, the sample included participants who represented a balance of the audit profession in Saudi Arabia and thereby adds validity and reliability to the findings.

4.3. Variable Measurements

The following six latent constructs were measured

- Remote Auditing (RA): Extent to which audit procedures use remote technologies and digitalization.
- Audit Quality (AQ): Opinions of the general dependability and quality of audit services.
- Ease of Use (EOU): How user-friendly users think the remote auditing tools are.
- Intensive Use of Tools: (IU) The frequency and extent of the use of digital auditing tools.
- Perceived Usefulness: (USEF) The productivity and perceived efficiency of digital instruments.
- Reliability: (REL) Reliability and consistency of audit results obtained with remote tools.

Each variable was assessed through multiple Likert-type items (1 = Strongly Disagree to 5 = Strongly Agree). Indicators were computed using the equal weights method.

4.4. Data Collection Method

Data were collected through a self-administered structured digital questionnaire. Respondents were assured of their anonymity, confidentiality, and informed consent. The questions were designed to reflect theoretical constructs and were pilot tested for clarity.

4.5. Statistical Analysis

The statistical analysis was conducted using SPSS version 26 and STATA version 16. A mediation effect is present when the independent variable has a significant impact on the mediator, and the mediator, in turn, has a significant effect on the dependent variable.

- Descriptive statistics: to summarize demographic data and construct distributions (means, standard deviations).
- Reliability Analysis: to test internal consistency (Cronbach's alpha, Composite Reliability CR).
- Validity Testing: through Confirmatory Factor Analysis CFA and Average Variance Extracted AVE.
- Correlation Analysis: using Pearson's correlation coefficient to evaluate the

relationship between two numerical variables, determining both the direction and strength of their association.

- Normality Test: using Shapiro-Wilk and Kolmogorov-Smirnov to assess data distribution.
- Structural Equation Modeling for testing direct and mediation relationships, to answer the previously stated hypotheses, which are related to the models with a mediator variable.

5. Empirical Results and Discussion

It encompasses the empirical findings drawn through analysis of the data to be interpreted and discussed in relation to the study's aims and hypotheses.

5.1. Demographic Profile of Respondents

The socio-demographic characteristics of the sample size are as follows

- Qualification Degree: 76.5% held a bachelor's degree; 18.1% had a master.

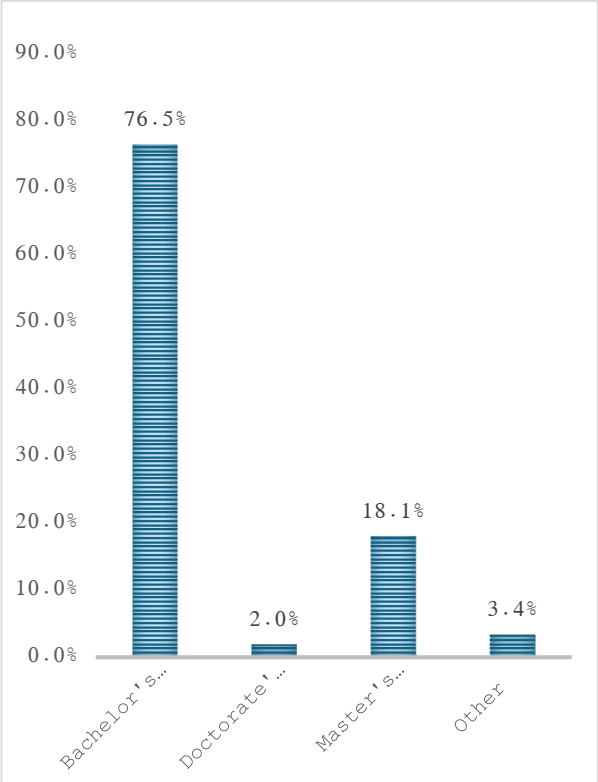

Figure 2: Distribution of Participants according to Qualification Degree.

This figure represents the educational background of the participants; most of them are graduates. The number of postgraduate students shows that many participants are apparently committed to learning and developing higher forms of knowledge and increasing their skills. This level of commitment may take another positive step toward accepting remote auditing and technological advancements.

- Professional Certification: 80.4% certified.

