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**Digitalizing the Auditing Process in Developing Nations,
taking The Gambia as a case study.**

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DECLARATION ON THE USE OF ARTIFICIAL INTELLIGENCE (AI) TOOLS

The undersigned AWA JOBE, student ID number 904136, enrolled at Ca' Foscari in the Master's Degree Programme in Global Accounting and Finance, author of the final degree thesis Digitalizing the Auditing Process in Developing Nations, taking The Gambia as a Case Study, thesis supervisor Cristina Gianfelici, aware of the penalties provided for in Article 76 of the Consolidated Act set out in Presidential Decree no. 445 of 28 December 2000, and of the loss of benefits provided for in Article 75 of the same Consolidated Act in the event of false or misleading statements, under his/her own responsibility pursuant to Articles 46 and 47 of Presidential Decree no. 445 of 28 December 2000,

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- that she **HAS** used generative artificial intelligence technologies to support various aspects of the research and writing of her final degree thesis, in particular Gemini version 3.5 Flash- Lite released in February 2024.

This tool was used to provide:

- ☐ generation of a chart and diagram for data presentation in chapter three page 75;
- ☐ Searching for related theories and concepts related to technology adoption in developing nations; The information gathered was verified using Google Scholar to reveal the publications of the related theories;
- ☐ Confirm definitions in simple terms of keywords related to her topic.

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that all material generated by AI has been carefully checked, reviewed and reworked by the author, who assumes full responsibility for the quality, accuracy and scientific integrity of the work.

DECLARATION

I confirm that this thesis, entitled Digitalizing the Auditing Process in Developing Nations, taking The Gambia as a case study, is my own work and has not been previously used in any form. All the sources of information used in this study have been duly cited and referenced in accordance with academic standards of Ca' Foscari University.

Signed: 

Name: Awa Jobe

Date: 22/09/2026

DEDICATION

I would like to dedicate this thesis to my Husband, Mr. Baboucarr Njie for being the center of my successful career journey and my children, Ibrahim B. Njie, Ahmed Kareem B. Njie and Aji Haddy B. Njie (my co-author). Special mention to my husband and the love of my life, for encouraging me to pursue my goals, whilst being the sole sponsor and benefactor throughout these years. Thank you for giving me the emotional support I needed whilst I was away from home and from everyone. I would also like to thank my two boys for making it a little easier for mama, leaving them at such a young and tender age of five and three years old. I apologize for the time I was away, and couldn't witness some of your milestones, but I am looking forward to experience more exciting moments together as a family. I acknowledge your strength and resilience and for always giving me the big smiles during our virtual calls, Mama is super proud of you both. And to Aji Haddy, you came into our lives right on time to write this thesis together with Mama, the process wasn't the easiest but your presence gave me so much strength.

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ABSTRACT

This research study on the digitalization of the auditing process in developing nations, taking The Gambia as a case study, seeks to establish how developing nations are embracing technology within their auditing processes. The importance of this research goes beyond identifying the impact of technology in critical sectors of the economy but also serves as a stepping stone to identify factors that are lacking to accommodate new innovations.

The study employed various analytical methods thus the quantitative analysis using Survey questionnaires and the qualitative analysis focusing on the interview sessions with relevant actors within the auditing field in The Gambia.

Integrating digital technological tools into the auditing process has broad implications. Technological tools have enabled auditors to significantly reduce the time and effort required to complete their work. Incorporating digital analytical tools can help to leverage the overall auditing process by cutting down on certain repetitive task that are labor intensive and resource oriented. This enhances efficiency and optimum allocation of resources, which can ultimately be directed to other strategic and value-added activities within the auditing process.

The auditing profession globally is undergoing a significant transformation driven by rapid advancements in digital technologies. This digitalization encompasses the adoption and integration of various tools and techniques, such as data analytics, artificial intelligence (AI), cloud computing, and robotic process automation (RPA), into the traditional audit process. While the benefits of digitalized auditing, including enhanced efficiency, improved accuracy, and better fraud detection capabilities, are widely acknowledged, the adoption and implementation of these technologies vary significantly across different countries and contexts. This thesis focuses on understanding the impact of digitalizing the auditing process and how emerging economies are ready to embrace and adopt new technological innovations.

Digitalization has greatly affected and impacted professions in every way shape or form and the auditing filed is not an exception. Nowadays, the auditing profession like most fields is seen to have been undergoing a significant transformation driven by the global adoption of digital technologies. This change towards digitalizing auditing does not just indicate a trend but a significant shift in how audits are conducted, offering crucial improvements in efficiency, accuracy, and transparency. Several factors have triggered this evolution, highlighting the increasing importance of digital auditing in the modern business arena.

To contextualize the digital status in developing nations focusing on The Gambia, one could say that the level of digital tools being integrated into the system is still at its infant stage. There are still lots of efforts needed to be done in order to have the same impact or level of development that has been contributed with the advancement of these digital technological tools.

The findings of this study reveal a significant paradox, while 96.2% of respondents recognize the perceived benefits of digitalization for enhancing audit quality, actual adoption is hindered by high resistance to change (67.3%) and a medium level of digital literacy. The

research highlights that as a developing nation, The Gambia faces setbacks including infrastructure restrictions and institutional resistance. The study concludes that a successful transition is contingent upon strategic investment in training and addressing the high cost of technology acquisition, such as the D2 million annual licensing fees identified in the field.

The Gambia as a Third World country, faces lots of setbacks, restrictions from almost every sector as well as the reluctance that emerge from people's resistance to change among many others when it comes to the notion of digitalizing the auditing field.

LIST OF ABBREVIATION

SAI- Supreme Audit Institutions

NAO- National Audit Office

GRA- Gambia Revenue Authority

CBG- Central Bank of The Gambia

RPA- Robotic Process Automation

AI- Artificial Intelligence

DOI- Diffusion of Innovation

PEOU- Perceived Ease of Use

PU- Perceived Usefulness

TAM- Technology Acceptance Model

CAAT- Computer-Assisted Audit Techniques

UTAUT- Unified Theory of Acceptance and Use of Technology

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CHAPTER ONE: LITERATURE REVIEW

1.0 Literature Review and Theoretical Framework

1.1 Introduction

Digitalization in simple terms refers to the process of transforming an old method or system into a new modern state through the use of products, people, and processes and using internet of things (IoT) and related information technology McDonald and Scheer (2012, 2015). It is also defined as the transformation of human-dependent and document-dependent processes into computer-controlled systems Matt et al. (2015).

The phrase “digitalizing the auditing process” can have different connotations and meanings depending on the context is it best suited. In the case of this research, we are interested to know how the impact digitalization could have when the auditing process is being transformed from a manual operation to a digitalized process.

This research study focusing on the digitalization of the auditing process in developing nations, taking The Gambia as a case study, started with a series of literature reviews. The study aims to empirically examine the digitalization process of auditing in developing nations, especially in The Gambia and poses the following research question: “How do digital auditing technologies influence the quality of financial oversight and the motives for adoption within the resource-constrained institutional landscape of The Gambia? This research question is further expanded into five sub-questions to give specific details and findings this research study seeks to address.

The study is exploratory and provides insights into the integration of digital auditing tools within the auditing process and how it affects the overall cycle of the typical audit exercise.

The process of the literature review started with identifying the main research question of the study as well as the key words, such as “Digital- audit” OR “Digital auditing tools” OR "Technology-Organization-Environment" OR "TOE framework" OR "Technology Acceptance Model" OR "TAM" OR "Institutional Theory under the framework section and Supreme Audit Institution" OR "SAI" OR "National Audit Office" OR "public sector auditing" OR "government audit under the targeted sectors before searching for words such as Sub-Saharan Africa" OR "West Africa" OR "developing countries" OR "emerging economies" OR "The Gambia to cover the geographic scope.

The process began with an expansive identification phase, utilizing primary academic databases including the Ca’ Foscari University library system (Sistema Bibliotecario di Ateneo), Scopus, Web of Science, ScienceDirect, Google Scholar and Emerald Insight. When choosing the final articles and reports, four main criteria were strictly applied. First, for relevance, the titles and keywords had to focus directly on the integration of digital auditing tools in developing nations. Second, for recency, we favored sources published within the last five years to capture modern and most recent contributions to the use of digital auditing tools. Third, for academic impact, we evaluated citation counts and the overall prestige of the publishing journal. Fourth, the literature review will address three interrelated dimensions (1) the technical effects of digital tools on audit efficiency, effectiveness, and quality; (2) the human/environmental implications for auditors’ skills, professional roles, and labour markets; and (3) the institutional drivers, barriers, and policy frameworks that enable or constrain digital auditing. These dimensions are key in addressing the adoption of digital auditing tools in developing nations’ context. Ultimately, these sources were selected to build a solid theoretical and practical evidence base on how digital auditing tools are being adopted. Through a multi-stage selection process, a final synthesis of 70

core academic contributions ranging from 2020-2026 was included in the SRL Matrix. This methodological funneling ensures that the literature review reflects high-impact, timely research relevant to the digitalization of auditing in developing nations.

The overarching research question guiding this review is:

How do digital auditing technologies influence the quality of financial oversight and the motives for adoption within the resource-constrained institutional landscape of The Gambia?

This question is unpacked into sub-questions across three dimensions:

- Technical: What is the perceived impact of the digitalization of auditing on audit efficiency and effectiveness in the context of The Gambia?
- Human/Environmental: What is the current level of digital auditing tool adoption and proficiency among professional auditors in The Gambia, and how might increasing reliance on digital tools affect employment trends and skills gaps?
- Institutional: What are the key drivers and barriers to adoption for audit firms and their clients, and to what extent do government digitalization policies influence uptake in the Gambian auditing profession?

Appendix 1 comprises of 70 recent contributions from journals of varying standing, including world-leading outlets such as *Accounting, Organizations and Society* and *Journal of Information Technology*, highly regarded accounting and management journals (e.g. *Accounting, Auditing & Accountability Journal*, *Journal of Business Research*, *Meditari Accountancy Research*), specialized accounting information systems and digital audit journals (e.g. , *International Journal of Digital Accounting Research*), and context-specific or practitioner-oriented outlets.

While AJG-ranked journals provide much of the conceptual and methodological foundation, lower-ranked and unranked sources are intentionally included. This is because they offer rare empirical insights from emerging and developing economies especially West Africa and public sector audits that more prestigious journals tend to overlook.

1.2 The Conceptual Shift from Manual to Digital Auditing

The adoption of digital technological tools within the auditing field has tremendously shaped the profession in recent years. This transformation has triggered the adoption of digital tools in place of manual processes in areas that are not only limited to paper base but also affects the overall auditing methodology. As highlighted by (Rahman, Zhu, and Yue 2024) the use of sophisticated software such as artificial intelligence, data analytics and other automated auditing tools has transformed the methodology and direction of the auditing field. Authors such as (Vitali and Giuliani 2024) has also categorized emerging technologies as an opportunity in enhancing the auditing process to gain significant competitive advantage. In the same vein, the use of advanced digital tools can be considered a challenge in introducing new potential risks.

The use of artificial intelligence, machine learning and other digital tools has given auditors the opportunity to explore and transact voluminous data sets in a manner that is time saving and accurate (Manal, Mirza, Safi, Umar.2024). This according to the authors, provides a room to detect certain anomalies and identify patterns that would escape human detection. In addition, the adoption of Blockchain within the auditing process creates the possibility to verify data integrity and security thus reducing the manipulation risk associated with data tampering (Firza, Kesuma, and Muda, 2025). Likewise, the Computer-Assisted Audit Techniques (CAAT) which is primarily used for high-risk identification as highlighted by Ceki and Moloi ,2025 in their study on the Supreme Audit Institutions' adoption of data analytics has been proven in ensuring

continuous monitoring and assurance. Artene and Domil 2024, describe the shift from manual to digital transformation as an increasing effect on the restructuring of the audit field. Lascău (2022) emphasizes that digitalization affects not only the technical aspects of auditing but also the work environment, professional relationships, and the very nature of auditor judgment. Moreover, (Lois, Drogalas, Karagiorgos, and Tsikalakis 2020) in their study on Internal audits in the digital era: opportunities risks and challenges, gave a detailed overview of the factors that impacts the adoption of digital auditing tools by internal auditors. They emphasized the importance of maintaining the human element in the course of transitioning into a digital era, stating that certain aspects such as professional skepticism and ethical standards can only be demonstrated by humans in place of machines.

The promise of digital auditing can be substantial and complex. Many authors have highlighted the importance of adopting technologies within the auditing profession in light of enhancing efficiency through automated tasks routine, enabling real-time monitoring and continuous auditing, however, certain authors have some reservations. According to Daidj 2022, the benefits attributed to the use of these technological tools can only be achieved if the environment in which these digital tools are to be placed are well prepared to accommodate them in its full capacity. This is coupled with the right human resources needed to fully embrace these new innovations and organization readiness. This point is really crucial for this study, focused on the developing nations' context, as most of the hindering factors affecting the adoption of digital auditing tools in these areas could be centered on the environment/organization unreadiness.

1.3 Theoretical and Conceptual Foundations

1.3.1 Technology Adoption Frameworks

The theoretical frameworks used in this research will help explain how, why and under what conditions organizations and individuals would embrace and utilize these new technologies. In the process of embracing digital auditing tools, the points highlighted in this section will help analyze the factors that could either facilitate or impede its use in a developing nation's context specially in The Gambia.

One of the theoretical frameworks to be examined in this study is the Technological Acceptance Framework (TAM) which was initially developed and proposed by Davis (1989). According to Davis, an individual behavioral intention to use a certain technology could be affected by two main factors: The Perceived Usefulness (PU) i.e., the expected benefits to be derived from the usage of this technology and The Perceived Ease of Use (PEOU) which represents the manner in which this technology could be operated free of effort. This framework has been applied in many information systems research providing valuable insights in understanding the auditor acceptance of digital auditing tools. In the case of The Gambia, the use of Big Data, Blockchain and Artificial intelligence is believed to have a positive impact on the overall process of the audit (PU). On the other hand, the usage of these technologies could either be easily utilized by the users of the technology or seen as complex set processes which will ultimately impacts the PEOU. However, critics Bagozzi (2007), have argued the limitations associated with this model, noting that the TAM framework only considers individual perception and ignores the social and cultural constraints that exist between the intention to act and the act itself. This is deemed insufficient to account for organizational and institutional criteria or factors that shape technology adoption in the public sector contexts.

To address this limitation, this thesis incorporates the Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003), which introduces "Facilitating Conditions" as a determinant of actual usage. A study on digitalized accounting management practices by Adeowoye J. O.; & Adejumo M. A. (2025), highlighted the importance of facilitating conditions that needs to be present for a successful TAM to thrive. These facilitating conditions according to Venkatesh et al. 2003 have to be present and well-functioning in order to accommodate and embrace new innovations. They argued that in developed nations, institutions are strongly built to accommodate new developments and the same time play as enablers for new innovations. Whereas in most emerging economies as in the case of The Gambia and Nigeria for instance, a constant and reliable power supply becomes a challenge talk less of a high-speed internet. To successfully merge and integrate the use of digital auditing tools within the context of The Gambia, it will be worthwhile to have strong institutions in place. Institutions equipped with the needed human resources, technology and regulatory frameworks that guide the usage of these new innovations.

For the purpose of this research, it will be prudent to understand the rate at which new innovations diffuse and spread in broader settings. The Diffusion of Innovation (DOI) Theory proposed by Rogers seeks to explore the manner in which new innovations are accepted socially. The diffusion and integration of new innovations in social settings will provide a specific lens to understand and explores the rate at which new digital innovations spread. This can be examined across government institutions and among auditor professionals in identifying the rate and level of early adopters within this context.

The Institutional Theory introduced by DiMaggio and Powell (1983) provides an analysis explaining why some firms or organizations behaves a certain way. According to them, the

external pressures faced by firms to appear legitimate and trustworthy in order to gain recognition from already established bigger entities is a main factor organizations could push beyond their limits just to be seen as relevant. In the case of this study, the local auditing firms in developing nations often mimic to mirror the international big-four in order to uphold their relevance on the face of the auditing field. The authors identified three fundamental mechanisms of institutional isomorphism: First, Coercive Isomorphism arises from the formal and informal pressures exercised on local firms by more powerful entities. Most developing nations usually face the pressure of being accepted and validated by international firms and NGOs. For instance, in The Gambia most audit firms tend to mimic the manner in which foreign organizations operate. And in the same vein, they are expected to comply with the International Standards on Auditing (ISAs) which highly incorporates a strict digital environment (Asraf & Uddin, 2016). Digital adoption in this case becomes a burden on many audit firms that are within institutions with weak digital data adoption. In situations where digital data is available, developing nations typically find hurdles to generate internal data from the audited entities, leading to a situation of forced adoption. Audit firms in these emerging economies would still endeavor to appear “legitimate” and adopt digital data even at their own expense. Mimetic (imitation of successful organizations), and normative (professional standards and expectations). Secondly, Mimetic Isomorphism is more common in situations when there is high uncertainty. This is because the path to digital auditing in a developing economy is unclear, local Gambian firms may simply "mimic" the digital strategies of the Big-4 (PwC, Deloitte, etc.). As Mignerat and Silva (2008) suggest, this mimicry acts as a "shield of competence," signaling to the market that the firm is modern, regardless of whether the technology is being fully utilized in the back office. Finally, Normative Isomorphism is triggered by the professionalization of the industry. Institutions within

the auditing and accounting industry in The Gambia such as the Gambia Institute of Chartered Accountants (GICA) tailors its training and certification criteria alongside global accounting bodies. Global certification bodies such as the Association of Certified Chartered Accountants (ACCA), creating a new generation of auditors that are within the scope of digital adoption. These new practitioners bring along new lenses to adopt digital accounting and auditing and viewing manual auditing as obsolete as mentioned by Fogarty and Dirsmith (2001). This research argues that the digitalization of auditing in The Gambia and other developing nations is not just limited to a simple choice made by an individual but a complex response to the global institutional forces. This framework provides valuable insights to understand the adoption of digital auditing tools in public institutions where international organizations such as the International Organization of Supreme Audit Institutions (INTOSAI), donor agencies and other partners may exert significant influence.

From the review of literature, Ceki and Moloi (2025) in their study “Technology Adoption Framework and Supreme Audit Institutions within the Hybrid TAM and TOE Model” gave an analysis that incorporates a model factoring technological, organizational and environmental parameters that shapes the Supreme Audit Institutions’ technology adoption process. Similarly, Otia and Bracci (2022) adopt the Institutional theory to examine the role public institutions in applying digital transformation within their processes. These frameworks can be very useful in understanding how digital tools are being embraced by Gambian auditing institutions and other relevant bodies within the auditing sector. Schreuder and Smuts (2023) also placed emphasis on the need to have organizational changes in order to smoothen the transition from manual processes into digitalized processes. They argued that the impact of digitalization on the audit profession can only be successful if certain practices are met.

1.4 A Multi-Dimensional Approach

This research will take the form of a multi-dimensional analytical framework to analyze complex dynamics of the digitalization process of the auditing field in The Gambia and developing nations alike. As highlighted by Daidj (2022) in his studies on “The digital transformation of auditing and the evolution of the internal audit”, the fundamental principles to incorporate digital auditing tools need to satisfy the core areas needed for proper functioning of these new innovations. In the case of this research, these core areas are categorized into three main pillars thus; Technical, Human and Environmental. Each of these pillars provides a clear path to be emulated in the adoption process of digital tools within the auditing field.

The technical pillar is focused on the perceived impact of digitalization on audit efficiency and effectiveness. This dimension seeks to explore the benefits digitalization could have on the auditing process in enhancing financial oversight and promoting transparency. In the case of the Gambia, auditors are interested to know whether the use of digital auditing tools will improve their work and the factors that necessitate technology adoption and audit performance.

The human pillar centers on the users of these new digital tools, their competency level, willingness to use these tools and the implications these tools could have on future recruitment and skill acquisition. In a nut shell, the human dimension exposes the human resources gap and the current proficiency level of the people who implement and adopt these digital tools. Most developing nations are faced with capacity constraints and thus making this dimension very crucial. This pillar will help in creating concrete strategies that are in line with promoting smooth transition from an analogue system to a more modern and refined digital space.

The environmental or institutional pillar seeks to navigate the overall atmosphere and space within which these new innovative technologies are set to thrive. The elements needed to fully accommodate and embrace digitalization especially in a developing nation context all needs to strengthen and actively working. External pressures such as government policies, regulations, organizational structures etc., are all essential in shaping strong institutions to adopt digital auditing tools. In the case of emerging economies, the institutions within which these technologies are expected to be implement are more or less non-existent, with obsolete regulations that needs to be updated in real-time.

1.5 Technical Dimension: efficiency, effectiveness, and audit quality

1.5.1 Digital tools and audit efficiency;

This dimension addresses the following research question: *What is the perceived impact of the digitalization of auditing on audit efficiency and effectiveness in the context of The Gambia?*

There has been a lot of debate on the topic of audit quality and what it entails. The definitions have taken different directions depending on the parties involved and stakeholder interest, ranging from compliance with the standards or the capacity of auditors performing the job (auditor competence). Recently, with the advancement of technology, a new dimension has been added to the set of definitions, citing timeliness, efficiency, accuracy, and detecting anomalies and in some cases fraud. However, the adoption of digitalization within the auditing process has been widely seen as beneficial in enhancing audit quality.

The review of literature has revealed a substantial number of research focused on the relationship between audit quality and digitalization with much evidence focused on China. A study on the effects of clients' digitalization and audit firms' digital expertise on audit quality, by Rahman and

Ao Ziru (2022) explores impact of digital audit talent on audit digitization and detection risk, drawing on data from the Chinese Institute of Certified Public Accountants. Their finding revealed both factors contribute positively to audit outcomes, thus suggesting that digital expertise at the firm level is particularly important, as it enables auditors to effectively leverage digital tools and interpret the outputs of analytical procedures. Similarly, Guo, Jia, and Shentu (2025) found that the use of digital auditing tools. They also share similar finding, noting that digitalization enhances audit quality by reducing cash flow manipulation, enhances the outcome-level quality, and offering a clearer operating mechanism for blockchain technology within banks in China, thus strengthening audit evidence.

Leng and Zhang (2024) examined the relationship between enterprise digital transformation and audit efficiency stating that adopting digital tools improves the internal control quality, reduces the audit lag and thus enhances audit efficiency. In addition, a study by Lui and Xia (2024) on the impact of industry technology and complexity on audit quality revealed that the efforts executed by auditors investing in technology have a positive correlation on the audit quality. Their findings demonstrate that the investment on complex environmental systems leads to higher production of audit results in enhancing the audit quality.

From an Italian context, the authors Lugli and Bertacchini (2023) contribution on audit quality by examining the existing relationship between quality and digitalization. Their finding shows that the adoption and use of digital auditing tools within firms improves the risks assessment process, creates a more comprehensive testing and ultimately leads to the provision of enhanced documentation and reporting. In addition, the authors made emphasis on the importance of competency and organizational support in realizing an effective audit quality through the adoption of digital auditing tools.

In public sector contexts, Volodina and Grossi (2025), Otia and Bracci (2022), and Lois et al. (2020) revealed that incorporating technological tools within the supreme audit institutions can enhance continuous monitoring, increase the sample sizes and execute real-time audits. It is also important to note that these studies reference the importance of having a solid and versatile environment such as an efficient IT infrastructure in place needed for the effective use of digital tools.

1.5.2 Audit effectiveness, risk, and opinion outcomes

The adoption and use of digital auditing tools also affect the audit opinions as well as the risk assessment process. These factors are very relevant in underscoring the overall finding and results produced from an audit exercise. Dong and Jiang (2024) revealed that enterprises equipped with the right digital tools tend to improve on their internal control systems and eventually change their audit opinion type. This is in line with having a robust risk assessment procedure in place that is capable to track and report any deviation from the norm. Similarly, Huang, Mirza, Zhang, Miao (2024) points out the effect corporate digital transformation (CDT) have in shifting a qualified audit opinion to a standard un-qualified opinion. They emphasize the crucial role CDT have on the general control environment of firms. Adopting digitalization within the auditing process creates an environment with higher compliance rate subsequently affecting the audit opinions. Likewise, the authors Zhang and Balia (2024) analyzes the effect technological tools have on corporate audit risk. According to them, there is a strong correlation between digital transformation and internal control systems in mitigating risks. The authors argued that institutions with well-established audit digitalization processes tends to benefit from high internal control coupled with transparency and accountability. Their findings also show that

digital transformation often leads to higher audit fees which is also associated with lower corporate risk.

Internal audit and environmental audit domains show similar patterns. Saputra and Paranoan (2024) highlight the importance of implementing cybersecurity, digitalization and data visualization in auditing firms. This according to them is important to improve the control environment by reducing human errors and making more informed decisions from the data visualization software. The need to maintain data integrity and security has been explored by Dudina, Mandrakov, VA Vasiliev (2022), noting that the use of digital auditing tools enhances data safety and ultimately reduces the risks associated with data manipulation and tampering. The general overview of these findings gave a perspective that the adoption of digital auditing tools improves the substantive quality of oversight if it is effectively put in practice.

1.5.3 Digital audits in public sector and SAIs

The public sector and Supreme Audit Institutions' (SAIs) role in the adoption of digital auditing tools in The Gambia is particularly important for this research study. Understanding that level of the Gambia's economy, which heavily depends on taxation and donor-funds, the need to have systems in place that encourages transparency and accountability will be highly valued. Aquino et al. (2022) stressed the importance to have access to digitalization, noting that digital affordability will help integrate technological tools within the public sectors. According to them, the existence of these systems will enable remote public audit practices which maximizes time and save resources. However, this initiative can also trigger the issue of data security and the challenge to maintain professional skepticism outside of the office premises. Moreover, Otia and Bracci (2022) and Volodina and Grossi (2025) gave analysis on the need to incorporate digital auditing tools by the SAIs, stating that digital transition helps to improve the audit practice. The

studies revealed that most SAIs have not fully grasped the idea of digital transformation, and only considers this shift within the auditing process rather than a complete organizational change.

Broccardo, Truant and Argento (2023) support this argument and claim that there is a formal disconnect between the use of digital auditing tools and the formal management accounting systems of public institutions. The authors argued that, while technology is being adopted in public sectors, it is usually embedded on basic service provisions and not necessarily incorporated within the core functions of management. In the case of regional sustainable development, which addresses the current state of the emerging economies examined in this study, Zhang, Zhang and Wang (2024) provides detailed evidence. The authors examined the contribution of the adoption of digital tools within the SAIs. According to them, digital transformation can contribute to regional development, creates quality governance and broader socio-economic benefits.

1.5.4 Technical gaps in relation to The Gambia

Although extensive research has been done in this area of study, there is still several gaps to be filled in order to fit the narrative of a resource- constrained setting like The Gambia. Several contributions made are drawn from China, Italy, and other relatively data-rich jurisdictions.

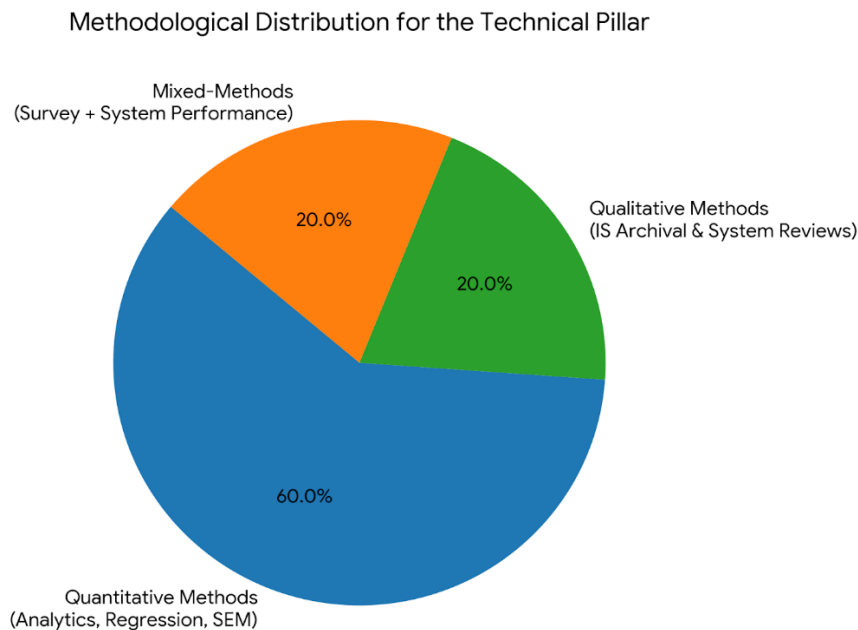
Although the likes of Olurankinse and Mamidu (2023) study on digital accounting practices and audit performance in Nigeria helps in bridging the gap, there is still the absence of research that represents a small West African nation with limited resources. There is little evidence on the adoption of digital tools in emerging economies with poor infrastructural developments. For the purpose of this study, the technical dimension will provide lens focused on the mechanisms the

adoption of digital tools could have in improving efficiency and effectiveness in a developing nations' context.

1.5.5 Methodological Distribution of the Technical Dimension

Studies in this domain frequently employ quantitative secondary data analysis, using multiple regression models and structural equation modeling (SEM) to examine metrics such as audit completion delays, system processing speeds, and anomaly detection accuracy across client enterprise databases (Leng & Zhang, 2024). Moreover, researchers also utilize quantitative experimental and quasi-experimental designs to compare error detection rates between traditional sampling and automated 100% population analytics (Friday et al., 2024; Marian et al., 2025). These empirical approaches are often supported by quantitative survey designs using Likert scales to measure user perceptions of system reliability and remote tool credibility (Kafel & Rogala, 2022), alongside qualitative document analysis of accounting information system (AIS) logs, cybersecurity protocols, and data architecture frameworks (Peret, 2022; Broccardo et al., 2023).

Fig. 1 Methodological distribution of the Technical Dimension



Source: own elaboration

The literature examined within the technical dimension category relies mainly on quantitative research methods constituting about 60%. This is complemented by mixed-method (20%) system of assessments to evaluate certain aspects such as infrastructure performance, data integrity and analytical execution, followed by the qualitative research method analysis (20%) in getting in dept knowledge on certain findings.

1.6 Human and environmental dimension: competencies, adoption, and labour markets

This dimension covers the following research questions:

“What is the current level of digital auditing tool adoption and proficiency among professional auditors in The Gambia?”

“How might increasing reliance on digital auditing tools impact employment trends and the skills gap within the Gambian auditing profession?”

1.6.1 Adoption of digital tools and auditors' proficiency

The human and environmental dimensions seek to explore the auditors' capacity and proficiency to embrace, adopt and implement these digital tools. The authors Angeles, Mabazza and Pascua (2023) examined the adoption process of technological tools and the factors influencing their adoption. They noted that the transition from manual systems to digitalized systems heavily depend on the firm size, organizational culture and most importantly the trainings accorded to auditors. Likewise, Lascău (2022) highlights the importance of digitalization and its effect on the work of auditors. According to him, auditors need to have continuous learning and training in order to carry out certain complex tasks and adapt to continuous change. In the same vein, the authors Astuti and Rohmah (2023) found an important relationship between the adoption and application of audit digitalization and the capacity of the auditor. The authors emphasizes that the application of audit digitalization can only be efficiently executed if the auditor possesses the necessary digital literacy and skills. Ilmawan and Bawono (2024) also mentioned the downside of technological integration of Ai and Big Data within the auditing process, noting that it creates a double-edged sword for auditors while it enhances efficiency, as it requires a level of complex digital literacy like data-science that many traditional auditors and accountants do not possess.