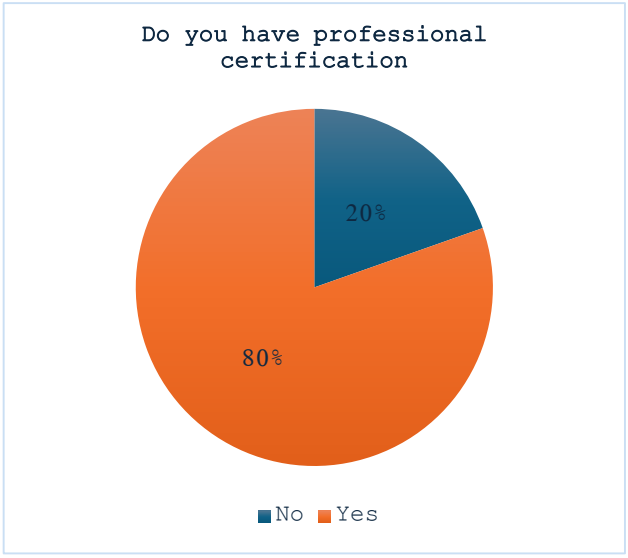

Figure 3: Distribution of Participants according to Professional Certificate.

This figure represents that most auditors in the sample were professionally certified, which is an indicator of their technical competence and familiarity with standards within the audit profession.

- Job Role: 72.1% were the bulk of auditors, while the remainder were 8.8% audit managers and 8.8% accountants.

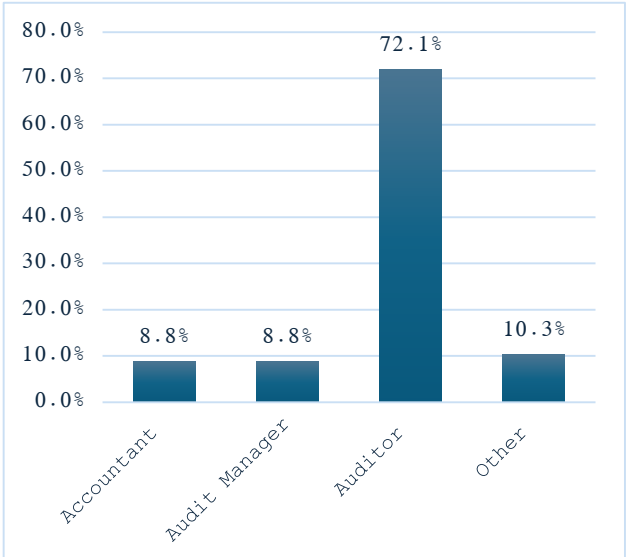

Figure 4: Distribution of Participants according to Current Job.

The chart shows a strong representation of core

audit staff, including a small number of audit managers and audit chartered (support) staff. This distribution is important because core audit staff, while on the front lines of audit execution, will provide a direct indication of how audit quality is being affected by remote auditing and technological interventions, but their perceptions are grounded in the experiences of their work. The responses from audit managers allow some supervisory perspective to be included.

- Experience: 47.1% of the participants had five years or less of experience, while 35.3% had an experience duration between five and ten years.

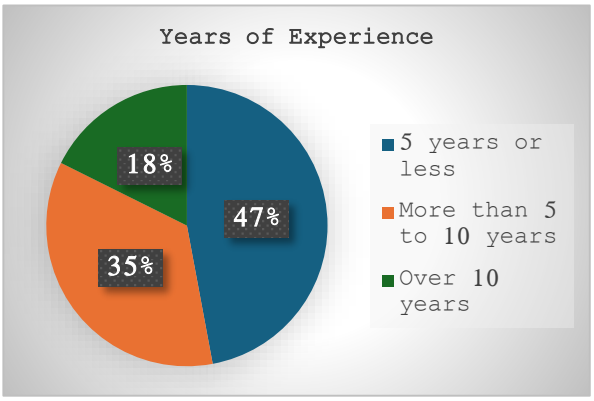

Figure 5: Distribution of Participants according to Years of Experience.

This figure demonstrates a mix of a relatively young but moderately experienced audit workforce. The high volume of early career professionals signifies that, as digital natives, younger auditors are more eager to transition to remote and technology-enabled auditing practices. There is also enough representation of experienced professionals in the sample, which provides the balance between traditional and digital audit processes.

- Firm Type: 30.4% hailed from Big Four firms.

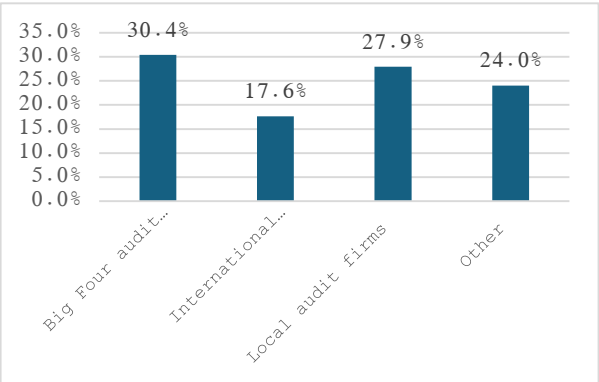

Figure 6: Distribution of Participants according to the Audit Firm.

Additionally, the representation of mixed organizations within the sample provides a heterogeneous sample relative to the use of organizational approaches and organization resource availability. Big Four auditors often have superior access to audit tools and technological infrastructure to support remote auditing. Smaller firms may not have the same access to technology and adequate resources to abide by organizational norms when adapting to a remote audit process. By having a wider variety of auditing experiences during a remote operational phase, the sample draws on a more enriched understanding of observational data.

Overall, the sample presents a professional population that is well-qualified and credentialed and diverse within organizational affiliation and years of experience. The variables of demographic diversity strengthen the generalizability of the findings of the research, especially in relation to how professional context impacts perceived quality and effectiveness of remote audit processes.

5.2. Descriptive Statistics of Constructs

The descriptive analysis is comprised of the following: minimum, maximum, mean, and standard deviation. The average of all variables is around 3, which means that respondents tend to neutrally agree to the statements that measure these variables. The variable with the highest agreement is usefulness, while the variable with the least agreement is remote auditing.

Table 1: Descriptive Statistics for Research Constructs (n=204).

	N	Minimum	Maximum	Mean	Std. Deviation
Remote Auditing	204	1.00	5.00	3.11	0.68
Audit Quality	204	1.24	5.00	3.17	0.72
intensive use	204	1.57	5.00	3.21	0.71
Perceived Usefulness	204	1.00	5.00	3.25	0.90
Reliability	204	1.00	5.00	3.23	0.88
Ease of Use	204	1.00	5.00	3.19	0.82

Remote Auditing (Mean = 3.11, SD = 0.68): This construct yielded the lowest mean among all constructs, suggesting mild agreement with the statements related to remote auditing. Auditors appear to accept the concept but may still have some concerns relating to its implementation, communication barriers in their deployment, or efficiency in their audit practice.

Audit Quality (Mean = 3.17, SD = 0.72): Auditors

reported moderate agreement with the statement that quality continued to be maintained, or was simply satisfactory, under the current situation. This implies that while new challenges may be being introduced about audit quality through remote auditing, auditors' perceptions of audit quality are relatively constant and not strongly affirmed.

Intensive Use of Technology/CAATs (Mean = 3.21, SD = 0.71): This indicates a moderate to high adherence to the use of computer-assisted audit techniques (CAATs). In this instance, auditors are using technology in a more intensive way, which reflect the global push toward digital transformation in audits.

Perceived Usefulness (Mean = 3.25, SD = 0.90): This was the highest mean among the constructs, indicating that respondents most strongly agreed with the usefulness of the tools or techniques that may have been introduced in remote auditing environments. The higher standard deviation also reflects a higher variation of opinion on this construct, either due to firm size, level of technological readiness, or both.

Dependability (Mean = 3.23, SD = 0.88): Auditor perspectives on technology reliability were generally positive, indicating that auditors generally agreed that they find the technology reliable. However, the moderate degree of variability suggests that the reliability of the technology may depend on the quality of the infrastructure or individual differences in experience.

Perceived Ease of Use (Mean = 3.19, SD = 0.82): The data related to perceived ease of use indicated positive responses overall, suggesting that most auditors perceive the computer-assisted audit techniques (CAATs) and remote systems as usable. Furthermore, the results support that the ease of use may be perceived as a construct that varies among auditors.

5.3. Reliability and Validity Test

The measurement model was evaluated based on three characteristics of construct validity: internal consistency reliability, convergent validity, and discriminant validity. These evaluations indicate that the constructs used in the study are meaningful (conceptually) and statistically viable.

Table 2: Reliability and Validity of the Questionnaire in Each Category by Using Cronbach's Alpha Coefficient.