Astuti and Rohmah (2023), Noor et al. (2024), and Razali et al. (2025) adopts the TAM/UTAUT-type models to explore the competencies and proficiencies of auditor performance on the application of digital auditing tools. From the authors perspectives, their findings revealed that the adoption of digital auditing tools enhance audit performance if the auditors perceived them as beneficial and useful. This explains a crucial point on the perceived usefulness outlined in the Technology Acceptance Framework Davis (1989). Auditors' willingness to learn and acquire skills in order to effectively apply these technological innovations is motivated by the manner in

which these tools could be of great use. In addition, the availability of continuous training coupled with the right environmental settings is crucial to realize the positive impact of the use of digital auditing tools. Yang et al. (2026) explores the dynamics that exist between auditor's digital literacy rate and reduced audit quality behavior (RAQB). According to the authors, high digital literacy rate leads to better compliance on audit procedures and strengthens analytical efficiencies.

In the public sector and SAI context, Sari et al. (2023) on their study on “Digital Transformation Capability Maturity Framework for Digital Audit Readiness in Public Sector” recommends a framework to assess the digital readiness of the public sector. The authors proposed a capability maturity framework designed to check the readiness of public institutions in adopting digitalization. The frameworks examine four main points, thus Internal Policy and Governance; Information and Technology; Digital Process Transformation and Human Resource Management. This framework when applied on emerging economies' public institutions will give excellent feedback on the status quo of digital adoption readiness. On the other hand, Yaturrohman et al. (2026) study on the “Readiness to Face Digital Audits, Digital Intelligence, and Technology Adaptability: Interest in the Future Auditor Profession” focuses on the readiness of future auditors. Their findings are linked to the career choices of students in tertiary and suggest that students with background on data analytics who possesses higher intelligence and technology skills are more likely to become auditors. They also demonstrated that high digital literacy is most common with the younger generation as compared to the older workforce. In the same vein, there are significant differences of digital literacy level between large international firms and smaller local firms.

1.6.2 Professional identity, employment trends, and skills gaps

Under this pillar, it will be ideal to take a look at the effect digitalization have on professional identities and the labour markets. Fotoh and Lorentzon (2024) explores the dynamics of how digitalization is affecting the auditing profession and how auditors are adjusting to it. Their narrative gave an outline, showcasing that the auditing profession has transitioned from the traditional “audit-machine to tech-savvy auditors”. They demonstrate that there is a need for reform to enhance auditors’ skills and expertise in meeting the new requirements and demands of this new digital era. This adjustment is essential as it enables auditors to be on the same level with the new technological innovation and at the same time having some sort of job security in the competitive job market. Schreuder and Smuts (2023) gave emphasis on the overall transformation of the auditing process, triggered by the adoption of digital auditing tools. The authors stated that digitalization fundamentally changes task structures. The need to understand what is important and what needs to be scrutinized when dealing with automated machines within the auditing process has to be determined by the auditors.

Several contributions discuss the potential employment implications. With the invention of new digital technologies, the auditing profession has been deemed to be threatened as narrated by some authors. The issue of job displacement emerges from the fear of auditors losing their jobs to robots and related machines have been highlighted by some authors. On the other hand, certain authors stressed for the need to upgrade skills and thus creating new roles on these new spaces. For example, several papers on competence and behavior (Zamzam et al., 2024; Noor et al., 2024; Razali et al., 2025) all reiterated the importance of enhancing auditors’ skills in IT audit, data analysis, risk management and other related fields in order to maintain relevance and the same time obtain job security with higher remuneration.

1.6.3 Evidence from emerging and developing contexts

The purpose of this research is to understand how digital auditing tools are being incorporated within the auditing process in developing nations' context. The research studies focused from these regions are very relevant in exploring the Gambia context. Olurankinse and Mamidu (2023) report on digital accounting practices and audit performance in Nigeria, showcasing that the adoption of digital auditing tools is interrupted by budgetary constraints and inadequate trainings and general infrastructural challenges. These findings are pretty common in emerging economies knowing that digitalization requires a substantial number of resources in both human and capital to be fully effective. In Indonesia, audit firms as highlighted by Astuti and Rohmah (2023) emphasized the dynamics of digitalization and professional ethics. Their contribution was centered on how digitalization when combined with professional ethics improves performance, although their result was only limited to certain firms. This is crucial to note the human element needed in improving performance when exercising professional ethics, a key element only human can possess.

In a broader context, similar contributions from resource-constrained environments Sari et al. (2023) and Yaturrohman et al. (2026) assesses public sector readiness and student readiness in Southeast Asia. Their findings underscore the gap in curricula and the limited exposure to advanced digital software. These findings suggest the situation and level of digital adoption in The Gambia would have to be improved in areas mentioned by the authors from similar economic settings.

1.6.4 Human-dimension gaps for The Gambia

The gap in the human dimension is very visible. Despite the many contributions to digital literacy and auditor competency, there is no direct evidence on Gambian auditors. Most West African-based studies are limited focusing only on middle-income emerging economies. Limited studies have explicitly focus on the effect digitalization have on job security, skills gap, employment trends especially on emerging economies.

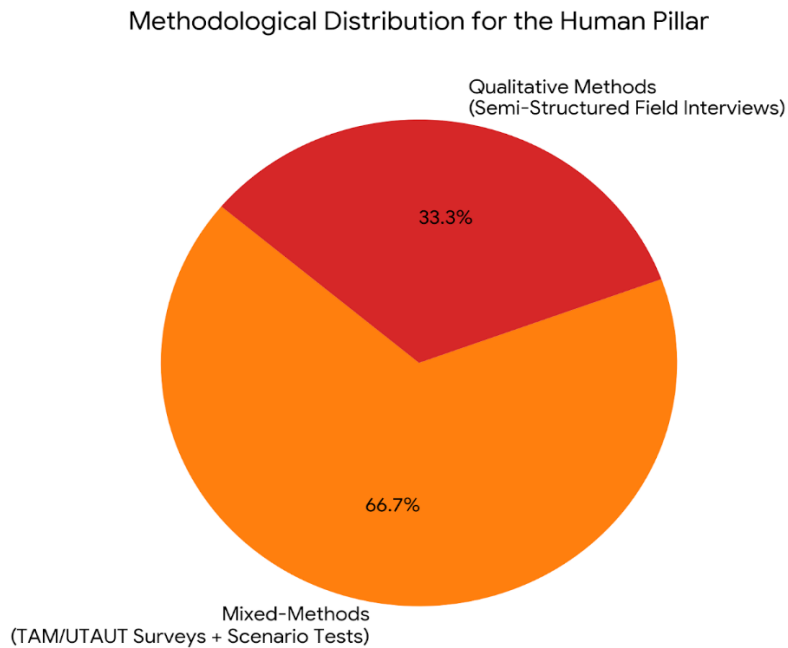
This gap is central to the present research, which seeks to empirically assess the current level of digital tool adoption and proficiency among Gambian auditors, and to explore how these patterns relate to perceived opportunities, threats, and career intentions under conditions of constrained resources and rapid technological change.

1.6.5 Methodological distribution of the Human Dimension

The human dimension is comprised of mixed-methods balancing quantitative survey designs with qualitative field investigations to examine behavioral responses, skill readiness, and decision-making dynamics. Quantitative inquiry within this pillar typically applies structural equation modeling to survey data collected through standardized Technology Acceptance Model (TAM) or UTAUT frameworks, measuring variables such as Perceived Ease of Use, Perceived Usefulness, digital self-efficacy, and behavioral intention to adopt (*Ilmawan & Bawono, 2024*).

In order to capture a deeper behavioral pattern, qualitative methods specifically semi-structured interviews and focus group discussions with auditors, IT specialists, and audit managers are widely used to investigate workplace culture, emerging role transitions, and practitioner skill deficits (*Vitali & Giuliani, 2024*). Additionally, experimental decision-scenario designs are deployed to observe qualitatively and quantitatively how auditors apply professional skepticism and evaluate algorithmic assumptions when using automated analytics tools (*Kalaintzis, 2024*).

Fig. 2 Methodological distribution of the Human Pillar



Source: Own elaboration

Studies within the Human Dimension is anchored primarily in mixed-methods research, constituting about 67%, while the remaining percentage of 33% represents the qualitative method. The literature utilizes qualitative framework development and perspective-based analysis to redefine the core mission of the auditing profession. A. Schreuder and H. Smuts (2023) adopted a perspective-chapter approach to identify the high-level impact areas of digitalization, arguing that the very essence of the auditor is transitioning from a traditional "checker" of historical data to a strategic "insight provider." Focusing on this qualitative shift, their research emphasizes that the methodology of digital transformation is not merely about software implementation, but about a fundamental re-engineering of professional identity and the value proposition of the auditor in a data-rich society.

1.7 Institutional dimension: drivers, barriers, and policy environments

This dimension addresses the following research questions:

What are the key drivers and barriers to adoption for audit firms and their clients, and to what extent do government digitalization policies influence uptake in the Gambian auditing profession?

1.7.1 Organizational drivers and barriers to adoption

At the organizational level, numerous studies identify drivers and barriers for adopting digital auditing technologies. The authors Vitali and Giuliani (2024) and Ilmawan and Bawono (2024) explores the effects of technological tools on the auditing process. They identified opportunities and challenges that affect the adoption process of digital auditing tools in organizations.

According to them, the issues of cybersecurity risks, cultural resistance, regulatory demands and most importantly the cost related in acquiring the software are factors hindering most organizations to incorporate digital auditing tools within their processes. In addition, Friday, Iyabode and Damilola (2024) on their study “Reviewing the Effectiveness of Digital Audit Tools in Enhancing Corporate Transparency” gave similar insights of why organizations still struggle to embrace auditing technology. Their findings highlight the challenge of data security risk and the associated cost involved in the acquisition and maintenance of these tools. The authors also examined the behavioral pattern of people within institutions in embracing change, this confirms the reluctance to change theory organizations face especially within the digital space.

A study on “Auditing Management Systems in Digital Transformation Era” by Kafel and Rogala (2022) scrutinizes the role of digital auditing in improving quality management. The study is

important to understand the role of digital auditing tools on non-financial issues. They compared the effect of remote auditing using digital tools with the traditional on-site audits. The findings show the economic benefit derived from traditional on-site audits matching that of the remote audits, this further solidifies the role technology play in saving resources that are geared towards running physical work spaces. Peret (2022) illustrates how organizations must redesign their structures and create roles that incorporate IT auditing with the financial audit practice. The study calls for organizational reforms and cultural shift that is set to fully embrace digital transformation and the same time strengthening strong controls and assurance.

The studies carried in this dimension gives signals on the challenges faced by organizations in adopting digital tools such as financial constraints, inadequate infrastructure, digital literacy gap etc. that needs to address. Furthermore, the perceived efficiency linked to the adoption of digital tools within organizations have also been well identified in areas related to reputational benefits and quality management. These points are key elements that this research study could contextualize in the case of organizations in developing nations, especially in The Gambia.

1.7.2 Government digitalization, SAIs, and governance

At the macro-institutional level, digital auditing is embedded within broader government digitalization and governance agendas. The role of government in strengthening digitalization within institutions is very vital in ensuring accountability in all sectors thus reducing loopholes for corruption and increases opportunity for economic growth. Santiso (2022) examines the role government plays in enhancing e-auditing practices and integrating Govtech in transforming public financial management. Their findings suggest that incorporating e-auditing practices within government institutions enhance transparency, reduces opportunities for corruption and strengthen the general oversight within institutions. On a similar outlook, the authors Marian et

al. (2025) explores the synergy that exist between the adoption of digital auditing tools such as artificial intelligence, machine learning and blockchain in continuous data monitoring on modern accounting and internal auditing frameworks. Their findings revealed that the adoption of digital tools by organizations enhances real-time monitoring and early detection of anomalies. They also emphasized the importance of digital infrastructures in supporting transparent digital governance.

Several papers focus specifically on SAIs and public sector oversight. The authors Otia and Bracci (2022), Ceki and Moloi (2025), and Kalaintzis (2024) explores the effects digital auditing tools have on public accountability. Their findings are crucial to determine the role of international organizations such as the International Organizations of Supreme Audit Institutions (INTOSAI) and other donor-funded reforms' stake in shaping the trajectories in adopting digital transformations within public audit institutions. Most developing nations rely heavily on the reforms and recommendations offered by these organizations. Their role in influencing the SAI Gambia and other SAIs in these regions will greatly enhance the organizational structures to accommodate technology within their institutions. In addition, Sologashvili and Udesiani (2026) suggest that the adoption of digital auditing tools is a form of smart-governance. Their contribution is not only limited to the auditing practice but also includes the governance aspect that organizations need to adopt in driving digital state transformation.

In the case of promoting regional sustainable development, Yuhan Zhang et al. (2024) emphasizes the impact the adoption of digital transformation of national audits as a mechanism in reinforcing developmental governance. According to the authors, applying digitalization within the audit practice is a key element in ensuring effective governance by audit organizations in shaping its relationships with other international firms, which is central to developmental

governance. Lois et al. (2020) and Broccardo et al. (2023) further elaborates how digital transformation strengthens the internal control and management control system affecting risks management and accountability structures. The findings suggest that adoption of digital tools requires a restructuring of governance frameworks towards a decentralized model in enhancing real-time risk management. In a developing nations' context, restructuring audit organizations in order to fit a model that embraces and facilitates digital transformation is very essential in enhancing smart governance and promote regional sustainable development by SAIs.

1.7.3 Institutional theory, legitimacy, and developing economies

Samiolo (2021) emphasizes the importance of institutional legitimacy. Their contribution is crucial to understand the position of emerging economies' responsibility in providing standard audit reports that are donor worthy. The adoption of digital auditing tools according to Samiolo is vital to help organizations build institutional legitimacy towards their donors, regulators and the civil society at large. The perspective of digitalization in many parts of the world is related to modernization and promoting accountability, these aspects are encouraged by donor-funding bodies that support organizations in developing nations. The pressure to adopt digital tools therefore becomes a necessity in order to satisfy one of the pre requisites of international support groups even where internal capacities are weak.

In contrast, Santiso's (2022) view point in the adoption of digital auditing tools by government agencies is seen as a means to create inequality between resource constraints entities who struggle to acquire and maintain these technologies. Although the adoption of digital auditing tools is seen as an effective anti-corruption tool, the author emphasizes that most audit organizations in developing economies do not possess the capacity to obtain and maintain these technological tools. This creates a situation of total dependency on the suppliers and vendors of

the technological software. In the case of this research, this point will be very relevant to scrutinize the role donor-funded projects have on the SAIs in developing nations in the digital transformation process. Also to see if there is a mechanism in place to avoid the inequality and dependency issues of SAIs on external aids.

For The Gambia, a small West African state which relies heavily on external aid and uses public sector auditing as a key instrument for donor confidence and anti-corruption motives. The adoption of digital tools can be motivated by either the efficiency and quality it has on the auditing process or it can be motivated by the symbolic pressures signaling modernity and compliance to external stakeholders.