	Cronbach's alpha	Composite reliability (rho_a)	Average variance extracted (AVE)
Audit Quality	0.936	0.938	0.497
Ease of use	0.781	0.780	0.697
Intensive use	0.843	0.847	0.517
Perceived Usef.	0.733	0.734	0.789
Reliability	0.732	0.754	0.787
Remote Auditing	0.920	0.923	0.742

Internal Consistency Reliability refers to how related items in a construct are. We use Cronbach's Alpha, where values above 0.70 typically resolve to acceptable reliability. Audit quality recorded the highest reliability (a=0.936), indicating a strong level of consistency in the items measuring perceived audit effectiveness. Remote auditing also had a good measure of internal consistency (a=0.920), confirming the reliability of the construct, despite the construct having a lower mean score. All other constructs ease of use, intensive use, perceived usefulness and reliability also showed good measures of internal consistency between 0.732 and 0.843. Overall, the findings indicate that the questionnaire items provided a reliable measure of each construct.

Convergent validity assesses whether multiple items that intend to measure the same concept measure that concept**. It is evaluated using:**

Composite Reliability (CR)-mitigating acceptable values are > 0.60

Average Variance Extracted (AVE)-mitigating acceptable value is > 0.50.

All constructs achieved the CR threshold, indicating consistent shared variance among items. Furthermore, all constructs met or exceeded our AVE threshold except for Audit Quality, which reported a slightly below cut-off AVE value of (.497). Accordingly, with values being below the cut-off value, this is considered close enough to be acceptable in exploratory situations, particularly as we had good CR and Alpha values supporting construct reliability.

Discriminant Validity (Fornell-Larcker Criterion) tests whether a construct is sufficiently different from other constructs. The Fornell-Larcker criterion states that the square root of the AVE must be greater than the inter-construct correlations for the rows and columns.

The diagonal values are all greater than the off-

diagonal correlation values in their respective rows and columns. Remote auditing has a square root of AVE = 0.664, which is greater than the correlations with other constructs (i.e., 0.670 with reliability, 0.664 with perceived usefulness).

Likewise, Ease of Use has a diagonal value of 0.835, again greater than correlations with all other constructs. Thus, this confirms all constructs are sufficiently different from each other, and there is evidence for discriminant validity. Overall, the reliability and validity assessments verified the quality of the measurement model: All constructs satisfied the internal consistency cutoffs (α > 0.70). Composite reliability and AVE values confirmed the construct reliability and convergent validity. The Fornell-Larcker test demonstrated discriminant validity, confirming that the constructs were measured separately.

Table 3: Fornell-Larcker Criteria.

	Audit Quality	Ease of use	Intensive use	Perceived Usef.	Reliability	Remote Auditing
Audit Quality	0.705					
Ease of use	0.708	0.835				
Intensive use	0.832	0.685	0.719			
Perceived Usef.	0.690	0.656	0.715	0.888		
Reliability	0.748	0.681	0.727	0.666	0.887	
Remote Auditing	0.822	0.685	0.792	0.664	0.670	0.664

5.4. Normality Test

The results presented in the following table indicate that all study variables deviate from normality, as their significance values were below 0.05. Nonetheless, with a valid sample size of 204 responses, the use of parametric tests remains appropriate. All the variables shown in the table (4) below are significant at less than .05 with both tests, which suggests that normality is violated in the data distributions. The Shapiro-Wilk test is the more appropriate test for non-normal data since it is better when the samples are smaller (n < 2000). It indicates all the variables are non-normally distributed.

Table 4: Normality Tests.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
RA	.065	204	.035	.986	204	.042
AQ	.127	204	.000	.976	204	.001
Intensive use	.090	204	.000	.982	204	.009
USEF	.168	204	.000	.944	204	.000
REL	.147	204	.000	.953	204	.000
EOU	.106	204	.000	.970	204	.000

5.5. Correlation Test

Significant positive correlations of remote auditing with all other variables with the p-value less than the 0.05 significance level were found by Pearson's correlational analysis:

Table 5: Matrix of Pearson Correlation Coefficients.

	Audit Quality	Ease of use	Intensive use	Perceived Usef.	Reliability	Remote Auditing
Audit Quality	1					
Ease of use	0.708**	1				
Intensive use	0.832**	0.685**	1			
Perceived Usef.	0.690**	0.656**	0.715**	1		
Reliability	0.748**	0.681**	0.727**	0.666**	1	
Remote Auditing	0.822**	0.685**	0.792**	0.664**	0.670**	1
** Correlation is significant at the 0.01 level (2-tailed).						

Remote Auditing and Audit Quality (r = 0.822): This is the largest positive correlation from the matrix. It shows that auditors who are more positive about remote auditing also tend to provide higher ratings of audit quality. This confirms the objective stated that if independent auditors have the facilitative conditions in place, such as technology readiness and auditing expertise, remote auditing can lead to successful audits.