1.7.4 Institutional gaps regarding The Gambia

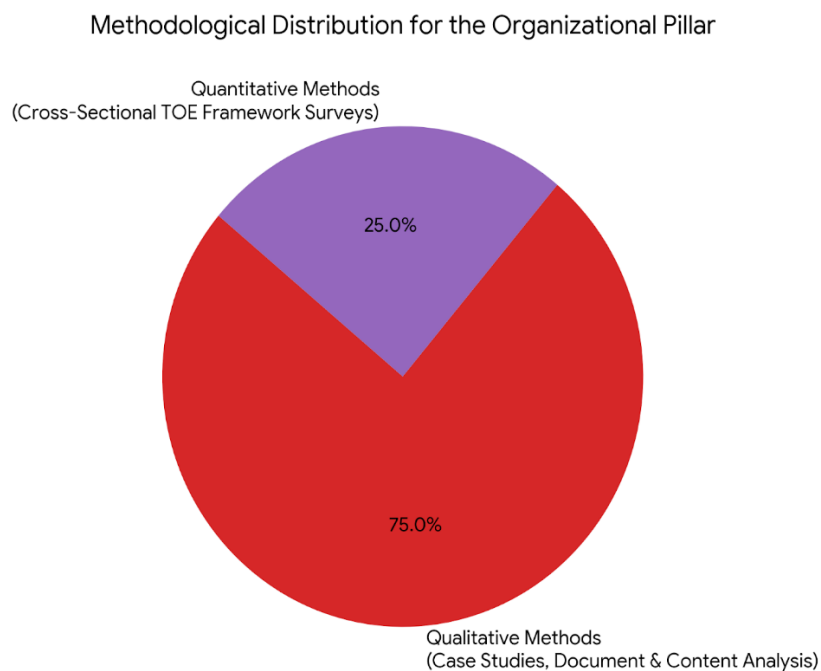
The reviewed literature provides ample evidence from China, Europe, and selected emerging economies as well as conceptual and practitioner-oriented discussions of SAIs and govtech. However, there is little systematic empirical evidence on low-income African states such as The Gambia. There are few detailed accounts of how national digitalization policies, donor funded projects and regional initiatives concretely affects the adoption of digital audit tools by supreme audit institutions and local audit firms.

1.7.5 Methodological distribution of Institutional Dimension

Qualitative exploratory case study designs are the dominant methodology, utilizing semi-structured interviews with senior leadership, Supreme Audit Institution (SAI) officials, and audit firm partners to explore organizational readiness, strategic alignment, and the operational distinction between basic digitization and structural transformation (*Otia & Bracci, 2022; Vitali & Giuliani, 2024*). Complementing case study approaches, qualitative document and content

analysis is extensively applied to international auditing standards (such as INTOSAI directives), national legislation, and public sector strategic plans to assess governance mechanisms and anti-corruption frameworks (*Santiso, 2022; Ceki & Moloi, 2025*). Where quantitative methods are used in this dimension, they generally take the form of cross-sectional survey research analyzed through the Technology-Organization-Environment (TOE) framework to evaluate how organizational size, resource allocation, and market pressures influence firm-wide adoption (*Lois et al., 2020; Ceki & Moloi, 2025*).

Fig. 3 Methodological distribution of the Institutional Dimension



Source: Own elaboration

The Institutional Dimension relies heavily on qualitative research methods constituting about 75%, followed by 25% of quantitative methods. The institutional policy analysis helps to examine strategic adoption, regulatory alignment, and public governance structures.

1.8 The Research Gap: Developing Nations in the Digital Audit Context

From the review of literature, a significant number of empirical studies and publications on this topic has been carried on developed economies such as China, the United States, the United Kingdom, Italy, Australia, and other industrialized nations. Despite the important contributions the studies might have provided, they still have not adequately captured the specific challenges and opportunities in developing nation's context.

The digitalization process of the auditing profession in a developing nation's context may take a unique form which is shaped by the economic constraints affecting the infrastructural development, unreliable electricity and internet supply and inadequate hardware. These factors are essential in creating an enabling environment where new innovations could thrive successfully, absence of which could lead to failure. Institutional weaknesses caused by fragmented or non-existent regulatory frameworks, limited organizational capacity and political interference could impede the smooth transition from manual processes to automation. The issue of the limited skill gap by auditors with digital competencies in these regions has been a major obstacle in the adoption of technological tools. In addition, resource constraints limited budgets for technology investment and maintenance in developing nations leads to restricting the scope and sustainability of digital initiatives.

According to Santiso (2022), the effect of digitalization on government institutions can only be impactful in combatting corruption and enhancing transparency if government institutions are set

with the right institutional and regulatory frameworks. His argument resonates well with the context of the Gambia a place that heavily relies on donor confidence in its effort to fight against corruption. In addition, the review of literature has also revealed the situation in Indonesia and Nigeria both emerging economies acknowledging the differences on the context provided by the authors in developed nations. The authors gave unique empirical evidence on digital transition within West Africa and Southeast Asian institutional environments. The empirical evidence given by Astuti and Rohmah (2023) highlight the effect of digital auditing tools on auditor performance using certain variable such as professional ethics to evaluate the public accounting firms in Central Java. These different parameters in understanding the impact of digital auditing tools embedded within the process shows unique insights as to the perceived benefits or limitations that these technologies could have on different economies or institutions. For instance, in the case of Nigeria a giant country in West Africa, the authors Olurankinse and Mamidu (2023) explores the impact of the use of digital tools within the accounting and auditing professions in Nigeria. Their findings highlighted some issues most developing countries are facing in terms of limited infrastructure and non-existent or outdated regulatory frameworks. Although the Gambia and Nigeria are still not on the same economic index, their findings hint a similar pattern the digitalization of the auditing process in the small West African state might be facing.

The unique contribution from the Gambia gives insight on the perspective of a small developing nation. The supreme audit institution of The Gambia (NAO) is mandated by the constitution to conduct audits for all government sectors and its affiliated bodies. As part of the NAO's strategic plan from 2025-2029, the SAI Gambia has highlighted "investment in technology and digitalization" as a core institutional capacity to be attained in the coming years. Despite these commitments and the efforts of the NAO, there is still some constraints and challenges face by

the institution and the Gambia government at large. The hurdles could be but not limited to insufficient financial resources for the acquisition and maintenance of digital technological tools, inadequate IT audit personnels and the lack of digital systems being integrated across government departments. Recently the Gambia government has entered into a memorandum of understanding with the Kingdom of Morocco on public sector accounting. This caters a specific provision to enhance the digitalization process of government institutions particularly the National Audit Office in integrating digital auditing tools.

CHAPTER TWO: THE GAMBIA CONTEXT

2.1 Introduction

The global push toward digital auditing appears to force developing countries into a very complicated position. While reading through the literature, it seems clear that while richer nations have normalized automated, real-time tracking, the story in emerging markets is far from straightforward. This landscape suggests that for local auditors, government bodies, and regulators, the problem is not just about buying expensive software. Rather, it appears to be a deeper struggle to balance international compliance demands with severe local infrastructure and resource shortages.

When looking at the situation in The Gambia, this shift seems to put two different kinds of pressure on the local accounting community. On the one hand, young accounting graduates, who mostly study for international certifications, enter the workforce expecting to find modern, paperless, and fully automated data systems. On the other hand, organizations like the National Audit Office (NAO) and small local audit firms must do their jobs within a confusing legal setup. This setup mixes old rules from the Companies Act with modern requirements from the Data Protection and Privacy Act 2021. Reviewing the friction that happens when global technical ideals are thrown on top of local realities helps form the real backbone of this study.

2.2 Auditing and Digitalization in Developing Countries

2.2.1 The Regulatory Landscape and Recent Evolutions

Financial reporting and government oversight in developing economies seem to be going through an institutional change that is mostly pushed from the outside. Historically, most organizations relied on manual paperwork and checked things long after the financial year ended. Now, many

developing nations face heavy pressure from international funders like the World Bank and the International Monetary Fund to adopt International Standards on Auditing (ISA) and International Financial Reporting Standards (IFRS). These legal changes are almost always tied to loans or economic aid packages, seemingly to make these countries look more legitimate and transparent to foreign investors.

At the same time, governments have pushed their own digital agendas, introducing central public finance platforms, online tax portals, and automated customs tracking. The main goal here seems to be stopping corruption and tax evasion. Because of these changes, the environment for both public and private auditors appear to have been turned upside down. As financial data moves online, auditors can no longer just look at physical boxes of paper receipts. Instead, it seems they are forced, both by law and by practical reality, to log directly into databases and try to follow electronic trails left by unfamiliar software.

2.2.2 Comparative Case Studies in Developing Nations

Across Africa, companies are heavily investing in technology, integrating cloud platforms, fintech solutions and many other technological tools within their processes. But due to their weak governance and control systems most organizations in Africa typically found themselves lag behind this rapid evolution. As a result, this has given rise to the adoption of auditing technologies that are often seen as strategic tools used for managing risks and enhancing growth.

In previous years most emerging economies have always focused on the basic IT or technology audits such as user access, back-up procedures, change management documentation, the traditional accounting and auditing practices, such as data entry and record-keeping (Babayeva & Manousaridis, 2020; Melin & Toezay, 2022). etc. Whilst having the main objective to support

financial or regulatory audits rather than providing meaningful insight to management (Melin & Toezay, 2022).

Looking closely at what actually happens when developing nations try to use digital audit tools highlights a major gap between official government promises and everyday reality. In Sub-Saharan Africa, Nigeria serves as a good example. The government there pushed for heavy enterprise software and cloud accounting alongside strict data laws. However, many researches have highlighted the limitations faced by the Nigerian Supreme Audit Institution and other audit and accounting firms. Citing the low literacy rate of people involved in the application of digital tools as a setback in adopting digital auditing technologies. This is a major call for concern as it creates a new opportunity to commit fraud in areas auditors cannot verify or explore. The mechanism of the systems is usually incomprehensible for most accountants.

Another limitation observed in the current state of technology in Nigeria is the cost associated in acquiring these technologies sometimes outweighing the benefits expected to be derived from them. This is also accompanied by poor infrastructure such as interrupted power supply, and weak internet connectivity needed to effectively utilize some of these digital tools.

Because the electricity grid collapses so often, local firms have to spend a fortune on private generators, and the resulting network drops seem to corrupt data extractions and mess up database syncing. This lack of basic resources regularly leaves local auditors with no choice but to give up on advanced software and go back to manual printing and offline checking, which completely defeats the purpose of the technology.

Likewise, the impact of digitalization in Nigeria as well as most developing nations is observed in various definitions, indicating the shift from the manual procedure to automation of

accounting and auditing. This shift or transformation is considered the main impact of digitalization in accounting and auditing in the Nigerian context.

In the case of Ghana, the public sector shows a very similar kind of friction, but more on the human side. In recent years, however, there has been a concerted effort to incorporate digital technologies such as Audit Management Systems (AMS), Electronic Working Papers (EWP), and data analytics tools into audit practices (Mensah, 2021). The government rolled out a massive public accounting platform known as the Ghana Integrated Financial Management Information System (GIFMIS).

Digital tools promise to streamline Ghanaian audit processes and speed up data analysis and reporting. However, the actual operational impact remains unexamined, and empirical evidence of these efficiency gains is still lacking. The issue here seems to be that the technology was introduced much faster than the auditors could be trained to use it.

Government auditors who spent their entire careers checking physical ledger books were suddenly expected to act like IT security experts and read backend database logs. Since their professional training doesn't factor IT related audits, they usually find themselves in very awkward situations, with high expectation from the auditees to navigate complex IT related issues. Instead of extracting the needed data themselves, the auditors in most public institutions in developing nations would rely on the printed data pulled out by the very IT managers they were supposed to be investigating. This jeopardizes their independence and thus the output of the audit reports.

A report by the World Bank published in 2021, discussed the importance and impact digital tools have on the day-to-day work of auditors. According to the report, digital tools cut roughly 30%

of the time spent to execute a task. They also noted that the accuracy ratio to process large data sets and detect fraud using digital tools has also increased. As stated by Appiah and Asante (2022) study, it was found that a 40% increase in detection of financial anomalies and discrepancies was noted in service since the adoption of digital technologies. In Ghana, there has been a prompt and timely publishing of audit reports ensuring real-time communication and strengthening public trust.

Despite the significant benefits, the digitalization journey of the Audit Service of Ghana is not without challenges. Issues such as inadequate infrastructure, cybersecurity threats, and resistance to change among staff have posed hurdles, this pattern as seen in Nigeria could be traced in many emerging economies, especially in South Asia.

In Bangladesh, studies suggest that the adoption of advanced computer-assisted audit techniques (CAATs) has very little to do with local business needs. Instead, it seems to be a form of superficial compliance to satisfy international donors. While local accounting firms spend money buying expensive software licenses just to look modern for regulators, their actual everyday work stays stuck in old manual habits. This gap is made worse because small local clients are terrified of tax authorities, so they keep chaotic, fragmented, or hidden records. This leaves auditors trying to use expensive software on incomplete and totally unreliable data.

In the case of Egypt in North Africa, the auditees' expectations from the auditors are becoming increasingly challenging and forward-looking. According to Elkadeem (2025) the future of audit in Egypt, the scope within which auditors used to operate from the traditional invoice checking and other verifications has shifted to cloud book-keeping, using large data-sets at once. It was also noted that stakeholders expect more than just a clean opinion but rather involve new areas to explore such as cyber-security, sustainability and compliance with international laws. The

Egyptian auditing compliance has also been evolving with the increase use of technology which has also rigorously affects the regulatory expectations and international standards to widely adopt the IFRS and also focus on non-financial related issues.

Notwithstanding, the evolutions comes with challenges. Skill shortage is a major setback faced by the Egyptian auditing sector as traditional auditors are not equipped with digital competencies. In addition, the cost associated to procure and maintain this sophisticated technology is also very high, as well as the training cost, leaving many small audit firms unable to acquire and maintain these technologies. Furthermore, client-readiness to adapt to new technologies and reluctant to change their old ways of manual bookkeeping to modernize systems is making automated analytics difficult to thrive.

2.3 Historical Overview of the Auditing Profession in The Gambia

The historical setup of accounting in The Gambia shows a massive division between the government sector and private accounting practices. Public sector oversight is driven by the National Audit Office (NAO), which was set up under the 1997 Constitution. The actual power of the NAO was expanded by the National Audit Office Act 2015, which was supposed to give the Auditor General complete financial and operational independence to audit government ministries, local councils, and State-Owned Enterprises (SOEs). Working alongside them is the Directorate of Internal Audit under the Ministry of Finance, which places compliance officers inside different state ministries to keep an eye on internal risks.

In the private sector, the profession used to be managed by the Gambia Association of Accountants (GAA), which has now evolved into the statutory Gambia Institute of Chartered Accountants (GICA). Because The Gambia has historically lacked its own localized professional

accounting qualification, the country has always relied heavily on foreign credentials, especially the Association of Chartered Certified Accountants (ACCA) from the UK. This reliance seems to have deeply drilled Western standards and expectations into local accountants, creating a weird mismatch where local professionals are trained to use global benchmarks inside a domestic market that lacks the basic physical infrastructure to support them.

2.4 The Legal and Statutory Framework

The current laws governing accounting and auditing in The Gambia look like a messy patchwork of old colonial rules, post-independence patches, and a few sudden modern laws. For instance, the Companies Act still traces its roots back to 1955, with a major revision in 1995. This law sets out the absolute basics of keeping business records and preparing balance sheets, but it is completely outdated. It says absolutely nothing about modern electronic accounting or international standards. Recent attempts to update the country's business laws have faced heavy criticism from local experts. Because the draft laws try to fix static, rigid tech processes into the text instead of giving independent accounting boards the flexibility to update rules as technology changes. This legal delay implies a permanent struggle between twentieth-century merchant laws and twenty-first-century electronic ledger systems.

This legal fragmentation also makes it incredibly hard to regulate the profession itself. The Accountants Act of 1991 originally set up the rules for joining the local accounting association, but researchers point out that the law has no teeth. It lacks any real legal mechanism to force firms to comply with international rules, leaving the country without a strong, state-backed quality control system for local accountants. A rare exception to this mess is the Central Bank Act of 2005. This law gives the Central Bank strict power over commercial banks, including the direct right to approve or reject the external auditors that banks try to hire.