Remote Auditing and Intensive Use of

Technology (r = 0.792): This strong association between the intensive use of computer-assisted audit techniques (CAATs) and the substantial use of digital tools is related to successful remote auditing. This suggests that integration is a key factor in supporting various aspects of remote auditing and highlights the proposition that new ways or methods of auditing also include aspects of technology.

Remote Auditing and Ease of Use (r = 0.685): A moderately strong correlation suggests that remote audits are easier to implement when audit tools and platforms are easy to navigate, leading to a greater likelihood of utility and benefit from a remote audit.

Remote Auditing and Perceived Usefulness (r = 0.664): This correlation also supports the argument that the usefulness of the technology matters for remote auditing success, but less than ease of use and use of computer-assisted audit techniques (CAATs), which demonstrates the importance of having both perceived usefulness and perceived ease of use capabilities.

Audit Quality and other Constructs (r = 0.690-0.832): Audit quality was statistically significantly positively correlated with all other constructs, in particular Intensive Use of Technology (r = 0.832) and Remote Auditing (r = 0.822). This contributes to the conceptual model that the quality of audits improves with technological attachment and remote operating capacity.

5.6. Structural Equation Modelling and Hypothesis Testing

This section presents the results of hypotheses testing derived from the proposed model.

Direct Effect

- Remote auditing has significant positive impact on audit quality. This means that increasing use of remote auditing will increase the audit quality, and the coefficient is 0.346, at the 95% confidence level.
- Remote auditing has a significant positive impact on ease of use; this means that increasing the use of remote auditing will increase the ease of use and the coefficient = 0.685, at the 95% confidence level.
- Remote auditing has a significant positive impact on intensive use; this means that increasing use of remote auditing will increase the intensive use, and the coefficient is 0.792, at the 95% confidence level.
- Remote auditing has a significant positive impact on perceived usefulness; this means that increasing use of remote auditing will increase the perceived usefulness and the coefficient = 0.664, at the 95% confidence level.
- Remote auditing has a significant positive impact on reliability. This means that increasing use of remote auditing will increase the reliability, and the coefficient is 0.670, at the 95% confidence level.
- Intensive use has a significant positive impact on audit quality. This means that increasing intensive use will increase the audit quality, and the coefficient is 0.334, at the 95% confidence level.
- Reliability has a significant positive impact on audit quality this means that increasing reliability will increase the audit quality, and the coefficient = 0.187, at the 95% confidence level.

Table 6: Path Coefficients and Significances.

	Beta	standard error	T-value	P-values
Ease of use -> Audit Quality	0.090	0.055	1.633	0.102
Intensive use -> Audit Quality	0.334	0.083	4.031	0.000
Perceived Usef. -> Audit Quality	0.038	0.057	0.672	0.501
Reliability -> Audit Quality	0.187	0.055	3.386	0.001
Remote Auditing -> Audit Quality	0.346	0.071	4.838	0.000
Remote Auditing -> Ease of use	0.685	0.036	19.062	0.000
Remote Auditing -> Intensive use	0.792	0.031	25.444	0.000
Remote Auditing -> Perceived Usef.	0.664	0.043	15.425	0.000
Remote Auditing -> Reliability	0.670	0.041	16.334	0.000

Indirect Effect

- Reliability serves as a mediator in the relationship between remote auditing and audit quality. Specifically, the indirect effect of remote auditing audit quality through reliability is estimated at 0.125, and this mediation effect is statistically supported at the 95% confidence level.
- Intensive use serves as a mediator in the relationship between remote auditing and audit quality. Specifically, the indirect effect of remote auditing, audit, quality, and intensive use is estimated at 0.264, and this mediation effect is statistically supported at the 95%

confidence level.

- Perceived usefulness and ease of use do not serve as a mediator in the relationship between remote auditing and audit quality. This is at the 95% confidence level.

In a conclusion, using remote auditing has an direct impact on audit quality, and it has indirect relationship that strengthens the relation through digital tools with a total indirect effect of 0.822.

Table 7: Indirect Effects.

	Beta	standard error	T-value	P-values
Remote Auditing -> Reliability -> Audit Quality	0.125	0.038	3.300	0.001
Remote Auditing -> Perceived Use of. -> Audit Quality	0.025	0.038	0.663	0.507
Remote Auditing -> Intensive use -> Audit Quality	0.264	0.063	4.174	0.000
Remote Auditing -> Ease of use -> Audit Quality	0.062	0.038	1.617	0.106

SEM analysis confirmed the central hypothesis of the study: Remote auditing has a positive and significant effect on audit quality, both directly and through indirect effects. More specifically, the indirect effects are primarily mediated by intensive use and reliability; thus, the framework for ensuring quality in the way that digital tools were integrated and the trust placed in the systems being used are critical for high-quality audits in a remote environment. The total indirect effect (the sum of the total significant mediated paths) was 0.822, so considering both direct and mediated relationships has increased the total impact of remote auditing on audit quality. Furthermore, these results support the view that while the degree of ease of use and perceived usefulness can contribute to system acceptability, additional measures of completed usage intensity and perceived reliability would then be the most potentially sustainable links to better auditing outcomes in the context of remote digital auditing.