For ordinary businesses, the main interaction with accounting laws happens through the tax system. The Gambia Revenue Authority Act mandates businesses to submit audited accounts for corporate tax to be calculated. This however, causes some constraints to small firms that are unable to afford the services of private audit firms, thus hindering small emerging businesses to penetrate the market.

Government auditing faces similar bottlenecks; even though the Constitution says all SOEs must be audited, the NAO has such a massive backlog and so few staff that it regularly subcontracts these public corporate audits to private local firms. All of this is now crashing into the Data Protection and Privacy Act 2021, a new law that punishes firms for mishandling digital data. This creates a huge headache for local auditors who are extracting and saving client data onto unsecure local drives or foreign cloud servers.

2.5 Applied Theoretical Structures

2.5.1 Institutional Theory and Isomorphic Pressures

To understand why digital transitions, look so chaotic in low-resource countries, institutional theory is incredibly helpful. Instead of assuming that every company adopts new technology simply because it makes them faster or more efficient, DiMaggio and Powell (1983) argue that the drive behind these structural updates. According to the authors, this often moves from competitive market forces to pressure from the state and professional networks. They state that "rational actors make their organizations increasingly similar as they try to change them". Due to social legitimacy, each company is expected to consider or follow standards, norms, and expectations of its external stakeholders (MCFARLAND et al., 2008; LAI et al., 2006). In

normal cases, customer demand shapes a central normative pressure (ZHU, SARKIS, 2007; HALL,2000).

In my view, this explains exactly why Gambian institutions rush to adopt frameworks that don't fit them, they are chasing corporate uniformity rather than operational sense. In the case of Egypt, the government imposing a general regulation supporting automated generating invoices for all companies regardless of the size is a typical example of what Isomorphic Pressures could result.

DiMaggio and Powell identify three specific mechanisms of change:

1. **Coercive Isomorphism:** This stems from "political influence and the problem of legitimacy" (as seen in the case of Egypt). It happens when an organization faces formal or informal pressures from entities they depend on. Government agencies illustrate perfectly how powerful groups can influence the actions of an organization (RIVERA, 2004). In The Gambia, this pressure comes directly from international aid donors making funding dependent on global audit certifications. My reading of this indicates that the local response is largely ceremonial. Local bodies comply to secure eligibility for funds, creating what looks like a modern structure on the outside while remaining basic on the inside.
2. **Mimetic Isomorphism:** This results from "standard responses to uncertainty". The authors emphasize that "the more uncertain the relationship between means and ends the greater the extent to which an organization will model itself after organizations it perceives to be successful". This behavior is rampant when key technologies are poorly understood. I see this frequently with small Gambian audit firms that copy the software choices and

auditing methodologies of the Big Four networks. They do not do this because it makes them more efficient, but because they are operating in a confusing tech environment and need to project a trustworthy, legitimate image to the public. This pattern of imitation stems from the fact that companies operate within interconnected social networks (McFarland et al., 2008; Henisz & Delios, 2001). Notably, when a firm experiences strategic ambiguity or technological uncertainty, it is much more likely to abandon independent decision-making and simply model itself after other successful organizations (DiMaggio & Powell, 1983; Liang et al., 2007). This phenomenon is very common in most emerging economies as they always want to “appear legitimate” and seen as one of the well-established systems.

3. Normative Isomorphism: This is "associated with professionalization". Because virtually every auditor in The Gambia shares a background in foreign accounting credentials like the UK-based ACCA, they exhibit extreme similarity to their professional counterparts in other countries. Over time, this imitation compromises their competitive advantage and market distinctiveness. Consequently, an over-reliance on copied structures reduces long-term competitiveness and can ultimately lead to organizational failure (Scott, 1987; Oliver, 1991; Kondra & Hinings, 1998). From my perspective, this professional socialization drills a Western perspective into local accountants, making them view paperless digital auditing as the only correct way to work, even when the surrounding local market lacks basic supporting infrastructure. Professionals from most third-world countries or developing nations often found themselves with equipped knowledge and skills that are not yet applicable to their environment due to poor infrastructure to accommodate those skills. In the case of digitalization, it will be prudent for professionals

from emerging economies to cater for what really works and adapts to their region.

Otherwise, have their institutions and systems to be updated in order to cater for these new innovations.

2.5.2 The Legitimacy Motive vs. Efficiency Motive Structure

Building on institutional theory, this framework looks at the real reasons why public and private entities buy technology (Samiolo, 2021; Volodina & Grossi, 2025). The efficiency motive is the textbook reason: a firm buys software to save time, eliminate math mistakes, and get real-time views of financial health to make better decisions.

Driven by Industry 4.0, the digitalization of business processes has revolutionized organizational capabilities (Ghobakhloo, 2018). Beyond simply cutting costs, adopting these technologies elevates workplace conditions, improves overall quality, and uncovers more profitable business models (Müller et al., 2018b; Staufén, 2018; Nosalska et al., 2019). This shift relies entirely on connectivity and visibility, synchronizing machines with products optimizes resource consumption, while intelligent oversight gives businesses the agility to pivot alongside market changes. Underpinning it all is data; intelligent machines capture real-time insights that allow firms to continuously refine current production and design next-generation offerings (Brettel et al., 2014).

The legitimacy motive, however, is purely symbolic. In developing areas where bad infrastructure blocks true efficiency gains, launching a brand-new centralized digital portal looks great politically. The actual goal here appears to be boosting international transparency rankings, looking good in anti-corruption reports, and keeping donor trust, even though everyone knows the internal staff still relies on manual overrides to get through the day.

The legitimacy motive can be seen and traced in most developing nations, as previously discussed; as they often tend to get “international approval” from the rest of the world. For any digital technology to successfully thrive in such an environment, it will be evident to first consider its efficiency and how it can contribute to the day to day running of firms and businesses, especially within an auditing context.

2.5.3 The Concept of Institutional Voids

To truly get why auditing is so frustrating in developing countries, one need to look at the institutional voids. The authors Tarun Khanna and Krishna Palepu define institutional voids as absence of crucial intermediaries that are found within processes, such as market research firms, independent audit bodies, software developers etc. According to them, these service suppliers are sometimes overlooked by most companies because their services are not directly traceable to final output (product) of companies. The authors explain that the absence or deficient supply of these informal institutions or support/out-sourced services creates voids in the market.

Eneje, Udefi, Okorieocha (2026) research on Audit Digitalization and its Impact on Fraud Prevention and Detection; Evidence from Nigeria, highlights salient points on institutional voids that adversely affects the adoption and application of digital auditing in Nigeria. The authors mentioned the inadequate regulatory framework and technological infrastructure coupled with unclear guidelines and standards that are geared for the governing and use of digital auditing tools. Moreover, Nigeria like many developing nations faces a serious infrastructural gap as seen in the Environmental and Institutional pillars in chapter one of this study. The problem of unreliable electricity supply and internet is a major barrier that institutions within the country have not tackled yet. These institutional voids can only be addressed in emerging economies if the institutions are set to accommodate digital evolutions efficiently.

In addition, Institutional theory highlights that developing-country markets are uniquely hampered by systemic inefficiencies that undermine growth and employment (Stiglitz, 1989; Behrman, 1999) as seen in this study. Khanna and Palepu (2005) attribute these flaws to "institutional voids," or the systemic absence of institutional mechanisms that facilitate effective market transactions. These voids act as a primary constraint on economic actors across emerging markets (Khanna & Palepu, 2010; McAdam et al., 2019). However, they also present a unique entrepreneurial landscape: by stepping in to bridge these institutional gaps, new businesses can internalize transaction costs, carve out a robust competitive advantage, and catalyze wider economic development.

In my view, this specific definition explains perfectly why The Gambia struggles so heavily with regulatory oversight. The local environment completely lacks these specialized intermediaries or a robust domestic stock market watchdog to act as an external verification layer. In a Western market, an auditor relies on automated third-party data points to validate a client's records. Without these credible middle-tier institutions, Gambian regulators are operating in a total vacuum, forcing human auditors to manually investigate foundational transactions that a digital auditing script assumes have already been cleared by the ecosystem.

The issue of institutional voids can be directly related to all the limitations faced by developing nations in the application and adoption of new technological innovations and most particularly within the auditing field. Governments are faced with old systems with outdated laws and regulations that have not catered for the new innovations. Also, in a situation where the institutions are able to acquire sophisticated digital gadgets, the issue arises for the human resources needed to effectively and efficiently carry out complex transactions. In addition, the

problem with overall development such as constant electricity supply and high-speed internet all contributes to some institutional voids faced by emerging economies.

2.5.4 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) takes these massive institutional issues and applies them to how an individual auditor feels about using a computer (Davis, 1989). The model states that whether a person actually uses a system depends on two things: Perceived Usefulness (PU), which is believing the software will help them work faster, and Perceived Ease of Use (PEOU), which is believing the software won't be a painful, complicated nightmare to operate.

In most developing nations, the PEOU is generally interrupted with poor infrastructure. If an auditor faces electricity interruptions and slow speed internet, their perception of ease-of use drops to zero, feeling totally demotivated to use the new digital tools. This normally triggers the auditors to neglect the new digital tools and go back to their old ways of manual auditing.

Considering this point, under the TAM conceptual framework, the auditor can still become demotivated or uninterested to use the new technology even if they know the importance of its usefulness. In other words, it is crucial for the PEOU to be high indicating that all necessary factors and checks that enable easy usage are in place.

The Technology Acceptance Model also faces some huddles in the case of applying and using sophisticated auditing tools by some expected users. Researches have shown that, this form of rejection or reluctance to change is mostly common in the older generation, who are always hesitant to try out new methods and techniques.

2.5.5 Professional Skepticism, Behavioral Systems, and Automation Bias

Nelson's (2009) model of professional skepticism notes that to be a good auditor, you need a critical, questioning mind and the technical skill to spot a mistake when it's right in front of you. In high-tech audit environments, this mindset faces a unique psychological threat called automation bias. This is the natural human tendency to blindly trust whatever a computer prints out.

Current adoption frameworks heavily privilege the outcome of technology acceptance over the process of trust calibration (Davis, 1989; Ibrahim et al., 2025; Venkatesh et al., 2003), leaving the pre-delegation trial phase theoretically underdeveloped. This omission is particularly evident given the stark conflict between economic and psychological theory on the subject. On one hand, normative economic models argue that rational agents systematically verify unknown entities before full delegation to satisfy risk management standards (Stigler, 1961; Sitkin & Pablo, 1992). On the other hand, the automation bias literature suggests that agents rely on algorithms as heuristic shortcuts, minimizing vigilant information-seeking (Mosier & Skitka, 1999).

To understand how automation influences auditor behavior, it is critical to distinguish between task types. Unlike complex estimates, which are usually subjective, future forecasts are triggered by inherent uncertainty (Griffith et al. 2015; Logg et al., 2019). Audit tasks that are routine and continuous are ideal with automated settings thus providing objective results (Mocadlo, 2022). Since automation usually thrives in such settings, then it is safe to suggest that auditors will decrease their intellectual effort and contribute less effectively when reviewing and verifying outputs produced by automated machines. This could also be seen as a downside of what digital auditing tool could lead, thus reducing human element to critically analyze certain findings.

Ultimately, this diminished vigilance presents a severe threat to audit quality by reducing the likelihood of identifying critical errors.

In addition, when overworked, under-trained audit teams are pushed into complex digital environments, their critical thinking skills drop significantly. Lacking the technical programming skills to question a database script or check the backend code, the human auditor becomes passive. It seems they assume that because a financial transaction was processed and stamped by a centralized government system, it must be clean and free from fraud. This over-reliance ruins professional skepticism, turning what should be an aggressive investigation into a lazy, automated rubber-stamping exercise.

Resources will need to be diverted into accelerated growth and continuous training. Ensuring that the accountants, auditors or otherwise technocrats are well-equipped with the skills and knowledge needed to carry their required responsibilities, especially within the context of digitalizing processes.

2.6 State of the Art and Case Study Findings

2.6.1 The Structure of the Gambian Audit Market

The actual market for auditing in The Gambia is incredibly top-heavy, acting basically as a tight duopoly where two major firms with international network connections dominate the entire landscape. These two firms lock down the most profitable audits, like commercial banks, big telecom companies, and major public corporations, mostly because foreign investors demand an international brand name.

On the other side, small local audit practices (SMPs) are left to fight over small, under-capitalized local businesses. While both tiers of firms claim to follow the exact same

international standards, the difference in resources is staggering. The international affiliates have the money for global software licenses and continuous overseas training, while small local practices frequently lack access to basic updated manuals, software guides, or independent quality reviews.

2.6.2 The "Independence Paradox" and Role Ambiguity

A massive issue that keeps coming up in the Gambian corporate world is how common it is for external auditors to write the financial statements for the very companies they are supposed to be auditing. Because local clients rarely have qualified accountants on their payroll, they look at the external auditor as a helper hired to fix their messy books. As already discussed in the previous paragraph, this role doubling comes with heavier risks and adverse consequences, which totally deviates from the overall objective of auditing, accountability and transparency.

Writing the financial statements and then issuing an independent audit report on those same records is a blatant violation of international ethics codes and local company laws. Yet, this practice is widespread because of a deep role ambiguity. Local business managers simply do not understand what an audit is, they treat the external auditor as an outsourced accounting clerk rather than an independent judge, which deeply compromises the reliability of financial disclosures across the country.

Trust serves as the invisible currency of global markets, and its protection falls squarely on one group of professionals: auditors. Tasked with safeguarding public confidence, auditors provide independent, objective assurance that financial disclosures mirror reality. Rigorously challenging management and evaluating disclosures against strict regulatory criteria, they reinforce the accountability that keeps global economies stable.

The expectation of trust and independence from auditors poses significant variances in what actually take place in reality. Auditors are expected to be independent watchdogs, free from bias or outside influence, while being paid by the very companies they are meant to scrutinize. This reality begs a fundamental question: can an auditor ever be truly neutral while relying on the client for their fees?

In the Gambia, the likes of private audit firms are often found competing to win huge auditing contracts from their clients. This could trigger significant audit risks, question any potential form of bias or the possibility of intentionally omit major findings that may jeopardize the image and reputation of their clients. The independence of an auditor in such a position could not be totally seen as non-bias or free from influence as the auditor always seeks to please their clients in order to always secure their contractual terms and agreements.

This paradox is rooted in the dual nature of audit independence. First, *independence in fact* requires the auditor to maintain absolute, uncompromised objectivity during execution. Second, *independence in appearance* dictates that external stakeholders must perceive the auditor as unbiased. Both dimensions are equally critical; if stakeholders detect a conflict of interest, the appearance of compromise destroys the trust that the audit was meant to protect.

The Supreme Audit Institution of the Gambia (NAO) always endeavors to maintain both the independence in fact and the independence in appearance with the private audit firms that frequently audits them on a period basis. This is usually done through rotational audits in order to avoid the risk of familiarity as well as the maintain a strict coherence of how their audits are conducted.

2.6.3 Regulatory Fragmentation and Standard-Setting Lags

Studies have highlighted a distinct split between global regulatory environments. Developed countries struggle with institutional rigidity and multi-jurisdictional complexities, whereas developing countries face weak infrastructure, political interference, and limited stakeholder participation. To ensure sustainable standardization, regulatory systems must be coherent, transparent, and inclusive. The data demonstrates that effective governance driven by adaptive policies, strong enforceability, and high-quality reporting directly accelerates standard compliance, widespread innovation, and public confidence.