The fact that perceived usefulness and perceived ease of use did not significantly mediate the relationship between remote auditing and audit quality creates additional theoretical reflection. In the Technology Acceptance Model (TAM) and its extensions, perceived usefulness and perceived ease of use are the two most important determinants of technology adoption and technology performance (Davis, 1989).

However, the results suggest that in the Saudi Arabian context for auditing, there are variables, such as reliability and extensive use with digital tools, that emerge as better explanatory variables. One possible explanation for this follows the professional culture for auditing in Saudi Arabia, which places a higher value on compliance, accuracy, and system reliability rather than the perceptions of users. This means that auditors would see their use of the digital auditing platforms as compulsory within their professional role(s), rather than at their own discretion. Therefore, in this context, reliability and compulsory use of the software would be more apparent than ease or usefulness.

Another possible explanation relates to digital transformation maturity in the region. In an early stage of technological evolution, users' perceptions of usefulness and ease of use typically matter greatly and contribute to if and how they adapt. As technologies become institutionalized and adopted in workflows, adoption becomes less about user actions and more about organizational need. This could also explain why perceived usefulness and ease of use are not as useful as predictors and reliability and intensity of use become more important. Lastly, cultural dimensions may be moderating too. Previous research suggested that, in cultures with high power distance and compliance-based culture, subjective perceptions are often less prominent than structural or mandated ones (Alalwan et al., 2020). Thus, in these cultures, the pressure and emphasis on reliability and compliance from organizations and regulators may trump attitude, making the perceived ease of use and usefulness subordinate to compliance imperatives. Engagement is not always voluntary, as you can see in this principle of conversational responsibility.

5.7. Goodness of Fit

The overall model fit was assessed using several indices. As shown in the table below, the chi-square value of 72.342 with 16 degrees of freedom is statistically significant at the 0.05 level, indicating that the model does not provide a good fit. However, it is important to note that the chi-square test is highly sensitive to sample size. Despite this, the other fit indices fall within the recommended thresholds, suggesting that the model fits the data adequately. Therefore, the results support an acceptable fit of the proposed model.

Table 8: Goodness of Fit Indices.

Indices	Abbreviation	Recommended Criteria	Results	Good Fit
Chi-Square	χ^2	P-value > 0.05	131.888	✗
Degrees of Freedom (df)			28	
Level of Significance			0.000	
Normed Chi-Square	$\frac{\chi^2}{df}$	$1<\frac{\chi^2}{df}<5$	4.71	✓
Root Mean Square Error of Approximation	RMSEA	< 0.05 Good Fit < 0.08 Acceptable Fit	0.037	✓
Normed Fit Index	NFI	> 0.90	0.972	✓
Relative Fit Index	RFI	> 0.90	0.991	✓
Incremental Fit Index	IFI	> 0.90	0.972	✓
Tucker-Lewis Index	TLI	> 0.90	0.961	✓
Comparative Fit Index	CFI	> 0.90	0.927	✓

Chi-Square (χ^2 = 131.888, p = 0.000): The p-value indicates a difference from perfect fit, but the Chi-Square statistic is sensitive to large samples (n = 204), and the necessary condition to reject good fit models due to a high Chi-Square statistic may follow. Although it is a good idea to attach other indices to the Chi-Squared statistic because of this sensitivity.

Normed Chi-Square (χ^2/df = 4.71): The normed Chi-Square statistic falls within the threshold acceptable limit of $1 < \chi^2/df < 5$, suggesting a good balance between the complexity of the model relative to the data.

RMSEA = 0.037: The RMSEA provides a very good fit, as it is below the 0.05 cut-off. The RMSEA indicates a consideration of parsimony in the model and is less sensitive to sample size than other indices and therefore serves as an appropriate indicator.

Incremental and Comparative Fit Indices (NFI, RFI, IFI, TLI, CFI > 0.90): All incremental fit indices were above the suggested cut-off of 0.90, indicating a very good fit and similar results between the observed data and the hypothesized model. The confirmatory fit indices together support that overall, the model fit is satisfactory. While the Chi-Square statistic is sizeable, as is typically the case with large samples, the strong incremental fit indices (NFI = 0.972, CFI = 0.927, TLI = 0.961) and excellent RMSEA (0.037) values demonstrate that the model has a good overall fit with the data. Hence, the proposed structural model is a logically sound theory that is empirically verified, confirming the nature and plausibility of the relationships outlined in the conceptual framework. This outcome reinforces confidence in the interpretational and analytical findings developed from the SEM analysis and provides a rationale for interpreting and discussing the results.

5.8. Discussion of the Results

This study proposes that remote auditing, with digitization tools, can considerably improve the audit efficiency by cutting further travel time, providing wider access to client data, and enhancing communication among audit teams. These findings correspond with the views of Rose et al. (2023), Li, Goel, and Williams (2023), and Alma'aitah et al. (2024), asserting that remote auditing can positively impact audit quality where organizations have adequate technological readiness and support mechanisms. Each emphasis was similarly on operational advantages of digital tools, such as cost savings, as noted by OECD (2023), or continuity in process. The study results, while situated in the Saudi Arabian context, are of broader international import. Remote auditing was suddenly led to the spotlight with the COVID-19 pandemic, and this was not just limited to Saudi Arabia. Comparable issues have emerged in developed countries such as the U.S. and the EU concerning the reliability of digital platforms, ensuring cybersecurity, and auditors needing to develop new sets of skills in technologically driven environments. The results of this study resonate with these global conditions, which place importance on reliability and intensive tool manipulation over subjective perceptions such as ease of use. There is hence a grave implication for developing countries, including many GCC countries and parts of Asia. These regions mostly face rapid regulatory and technological changes but may find themselves without a standardized framework for digital auditing. This makes the Saudi case a precedent to show how regulatory bodies, professional firms, and

auditors themselves can potentially respond to the issues raised in remote working environments with respect to compliance, efficiency, and audit quality. Moreover, the cultural dimension reveals the different ways in which professional practices are influenced in different contexts. This may allow new avenues for inductive international comparative research into the interactions of culture with digital adoption and audit quality. Finally, the global audit profession, including international organizations such as IFAC and oversight bodies such as PCAOB, may benefit from this research. Consideration of the different drivers of technology acceptance in different regions may help tailor international standards to local contexts and ensure both local acceptability and global comparability of remote audit practices. Yet, some past studies dispute these findings. The PCAOB (2021; 2025) and the Financial Reporting Council (2021) point to risks with remote auditing, especially with the gathering of evidence, diminished professional scepticism, and the limitations of virtual interactions. These concerns recall older warnings that audit quality depends not only on efficiency but also on the auditors' ability to exercise judgment, pick up on anomalies during physical inspections, and interpret non-verbal cues of various kinds. That these older and more recent studies provide disparate results could be caused by context differences. Though technological advances have removed many logistical hurdles, the inability to completely substitute for physical verification in the digital sphere continues to be a concern that regulators have legitimate issues with. Overall, the study's findings suggest that remote auditing, in fact, offers much higher gains in efficiency yet emphasizes the need for balance between blindly embracing digital tools and maintaining fundamental audit principles. The literature has noted that while it is a good thing for audit quality that they are enhanced by technology, they cannot stand alone unless they are merged with thorough professional standards, scepticism, and regulatory compliance (IAASB, 2020; Surya et al., 2020).

6. CONCLUSION

This research aimed to empirically evaluate the extent to which digitalization tools and the use of remote auditing techniques improve audit quality in modern accounting systems. The results, based on an analytical dataset verified statistically, provided compelling evidence that the role of digital technology, most notably automation tools and digital training, increased the overall audit quality and audit efficiency. The key finding from the analysis was that automation tools play an important role in enhancing audit quality through these technologies to increase accuracy, streamlined operations, and reduce human error. Similarly, among accountants, digital literacy was found to be a statistically significant predictor, which illustrates the important role of human capital for effective use of the technologic infrastructure. Moreover, this study found that there are direct and measurable effects of investments in digital learning on overall audit performance. This study shows a strategic dilemma for companies: While technology adoption is important, usability hinges on developing digital skills across the workforce. It is noteworthy to point out that, despite their extensive use, our model showed no statistically significant influence on audit quality from cloud accounting systems. This suggests that, while cloud accounting systems may be the essential foundation for remote auditing, they do not demonstrate unilateral improvements in audit quality without additional instruments and expertise. Overall, our findings strongly affirm a holistic coupling of continuous workforce development with digital auditing tools. In a period of distance assurance, companies that are perceptive enough to invest strategically in digital skills and technology infrastructure should see long-term improvements in audit quality, resilience, and regulatory compliance. The implications of this study have two dimensions; for the practitioners, such studies reaffirm the opportunity of embracing advanced technologies such as data analytics and cloud platforms in the interest of efficiency and effectiveness of audit. For the regulators, such results put forth that upgrading their frameworks be a necessity so that adopting technology would not erode the fundamental principles of audit. Future research can focus on the integration of emerging technologies like artificial intelligence and blockchain into audit practice while preserving trust and confidence from the stakeholders. While this research was conducted in Saudi Arabia, the implications have global reach. The findings indicate that trustworthiness and heavy reliance on technology are key determinants of audit quality in remote situations, which can be used in developed and developing economies. This underscores the need for international auditing standards and practices to consider cultural and contextual factors in how digital tools are used.