In the case of The Gambia, the Gambia Institute of Chartered Accountants (GICA) does not have the money, the staff, or the real legal power to monitor and discipline firms that ignore IFRS or ISA across the country. Because there is no independent, government-backed oversight board to enforce quality control, the regulatory environment is completely fragmented.

Auditors in most emerging economies tend to use non-coordinated approach with no basis or rules in monitoring and verifying certain processes. As mentioned by Eneje, Udefi, Okorieocha (2026), the absence of clear procedures, guidelines and standards monitoring the use of digital auditing tools leaves auditors uncertain about the legal and ethical implications of incorporating technology into their practices.

Standardization failures, however significantly compromise economic growth, innovation, and regulatory governance worldwide. In developed nations, fragmented, politicized processes fuel trade friction and technological lock-ins (Blind et al., 2023; de Vries et al., 2023), while slow updates in cutting-edge fields like AI and cybersecurity compromise consumer safety (Gasser & Almeida, 2022; Wladawsky-Berger, 2023). Meanwhile, developing nations struggle with low

compliance and weak enforcement, or even absent regulatory laws as in the case of The Gambia, which drive quality deficits and isolate local industries from global value chains (Mensah et al., 2023; Chirisa & Mabeza, 2024). This reliance on external frameworks (UNECA, 2023), combined with a lack of local stakeholder participation (Ezeanya-Esiobu, 2023), undermines social legitimacy. Ultimately, these deficiencies weaken industrial competitiveness and diminish the capacity of states to regulate effectively in a globalized economy.

Additionally, in developing contexts, frameworks like the AfCFTA Protocol on Standards drive regional cooperation and streamline trade through mutual certification recognition (UNECA, 2023; ARSO, 2024). In addition, the integration of digital tools within national regulatory authorities will strengthen transparency and compliance monitoring as indicated by (Mensah et al., 2023; SEC Nigeria, 2023). Ultimately, when regulatory frameworks are adaptive and inclusive within national laws, they promote public trust and enhance social legitimacy as (Ezeanya-Esiobu, 2023; Chirisa & Mabeza, 2024) suggested.

2.6.4 Infrastructural Realities and Technical Friction

While broad reports from the World Bank claim that expanding internet access is the ultimate growth engine for Sub-Saharan Africa, the actual physical reality on the ground in The Gambia tells a very different story. Big government projects, like the rolling out of IFMIS for state spending and ITAS for tax collections, have successfully converted millions of corporate documents from physical paper into digital records.

However, because these government databases operate in isolated silos that do not talk to each other, the reliability of the electronic audit trail is highly suspect. Constant electricity blackouts and the astronomical cost of internet bandwidth create non-stop technical friction. To get around

these infrastructure bottlenecks, auditors are routinely forced to stop live digital tracking, extract data to USB sticks, and do their reconciliations manually offline, keeping everyday professional work tied to low-resource methods despite the fancy digital front-end of government websites.

2.7 Auditing Standards: The Gap Between Design and Practice

The legal architecture of The Gambia shows a major regulatory gap: there are no local auditing standards, and there is no state-enforced law mandating the use of International Standards on Auditing (ISA). Because there is no law forcing compliance and because GICA does not provide a simplified standard manual for its members, audit quality is entirely up to the conscience and capability of individual firms. This creates a highly scattered professional scene where quality varies wildly from one firm to the next.

Firms that are not part of international networks are left at a massive disadvantage due to knowledge isolation. Without high-quality training manuals or regular technical updates from global headquarters, these small local practices become completely disconnected from modern global knowledge.

Reflecting this gap, World Bank Reports on the Observance of Standards and Codes (ROSC) heavily criticized the local habit of using the phrase "subject to the foregoing" in audit opinions, calling it a classic example of ritual compliance. Auditors copy this complex legal phrasing to look professional without actually understanding the heavy legal liabilities behind it.

Furthermore, the fact that the World Bank uses ISA as a yardstick to judge local audit quality, even though ISA is completely missing from local corporate laws, highlights a form of coercive mimicry: the country is forced to adopt the look of advanced global institutions before it has the underlying infrastructure to support them.

This issue is made worse since most client bookkeeping in developing nations is usually chaotic and disorganized or even absent, especially in manually intense environments. External auditors are usually challenged to find complete data sets from their clients in order to execute their auditing practices effectively. This however, cuts the auditor's legal right to access reliable evidence. In some cases, external auditors would prepare their clients' financial records from scratch before auditing them, turning the entire assurance process to a self-review exercise. This practice questions the reliability and integrity of their audit reports.

2.8 The "State of the Art": Digital Readiness and Implementation

Operating within a hyper-turbulent volatile uncertain complex and ambiguous environment (Lin, 2024; Agarwal, 2021), modern firms face an accelerated pace of change driven by digital transformation (Ghezzi & Cavallo, 2020). Beyond simple hardware or software, these technologies represent sociotechnical "digital objects that have been assigned a socially agreed-upon meaning" (Hund et al., 2021, p. 5), spanning from foundational IT infrastructures to frontier capabilities like AI, VR, and mixed realities (Sharma et al., 2023). The strategic deployment of these technologies to reconfigure products, business processes, or overarching business models constitutes digital innovation (Nambisan et al., 2017; Henfridsson et al., 2014; Yoo et al., 2010).

Although digital innovation is essential for long-term competitiveness (TNO, 2023), its success relies on highly deliberate, managed factors (Nasiri et al., 2023). Currently, only 3% of firms successfully realize their innovation goals, primarily due to a profound lack of baseline organizational readiness (Boston Consulting Group, 2024). As Vo et al. (2024) and Peiró-Signes et al. (2024) argue, technical availability and scalability alone do not guarantee successful adoption. Firms must deliberately heighten their digital innovation readiness their formal state of

preparedness to effectively adopt, assimilate, and exploit these digital assets for transformative value creation (Lokuge et al., 2019).

Designing an innovation-ready organization is fundamentally complicated by the unique traits of digital technology (Holmström, 2018). Because digital architectures are modular and layered, firms are forced to collaborate within open, diverse ecosystems alongside a revolving network of partners, including customers, suppliers, IT vendors, and academics (Füller et al., 2022; Nambisan et al., 2019; Lyytinen et al., 2016). Navigating these temporary relationships often proves difficult for legacy organizations (Kane et al., 2019). Additionally, because digital innovation is non-linear and perpetually incomplete (Allataifeh & Moghavvemi, 2021; Berente, 2020), the exact transitions between innovation phases remain fluid and ambiguous (Nambisan et al., 2017). Consequently, achieving readiness for digital initiatives requires a distinct set of organizational prerequisites compared to traditional innovation management.

Data from World Bank digital economy reports suggests that affordable internet and investments in tech education can serve as major economic drivers in Sub-Saharan Africa, eventually raising GDP per capita and lowering poverty. For instance, in neighboring Senegal, data shows that when rural households get access to mobile internet, their consumption goes up and extreme poverty drops, implying that digital tools can genuinely lift people up economically. In The Gambia, however, the digital audit environment is a strange, messy hybrid. The use of advanced predictive analytics or artificial intelligence is practically non-existent, and digital transformation is mostly limited to a few major national databases.

2.8.1 Technical Infrastructure Readiness

Integrating digital innovations into public administration is essential for improving service delivery and state performance (Benbunan-Fich et al., 2020; Pratama, 2020). This digital shift relies heavily on the co-existence of robust technological infrastructure and sufficient financial backing (Ibrahim et al., 2023; Yüksel, 2020). Together, these resources allow public sectors to adopt new technologies smoothly, driving tangible gains in service quality and governmental efficacy (Malodia et al., 2021a). Modern governance depends on cutting-edge infrastructure (Dkhili et al., 2020; G. Zhang et al., 2023), which comprises high-speed connectivity, advanced hardware and software, and secure communication networks (Qin et al., 2020). The establishment of this technical foundation can lead government agencies to simultaneously optimize internal operations and provide citizens with effortless access to vital services (Linders et al., 2018; Panagiotopoulos et al., 2019).

At the same time, strategic financial investment is paramount to realizing public sector digital transformation (Verhoef et al., 2021). Adequate funding is vital across every lifecycle phase of a digital solution, from development and deployment to routine maintenance (Tijan et al., 2019). Specifically, it funds software creation, hardware acquisition, cybersecurity scaling, and continuous workforce upskilling (Lee, 2021). This financial backing secures the longevity, adaptability, and evolution of public digital systems (Paul et al., 2023). Furthermore, robust budgetary allocations allow governments to extract actionable insights from data analytics, ultimately sharpening executive decision-making and fostering data-driven policy design (Lansing et al., 2023; Neely et al., 2021).

Modern accounting textbooks are full of excitement about an advanced, high-tech world called Audit 4.0, which heavily increases the scale of technology-based assurance. In this environment,

authors state that auditors will "piggyback on technology promoted by Industry 4.0, especially the Internet of Things (IoT), Internet of Service (IoS), Cyber-Physical Systems (CPSs), and smart factories, to collect financial and operational information". This architecture relies on a virtual mirror world that continuously tracks the conditions and locations of an organization's objects, allowing auditors to deploy models for "remote inventory, cash balance evaluation, real-time faults, and irregularity detection".

My reflection on this ideal is that it feels completely detached from the physical reality of the West African market. Although the literature speaks of seamless cloud networks like Continuous Audit Intelligence as a Service (CAIaaS) to automatically suggest modules based on user data, the typical Gambian firm cannot even keep its servers running due to local power cuts. In addition, The Gambia government under the Ministry of digital communication and technology hasn't given enough focus on technology acquisition and adoption. This can be achieved by allocating sufficient budget geared towards promoting the adoption and application of digital technical tools across government sectors which will ultimately affects the auditing process by the NAO. This pattern could also be relatable to other developing nations alike as seen in our previous texts.

In the case of local accounting and auditing firms, the issue also relies heavily on budgetary constraints (lack of capital) and a reliable bandwidth. This is needed for effective use of the internal IT resources in order to participate in any real-time virtual environment. This creates a massive mismatch: the academic world is mapping out an automated, continuous future, while local firms are stuck attempting basic database extractions onto physical hard drives because cloud infrastructure is far too expensive.

2.8.2 The Human Pillar: The Skills and Acceptance Gap

Technology acceptance models remain the dominant element for explaining technology adoption (Davis, 1989; Venkatesh et al., 2003). These frameworks prioritize practical variables, specifically perceived usefulness and ease of use, to predict user acceptance. However, this narrow focus on operational and functional aspects leaves a theoretical blind spot regarding how technology alters individual happiness and well-being by accepting new innovations.

Applying the Technology Acceptance Model (TAM) to Gambian auditors and auditors in other developing nations reveals a very stressed psychological landscape. Most practitioners fully recognize that the theoretical usefulness (PU) of programs like CaseWare or IDEA is incredibly high, especially since the government is forcing everyone onto platforms like IFMIS. However, their perceived ease of use (PEOU) is incredibly low because they cannot get localized training, software licenses cost more than their firm's annual profit, and there is no local IT helpdesk to call when the system crashes.

The PEOU of most technological innovations being really low is a very common indication of demotivation and economic stress faced both by workers and governments especially in most emerging economies. There needs to be a proper structure to introduce new technologies to expected users as well as incorporate standardize trainings needed to boost the perceived ease of use.

This gap between wanting to use technology and actually being able to run it creates a major vulnerability, specifically a massive risk of automation bias. When local auditors stop doing manual sample checks and simply download a report from the government's central IFMIS system, they show a dangerous tendency to accept the printout as infallible truth. This

completely ruins professional skepticism, which requires an auditor to have both a questioning mind and the actual technical competency to know when a system is spitting out corrupted data.

Without deep data-science skills or an understanding of digital application controls, local auditors have no way of knowing if a database script has glitched, creating a dangerous paradox where buying technology actually lowers audit quality. This human gap is severely common in areas with low training and continuous learning programs. Accountants and auditors are suddenly put in a vacuum to accept new technological evolutions without providing them the complete learning kit, in order to strengthen their intellectual capacity on digital auditing and accounting, and thus be able to detect errors and anomalies within complex systems.

2.8.3 The Organizational Pillar: Institutional Pressures and the Gambian Ecosystem

The environmental pillar looks at the external regulatory and technical ecosystem that dictates how digital adoption actually happens in The Gambia. Forced and mimetic copying heavily define the local market. Because the National Audit Office and big ministries operate under the strict watch of international lenders like the World Bank, the pressure to adopt digital platforms like IFMIS just to look legitimate is intense. Because of this external pressure, local audit firms are slowly forced to look digital because government tax portals remove the practical option of remaining purely manual.

However, what truly defines the environment in The Gambia is the complete lack of basic facilitating conditions. While an auditor in London takes high-speed Wi-Fi and 24/7 electricity for granted, a Gambian auditor faces constant infrastructure failures. The power cuts out unexpectedly, and the cost of internet bandwidth is a major budget line item. These physical limitations act as environmental gatekeepers, making the daily use of advanced cloud-based

auditing tools practically impossible. This proves that local professional practice is ultimately dictated by infrastructural determinism.

Furthermore, this environment is complicated by new laws like the Data Protection and Privacy Act 2021. This statute forces auditors to verify that the digital tools they choose to comply with strict data storage and privacy rules. To sum up, these environmental pressures increase the risk of institutional decoupling: local audit institutions maintain a high-tech digital facade for international stakeholders and government regulators, while their actual, back-office work remains stubbornly manual.

2.9 Synthesis of Literature Gaps

From the review of existing academic literature, a massive contradiction emerges between what the academic world promises and what is actually happening on the ground in developing markets. The literature on one hand describes a flawless, high-tech future where platforms like Continuous Audit Intelligence as a Service (CAIaaS) use built-in algorithms to automatically train models and recommend customized apps based on client industries. Authors like Dai and Vasarhelyi (2016) paint a picture of an "Audit 4.0" paradigm where a virtual mirror world seamlessly tracks live corporate data streams to automate remote inventory checks and irregularity detection.

However, my reading of the actual fieldwork reveals that this polished narrative completely falls apart when it hits regional realities. In less-developed countries, the adoption and use of this technology are "substantially below expectations". The literature explicitly notes that a severe "lack of skilled and experienced auditors impedes the transformation," making it incredibly

difficult for smaller, resource-starved practices to acquire necessary human IT resources and infrastructure.

This creates a severe theoretical mismatch. The mainstream auditing literature assumes that every firm operates in a frictionless Western market backed by high-speed internet and structured database systems. It completely ignores the survival workarounds that real people have to use in places like Africa, where even basic mobile money users are forced into "redacting the account balance for the shared notification message" and constantly changing PINs just to protect their data privacy.

Ultimately, this review highlights that we are trying to force advanced, continuous compliance rules onto markets that Khanna and Palepu (2010) rightly identify as plagued by "institutional voids". Expecting local auditors to manage complex digital transformations without a robust layer of specialized market intermediaries, software accreditation agencies, or data-gathering firms, the current literature leaves a massive blind spot. We are applying universal tech-heavy theories to an environment where basic facilitating conditions simply do not exist, and identifying this specific blind spot is what leads directly to the formulation of our problem statement.

2.10 Problem Statement: The "Gambia Gap"

The "Gambia Gap" serves as the primary justification for this study, referring to the massive disconnect between the high-tech standards of global auditing and the everyday realities of a country dealing with severe resource shortages. Breaking this down into technical, human, and environmental pillars helps highlight three specific gaps that this research aims to solve.

2.10.1 The Infrastructure-Policy Gap

A massive paradox in this study is the infrastructure-policy gap. The digital realities in less-developed nations are characterized by weak infrastructure and non-existing regulations creating a heavy technical friction. On one hand, government policy demands that tax filings and audits be done online, as seen in the case of Egypt, in order to promote transparency. On the other hand, unreliable power supply and overly expensive internet creates a hurdle for data adoption and application, thus forcing businesses to still practice manual processes.

Because of this, continuous auditing, which sounds great in theory, becomes an impossible dream in practice. When an audit trail that is supposed to be an unbroken digital chain is constantly interrupted by power cuts, the system breaks down. Auditors have to pull data manually, format it by hand, and reconcile it offline, reintroducing the exact human typing errors that digitalization was supposed to fix. Government policy creates a high-level digital mandate that the country's physical infrastructure simply cannot support, trapping local professionals in a trap where technology actually makes the job slower and more complicated.

2.10.2 The Human and Environmental Dimension: The Resource and Skills Gap

Most academic papers on auditing focus entirely on big multinational firms, completely ignoring the reality of cash shortages. Research in wealthy countries takes it for granted that audit firms have the financial flexibility to constantly buy new software and pay for intensive staff training. In contrast, the audit sector in The Gambia, including both the NAO and small local practices, deals with a constant shortage of money. The cost associated with buying digital licenses leads to budget constraints in many developing countries. This tends to tighten the budget, leaving no room for additional cost meant for training auditors and accountants in order to effectively utilized the purchased licenses.

Acquiring sophisticated licenses and not being able to efficiently utilize it creates a huge knowledge gap, between expectation and reality. The consequences can also be severe if auditors are expected to rely on this software and produce audit reports and opinions, when they treat automated generated report as authentic without executing professional skepticism. In the Gambia, the use of the Integrated Financial Management & Information System (IFMIS) by public auditors poses constraints on the manner in which financial data are pulled. Most auditors lack the knowledge to pull reports and data from the IFMIS portal, talk less of scrutinizing its content.

Combined with high training costs and the lack of any IT-audit courses in local universities, these technical barriers create a strict competence ceiling. This raises a fundamental question: is the human element strong enough to handle this digital transition, or is the lack of basic support completely undermining the quality of audits?

2.10.3 The Institutional Dimension Gap

A major institutional paradox highlighted by this research is the risk of decoupling, where an organization's public image is completely different from its actual daily practices. In many developing nations, this could be regarded as forced compliance. Audit firms within these regions tend to “please” international donor agencies and global accounting bodies in order to appear “standard”. The reality on the ground tells a different story, these forced systems are rarely integrated into the local workflow since auditors are not very comfortable with their usage thus the audit work remains primarily manual.

The creates a functional gap where acquiring software serves as a way to appear legitimate rather than a useful tool to enhance processes. In a country where the audit sector relies heavily on

foreign funding and World Bank approval, the pressure to *appear* digital and copy the tech look of global firms matters far more than actual internal efficiency. Digitalization in The Gambia may serve primarily as a symbolic token to show the global community that the country is modernizing and fighting corruption, even if systemic infrastructure issues prevent those tools from ever being fully utilized. Investigating this dimension allows this research to look past the official rhetoric, separating a real technological evolution from a digital ritual designed to make international stakeholders happy.

2.10.4 The Conceptual Blueprint: Bridging the State of the Art to Fieldwork

To wrap up this chapter, it is important to remember that this literature review functions as a descriptive map of existing research, not a practical playground for testing hypotheses or running statistical models. The objective here has been to outline the legal frameworks, theories, and technical realities based on what other scholars have written about developing nations and The Gambia. Through this deep dive into the literature, three major mismatches have been uncovered: the infrastructure-policy gap, the resource and skills gap, and the institutional decoupling gap.

Because these three gaps have never been tested or verified in the current Gambian environment, they provide the exact justification and conceptual blueprint for this study. Moving forward from these theoretical conflicts and data limitations, this study proceeds to present its own original findings in the chapters that follow.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

The purpose of this research seeks to explore and evaluate the impact of digital tools on the auditing process in The Gambia and developing nations alike. The study aims to investigate the impact of technological adoption in the audit field and how it affects the overall auditing process. The motivation for this research approach, the design, methods, and research strategy will be discussed.

In addition, the study will also explore and assess the impact of technology in transforming traditional audit practices from manual to modern, workflows, and methodologies, and also to point out the benefits and challenges associated with their adoption.

This chapter details the methodological approach employed to address these research questions effectively. It outlines the research philosophy, design, data collection methods, sampling strategy, data analysis techniques, ethical considerations, and potential limitations of this study, all within the specific context of The Gambia and developing nations alike.

3.1 Research Philosophy

This research adopted a pragmatic research philosophy. Pragmatism acknowledges that there is no single "best" way of understanding the world and that the most appropriate research approach is the one that best addresses the research questions (Saunders et al., 2019). In the context of the digitalization of auditing in The Gambia, it can be seen as a complex phenomenon influenced by technological, organizational, institutional, and individual factors. In such a situation, a pragmatic approach allows for the flexible use of both qualitative and quantitative methods to gain a comprehensive understanding of this study. This philosophy aligns well with the need to

explore both the broader trends and the experiences within the Gambian auditing landscape. The pragmatism allows for the combination of both quantitative (positive-oriented) and qualitative (interpretivist-oriented) methods. To explicitly answer the research questions posed in this study, the findings will be shown in the conclusion chapter of this study after exploring and analyzing the empirical data gained from the quantitative and qualitative methods. This will give detailed analysis on the process of digital adoption within the auditing process in developing nations, taking The Gambia as a case study.

3.2 Research Design

Within a pragmatic philosophical stance, the study employs both quantitatively oriented (positivist) and qualitatively oriented (interpretivist) elements. The reason being, the study focusing on the adoption of digital auditing tools within the auditing process in developing nations would necessitate the application of both Quantitative and Qualitative studies. The quantitative component focuses on measuring relationships between key constructs derived from the Technology Acceptance Model (TAM) and Institutional Theory (e.g. perceived usefulness, perceived ease of use, and institutional pressures), using a structured survey administered to auditors and related professionals. The qualitative component employs semi-structured interviews to generate more in-dept analysis and insights into how auditors experience, interpret, and respond to digital technologies and institutional demands in practice. Therefore, the study infused a mixture of both methods in order to achieve the desired results.

The use of quantitative studies approach (Positivism) is embedded on the idea that the adoption of digital tools as stated in previous literature, showed a degree of positivity. Thus, the use of digital tools usually enhances the overall working conditions of firms and businesses. In this

regard, adopting a positivism approach which is often linked with the quantitative research design is deemed appropriate.

In contrast, the digitalization of the auditing process especially in developing nations can cause a call for concern and the results might not be all positive. Considering some of the economic challenges faced by emerging nations in acquiring and adopting digital auditing tools, the research design will likely take the form of an Interpretivism approach. This will create an avenue for the participants to share their unique analysis and point of views.

For the purpose of this study, integrating the two methods will allow this research to test patterns proposed by existing theory and prior empirical work, and the same time cater for new themes that emerge from participants. Thus, this research design integrates quantitative and qualitative components in a pragmatic manner, drawing on positivist principles for the survey and interpretivist principles for the interviews.

3.3 Research Type

Saunders et al. (2016), outlines three research approach that researchers can use thus a deductive approach, an inductive approach, and an abductive approach. Each of these approaches has its advantages and disadvantages. In the case of deductive research, the primary source of knowledge comes from the existing theories, with the hypothesis created and tested from the knowledge gained from previous theories. This method is best suited for a quantitative research approach than qualitative since it compares relationships between variables. Also, the findings from a deductive approach are usually generalized emerging from a relatively large sample size.

The second method as proposed by Saunders et al. (2016), is the inductive approach. This approach focuses on the results generated from the empirical research of the study. Most

researches using the qualitative methods usually find this method more appropriate in analyzing data collected from interviews, and interpreting respondents' perspective in order to fully grasp certain issues being examined. According to Saunders et al. (2016), an advantage of this approach is the ability to be able to have several understandings and meanings of certain issues and not being limited to the causes and effects on certain variables as seen in the deductive approach.

The final approach is the abductive approach. This is a combination of both approaches creating a more flexible way of getting data and interpreting data in various perspective. This approach combines both the advantages of the two aforementioned approaches and allows researchers the ability and independence to get the absolute best in analyzing their findings.

This research adopted the abductive approach in order to gain more leverage in understanding the impact digitalization has on the auditing process in developing nations' context.

3.4 Research Strategy

This study adopted a Convergent Parallel Mixed-Methods Design. This design allows for the simultaneous collection of quantitative data (to measure 'what' is happening regarding digital adoption, through survey questionnaire) and qualitative interview analysis (to understand 'why' it is happening). This triangulation ensures that the high perceived benefits found in the surveys are critically examined against the practical realities of the Gambian regulatory and economic framework.

The research strategy takes the following: Survey Questionnaire and Interviews.

3.4.1 Survey Questionnaire

The survey questionnaire is informed and guided by the theoretical framework (TAM and Institutional Theory), and the research questions. The survey gathers data from a sample of auditors and finance professionals in the Gambia and other audit professionals outside of the Gambia. This approach is essential to measure their level of adoption and application of technological tools within the auditing process. The PEOU and TAM model will also be assessed in all regards, whilst evaluating the forms of institutional pressures highlighted in this study. The questionnaire operationalizes the theoretical framework by including items on perceived usefulness and perceived ease of use drawn from the Technology Acceptance Model (TAM), and items capturing coercive, normative, and mimetic pressures derived from Institutional Theory. These constructs are used to examine auditors' adoption intentions and behaviours in relation to digital auditing tools in The Gambia.

3.4.2 Interviews

The research as part of its qualitative research method, involve interviews with individuals from different sectors of the economy; those directly affected with the impact of audit reports with key informants in The Gambian auditing profession. These informants were strategically selected to represent diverse perspectives and experiences. The study comprises of interviews from twelve individuals within the auditing and accounting field, with the list comprising of IT Auditors, financial auditors, accountants and those charged with governance from different organizations. The interview sessions were recorded to ensure completeness and to maintain accuracy in the reporting of the information being shared. The names of the interviewees as well as the organizations in which they work are not included in this study to ensure anonymity. A database including details of the interviewees, stating their occupation, length of the interview and their

credentials will be outlined in a table format to enhance the transparency of this research. In addition, the interview sessions were carried out both in person for some instances and online via zoom for certain persons. Also, the English language was used as a medium of communication during the interview.

3.5 Time Horizon

Although the phenomenon of digitalizing the auditing process is inherently longitudinal, this study adopted a cross-sectional time horizon due to time and resource constraints (Caruana, 2015). The findings may serve as a baseline for future longitudinal research. The digitalization of the auditing process in developing nations as a research topic has already signaled a continuous process that needs to be examined overtime. In such an event, it will be deemed more appropriate to consider the Longitudinal approach in order to track the progress and analyze its performance and impact in the long-run.

However, due to the nature of this research and the time constrain and pressure involved in academic research projects, the Cross-sectional approach will be more appropriate. This is because, it will be more convenient and appropriate to collect all available data at one point in time and conclude on the research topic.

Nonetheless, in the near future, this degree research project could be used as a basis to perform further extensive work on the impact digital tools have on the auditing process, paving a way for a longitudinal approach.

3.6 Sampling Strategy

According to Taherdoost (2016), a sampling frame is the actual list from which you pick your study participants. Researchers generally choose these participants using either probability or

non-probability methods. For the purpose of this study, a non-probability sampling is adopted although the method is limited by its selective choices creating room for bias Etikan et al. (2016). This method was adopted for its effectiveness to not generalize the results to the entire population, but basically focusing on professionals within the auditing field. In that regard, selecting professionals outside the auditing domain will be deemed unnecessary and ineffective to obtain our results. This approach was selected since it is well-suited for this study as it gathers first-hand insights directly from auditors. Specifically, it explores how digitalization is reshaping audit workflows, how new digital tools are being applied in practice, and how these changes are transforming the broader profession.

The sampling for the survey and the interview targeted professionals with auditing and accounting background, who work within the private and public sectors. These professionals were targeted because they constitute the stakeholders in the audit field and are considered key players within the auditing process. The National Audit Office (NAO), which is the Supreme Audit Institution (SAI) of The Gambia, the Gambia Revenue Authority, the Central Bank of the Gambia as well as the private audit firms within the Gambia and beyond were key organizations targeted for both the interview and the survey.

During the research, the author targeted the National Audit Office (NAO) as a key focus to investigate how digital audit workflows are reshaping public oversight in developing nations, using The Gambia as a primary case study. The NAO is mandated by the constitution of The Gambia the authority over public funds oversight and evaluates systems across all government ministries, departments, and agencies. This unique position gives this research a broad, systemic view of public financial management that a single-organization studies cannot capture. In understanding the context of developing nations in embracing technology within their

institutions, the position of the SAI Gambia will be evident to provide empirical results for this research, by serving as a real-world example of a public oversight body navigating the shift towards digitalization. Moreover, examining the NAO alongside tax authorities like the Gambia Revenue Authority (GRA) and financial supervisors like the Central Bank of The Gambia allows us to directly benchmark how public sector digital readiness compares to broader regulatory and private sector standards.

The NAO being incorporated within our primary research methods enhances our core study objectives and also enriches our empirical data. In the quantitative survey phase, the response gathered from the NAO professionals helps to set a clear baseline of the use of digital auditing tools compared to the manual processes. This data highlights the specific issues encountered by the staff of the NAO and also helps to establish clear lines on the barriers observed in this research; thus technical, human and institutional pillars. On the qualitative category, the NAO was allocated four slots out of our total eleven, one of which includes those charged with governance. This was an intentional act to capture the realities on the ground and showcase the critical institutional insights. The semi-structured interviews explored the current digital literacy rate and level of the NAO professionals, how auditors on the ground collect and verify evidence, the current digital tools already being adopted and the NAO's leadership roles and responsibilities towards digitalization. The combination of the interview analysis together with the survey findings will create a practical picture of digital transformation in public sector auditing within a developing nation context.

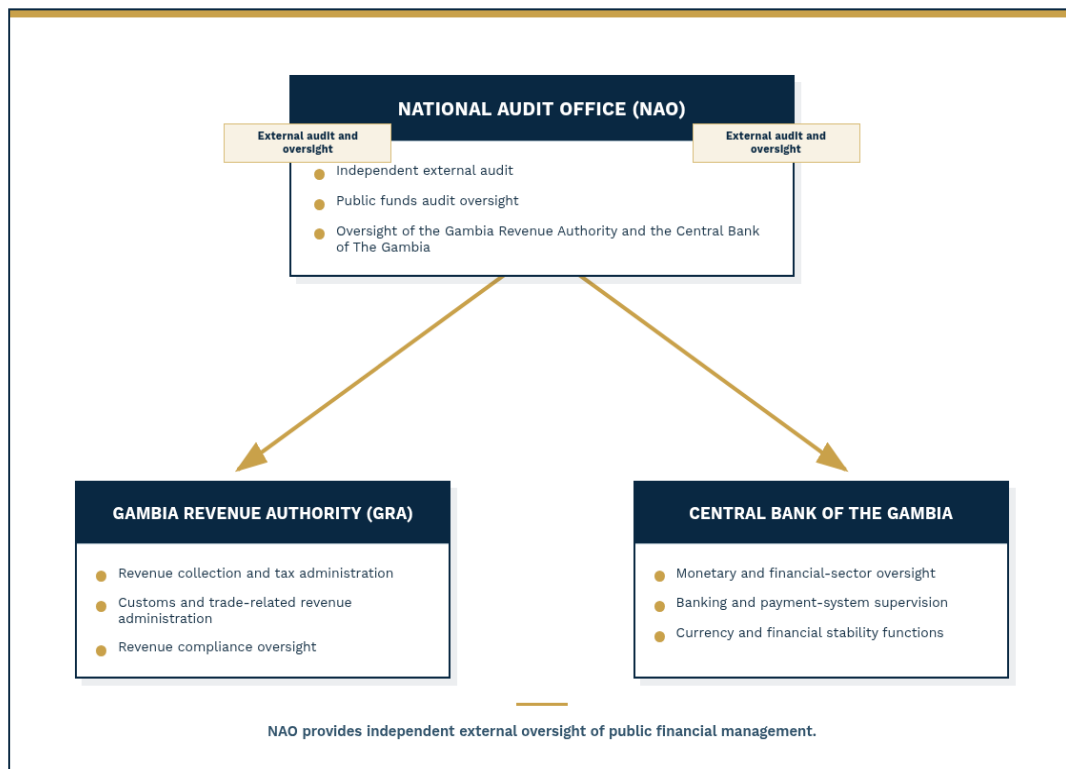
In a recent publication, the SAI Tanzania has recently call upon the SAIs in Africa to come forward and embrace digitalization citing specifically SAI Gambia (NAO). Being the body responsible to report on government processes in enhancing transparency and accountability, the

call was relevant to facilitate these institutions fighting against all forms of corruption and financial misconduct. This initiative is key to understand the roles SAIs in other developing nations are playing in embracing advanced technological tools. The scenario from the speech given by the SAI Tanzania, calling upon the NAO clearly manifest and strongly supports the position of the NAO in shaping the narrative of this research. The idea behind this call is to ensure that African SAIs are at the forefront to utilize technology as a mechanism to detect fraud and financial embezzlement in government institutions. This aligns well with the objective of this research as it seeks to ensure the current level of digital integration within audit institutions and the perceived benefits and limitations faced by the actors within the field of audit. Selecting the SAI Gambia in obtaining evidence on the state of digital adoption within the developing nations is a giant step in order to implement the key recommendations given by SAI Tanzania in using AI-powered audit tools to combat financial irregularities.