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APPENDIX 1: QUESTIONNAIRE:

Section A:
Demographic Information

- Qualification Degree
- Do you have a professional certification
- Current Job
- Year of Experience
- The audit firm you work for

Section B: Impact of Remote Auditing on Audit Quality
Section B:
[H1] Efficiency and Quality in Remote Auditing

1) Remote audits enable auditors to complete tasks more efficiently than traditional audits.
2) Remote auditing improves the accuracy of audit findings.
3) Remote auditing enhances the ability to detect financial irregularities.
4) Auditors can maintain professional scepticism while auditing remotely.
5) Audit quality does not decrease in the absence of face-to-face interactions.
6) Remote auditing supports timely audit reporting.
7) Auditors can easily adapt their methods to remote settings without affecting quality.
8) Remote audits allow for broader access to client data.
9) Remote auditing enables better audit planning and execution.
10) The use of remote platforms supports comprehensive evidence collection.
11) Clients are cooperative during remote audits.
12) Remote auditing provides adequate communication between audit team members.
13) Auditors maintain high standards of judgment in remote audit environments.
14) Audit procedures are equally thorough in remote audits.
15) Remote auditing allows for better time management.
16) Remote audits support effective documentation and file management.
17) Remote audits provide sufficient insight into the internal controls of the client.

[H2] The Role of Digital Tools in Remote Auditing

1) The use of digital tools strengthens the effectiveness of remote audits.
2) Digital tools enable better detection of financial fraud during remote audits.
3) Cloud-based audit platforms improve team collaboration.
4) Data analytics tools help auditors identify anomalies quickly in remote settings.
5) The use of AI in remote audits enhances the quality of audit evidence.
6) Blockchain-based tools increase trust in audit documentation.
7) Digital tools allow real-time data validation in remote audits.
8) The integration of technology helps auditors maintain professional judgment remotely.
9) Digital tools simplify the retrieval and analysis of large data volumes.
10) The reliability of audit outcomes increases when digital tools are used.
11) Digital platforms improve the efficiency of remote audit procedures.
12) Digital tools help reduce human error in remote auditing.
13) Automation in audit procedures increases consistency in audit quality.
14) Remote audits using advanced technology produce results comparable to in-person audits.
15) The use of audit software allows for continuous auditing and monitoring.
16) Encrypted communication tools ensure secure sharing of audit files.
17) Visualization tools enhance understanding of complex financial data.

[H2a] Effects of Intensive Use of Digital Tools in Remote Auditing

1) The intensive use of digital tools leads to better audit outcomes in remote audits.
2) The more frequently auditors use digital platforms, the higher the audit quality.
3) Regular application of data analytics improves the depth of financial evaluations.
4) High-frequency use of cloud platforms increases audit documentation quality.
5) Extensive use of automation reduces inconsistencies in audit procedures.
6) A high level of digital engagement improves auditors' ability to detect audit risks.

7) Continuous reliance on digital tools results in more thorough audit evidence collection.

[H2b] Perceived Usefulness, Reliability, and Ease of Use of Digital Tools

1) The perceived usefulness of digital tools increases their positive impact on audit quality.
2) When digital tools are easy to use, remote audits are more effective.
3) Reliable audit software enhances auditors' confidence in remote audit results.
4) Auditors are more likely to perform better when they trust the technology they use.
5) User-friendly digital platforms improve auditors' focus on audit tasks.
6) The effectiveness of remote audits depends on how auditors perceive tool reliability.
7) Perceived ease of use and utility of digital tools enhances the quality of audit outcomes in remote settings.