The sampling also targets the Gambia Revenue Authority (GRA), a body overseeing the customs & excise department and the income tax department. This institution plays a significant role in The Gambia economy as it represents the body responsible for collecting and remitting revenue to the Gambia government. These monies are used for servicing major government activities such as payment of salaries to civil servants, payment of public debt and other contingent government commitments. Their role in this research is linked with the revenue collection and remittance; observed in this study by using digital auditing tools in enhancing public accountability and transparency. The use of advanced technologies at GRA level will strengthen their processes in promoting absolute transparency which eventually enables the NAO to conduct real-time audits more efficiently. Gambia is a tax-based country, with almost 90% of its revenue coming from taxation, thus the insights given by the GRA participants during the survey and

interview will be of great value. The GRA has undergone through a significant digital transformation in recent years, introducing the ITAX system to tackle the issues of indirect taxes on goods, and with the introduction of the ASYCUDA world software, which address the issues of transparency on the import-export transactions at the customs and excise department. These developments are reckoned as a step towards embracing digitalization and also fuels NAO's commitment to automate their auditing process. During the sample, a representative from their internal audit department was part of the interview process for this research. Their contribution was essential to understand the stance of government in ensuring transparency and integrity within the revenue collection process and also explore the digital readiness of major stakeholders of the SAI Gambia in embracing advanced technological tools.

Fig. 4: Independent external oversight of public financial management



Source: Own elaboration

Another major stakeholder within the auditing process explored in this research is the Central Bank of The Gambia (CBG). This institution is the financial oversight body of The Gambia and plays a key role in supervising the banking sector as a whole. Targeting participants from the Central Bank of the Gambia is ideal to gather empirical data on the financial sector digital readiness for both the public and private sectors. In the case of this research, sampling the CBG highlights key areas of digital literacy rate and financial inclusion within the societies of emerging economies. The research is interested to have a glimpse of how ready developing

nations are to enhance their process using advanced technologies and the same time observing some of the technical, human and institutional loopholes that impedes this process. The CBG as a central figure in monitoring the financial sector, is equipped with the information on the digital literacy rate of professional within the financial sector as well as the level at which other institutions within the private sector are embracing technology. This information is key in shaping the results of this research in analyzing the impact digitalizing the auditing process could have in developing nations, especially in The Gambia.

Moreover, the CBG is also on its digitalization path and has included many digital platforms in order to promote financial inclusion and also enhance digital payment systems. The introduction of the National Financial Inclusion Strategy (NFIS) launched in 2022, was spearheaded by the CBG, the UN Capital Development Fund (UNCDF) and Alliance for Financial Inclusion (AFI). This initiative has radically transformed the financial sector in enabling the youth and informal workers have access to funds. This development informs the research on the overall structure of the available revenue lines within the economy and also helps to identify some of the technical or infrastructural dimensions needed in the digitalization process. The participants from the CBG provide an instrumental role in demonstrating the technical and infrastructural readiness of the Gambia financial sector in adopting digitalization. Likewise, in their mission to promote online digital payment systems, the CBG introduced the Gambia Interoperability Switch Program. This initiative has enabled smooth inter-banking transactions, online payment of services and many other integrated payment systems. Considering the gaps this study seeks to address, with little evidence on the adoption of digital tools in emerging economies with poor infrastructural development; the participants from the CBG will help address these areas and also provide invaluable insights on the financial ecosystem of the Gambia.

3.6.1 Sampling technique

In the case of the survey questionnaire, a convenience sampling approach (Bell et al., 2019) was adopted, targeting all professionals who had access to the survey questionnaire despite their years of experiences within the auditing field in The Gambia. This technique is ideal to capture the broad insights of professionals within the auditing and accounting field and the same time offsets the bias employed by the purposive sampling adopted for the sampling of interviewees.

During the sampling of interviewees, the study adopted the purposive sampling strategy to target specific individuals within the auditing field. The respondents are expected to meet certain criteria in order to be selected for the interview sessions Etikan et al (2016). To ensure insightful contributions from the interview sessions, we chose to exclude auditors who have been in the field for less than five years, and who possess professional and academic certificates such as the ACCA or equivalent, Masters or equivalent in their respective domains.

3.6.2 Sample size: quantitative survey

A total of sixty responses were received surpassing the targeted fifty. All the sixty responses received were evaluated and used for the results of this study. Adopting the convenience sampling approach is suitable to provide an overview in understanding the challenges, benefits and current adoption rate of digital auditing tools in developing nation's context from all the players within the sector.

3.6.3 Sample size: qualitative interviews

Initially, ten respondents were targeted and contacted via personal channels and networking and fortunately, we ended up with eleven. These included four participants from the National Audit

Office, two from private audit firms, four from government parastatals, and one from the private telecommunication sector. All eleven respondents reside and work in The Gambia, this is important to ensure homogeneity. In addition, two are head of institutions and are in charge of governance whilst one participant represents the central bank of The Gambia. Participants were selected purposively to capture a range of perspectives on digitalization in auditing and recruitment of interviewees continued until thematic saturation was reached, that is, no substantively new insights emerged from additional interviews.

3.7 Data Collection Method

The study adopted the Qualitative word-based in conducting interviews as well as the Quantitative method in sharing survey questionnaires to a targeted audience. A mixture of both the qualitative and quantitative data collection methods is ideal in this research project as it enables a more comprehensive results found in both research methods.

3.7.1 The Interview Process

The study took upon an interview process to gain in dept knowledge on the research questions posed in this research as well as understand the current state of audit digitalization in developing nations. A semi-structured interview as proposed by Saunders et al. (2009), was adopted in this study. According to the authors, a structured interview follows a strict pattern where the interviewee is only limited to answer the questions posed. On the other hand, the unstructured interview does the opposite and allows for conversations to be steered from different angles. In the case of this research, a combination of both methods will be employed to cater for the research questions as well as create an outlet for the interviewee to delve more into the topic. The adoption of the semi-structured interview during the sessions enabled the interviewee to share

their experiences and expertise in the areas related to this research. The information provided by the interviewees was recorded and kept in a folder for reference purposes.

3.7.2 Survey Questionnaire

In the case of the survey questionnaire, a convenience sampling approach (Bell et al., 2019) was adopted, targeting all professionals who had access to the survey questionnaire despite their years of experiences within the auditing field in The Gambia. To obtain responses for the survey questionnaire, personal networking was involved since the researcher works within the auditing sector in The Gambia. This has enabled the author to access the space of auditors and accountants within the Gambia in getting the needed responses for the questionnaire. The google link containing the survey questionnaire was shared through official platforms of institutions such as the NAO, and other social media channels to reach the targeted number.

3.8 Data Analysis Technologies

3.8.1 Qualitative Data Analysis

Analyzing the data received during the interview is a very crucial step for this research study. The information gathered during the interviews are characterized in reoccurring themes, expressions and thoughts (Turner, 2010). While the thematic analysis was primarily inductive, several themes were interpreted in light of the theoretical framework. In particular, interview data relating to perceived benefits and ease of use of digital tools were linked to core TAM constructs, whereas themes on regulatory demands, professional norms, and peer influence were interpreted through the lens of Institutional Theory.

The themes, each addressing a specific research question and addresses certain gaps that the quantitative approach (survey) could not address. The data collection process of the interviews

was carried through a consented transcript of audio recordings. In the analyses part, direct quotations are being employed for some respondents in order to reflect the exact wordings described during the interviews. According to (Wolcott, 1994), quoting directly from the respondents is a vital way in establishing facts and reliability.

The interview phases were comprised of the introductory part, giving the interviewees the opportunity to explain their current positions and the role they play within the auditing and accounting profession. This is followed with the questions that are directly related to the research questions of this study. This section allows the respondents to share their thoughts on the perceived benefits, limitations, government regulatory policies and the overall impact the digitalization of the auditing process could have or currently have within the audit field. The third part of the interview delve into the future prospects of the digitalization process in developing nations and what measures are to be in place in ensuring a successful adoption of these digital tools. As suggested by Saunders et al. (2016) adopting the thematic analysis is great way to analyze large data sets. For the purpose of this study, the analysis will take a thematic formatting, identifying seven themes that are a reflection of reoccurring phrases and expressions during the interview process Braun and Clarke (2006).

3.8.2 Quantitative Data Analysis

The quantitative data collected through the survey questionnaire were analyzed using statistical software (Google Survey response sheet). The analysis involved inferential statistics to examine the relationships between key variables, percentage outcomes as well as detailed explanation of events. Moreover, the perceived usefulness and ease of use of digital technologies and their adoption (TAM), the influence of institutional pressures on adoption, and the impact of

digitalization on audit outcomes, were reflective on the questionnaire. These analyses directly address the research questions of this study.

3.8.3 Integration of Qualitative and Quantitative Data

The mixed-methods design necessitates the integration of qualitative and quantitative findings. The qualitative findings will inform the interpretation of the quantitative results, providing context and deeper insights into the statistical relationships identified. For example, interview data can help explain why certain institutional pressures are more influential than others or why auditors perceive certain technologies as more or less useful. This integration will occur primarily at the interpretation and discussion stages of the research. The integration of qualitative and quantitative results is guided by the theoretical framework, with both elements jointly used to assess how TAM constructs and institutional pressures shape the adoption and impact of digital auditing tools in The Gambia. The data collected from both the interviews and the survey questionnaire will be interpreted and analyzed using the results provided by each method.

3.8.4 Ethical Considerations

This research adhered to strict ethical principles ensuring the well-being and rights of all participants in The Gambia. Key ethical considerations include informed consent of participants, providing them with a clear information about the uses of their responses for the purpose of this study. The participants were also informed about the confidentiality aspect of their responses unless otherwise they would want to be mentioned, as seen with case of Auditor General and the Head of Internal Audit Directorate.

Likewise, the audio recordings of the interviewees are kept for some time for future references before it is destroyed at a certain time lapse. In a nutshell, the manner in which the interviews were carried highly gave regard to the institutional norms and considers individuals' preferences.

3.9 Methodological Limitations

The limitations faced by this research study is more related to the sampling issues that rely heavily on a certain demographic (auditors, accountants, business personnel and the auditees) in The Gambia. As a case study focused on The Gambia, and other developing nations, it would have been worthwhile to gather responses and data from other developing nations highlighted in this study. However, the insights gained from the Gambia context, can provide valuable lessons and contribute to a broader understanding the impact digitalization have on the auditing process in similar contexts. The research is majorly linked with the Non- Probability Sampling, where a selected demographic (accountants, auditors) was selected within the rest of the population. This however could be considered a limitation as it neglects other professions, but in the case of this study, the selection was deemed necessary as they provide the responses the study seeks to address. In addition, gaining access to key informants and achieving a representative sample in The Gambia were some challenges faced, this is due to time constraints, as the researcher spent a very limited time in The Gambia. Despite these limitations, the study still provides a valuable analysis of how the digitalization of the auditing process in developing nations is taking its course and how it has been perceived by the relevant actors within the auditing process.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter presents the findings and analysis from this study's quantitative and qualitative research. The quantitative data, collected through a survey, provides a statistical overview of the results related to the research questions. The qualitative data on the other hand, is gathered from in-depth interviews explores the research aims and objectives of the study. The combination of these two methods provides a comprehensive overview of how digital auditing tools affects the auditing process in developing nations' context.

In addition, the quantitative results show percentages and statistical trends, while the qualitative findings from the interviews provide insight into people's attitudes, perceptions, and involvement with digital tools in the auditing process.

The formatting of this chapter will start with the quantitative results using graphical representations and percentages before transitioning to the results generated from the qualitative method presented in themes. The thematic presentations under the qualitative research method are associated with three gaps identified in this study thus, Technical Gap, Human/Environmental Gap and Institutional Gap. This is also aligned with the research questions examined in this study, whilst analyzing the results based on the theories proposed in this research in understanding the adoption process of digital auditing tools.

4.1 Quantitative Data

The quantitative data aims to understand the perspectives of auditors, accountants, and relevant stakeholders on the adoption of digital technologies in the auditing process. A survey questionnaire of twenty questions was prepared and shared targeting a specific audience that are

within the auditing chain or cycle either directly or indirectly. The structure of the quantitative results will be presented using the descriptive statistics before integrating the findings related to the research questions. Each of the survey questions is related to a specific research question. The results of the questionnaire will be re-grouped under the related research question in order to address/answer the research questions. This will create more clarity and ensure that all the research questions are addressed and answered by the survey questionnaire.

4.1.1 Descriptive Statistics

The descriptive statistics referred to in this research will focus on the following terms:

Frequency and percentage distributions; These are used for categorical questions to understand the roles played by the participants or respondents in this research survey. It will be related to questions that seek to ascertain how a participant's role is reflected in the adoption of digital auditing tools in The Gambia.

Measures of central tendency; This involves the use of the MODE, MEAN and the MEDIAN on questionnaires. The MODE, is the most frequent response ascertained. Whilst the MEAN highlights the average scores for a given statement related to the research questions and on the other hand, the MEDIAN will represent the middle value in situations where there will be extreme outliers in the data.

Measures of dispersion; The standard deviation is used to show the variability or spread of the responses. A low standard deviation indicates that most respondents are in close agreement, while a high standard deviation suggest a wide range of differing opinions on a particular topic.

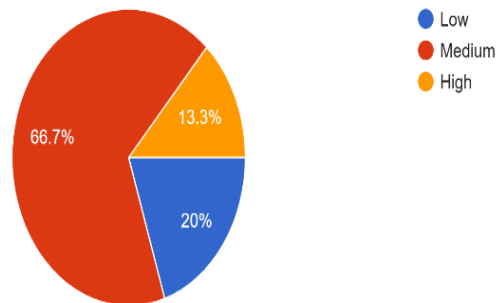
4.2 Quantitative findings in relation to the research questions

4.2.1 Research Question 1. What is the current level of digital auditing tool adoption and proficiency among professional auditors in The Gambia?

The findings related to the current level of digital adoption and proficiency among professional auditors in The Gambia is highlighted below in figures 1.1,1.2,1.3 & 1.4.

Fig. 1.1

What is the level of digital literacy among your audit staff? Scale:
60 responses



Source: own elaboration

Fig. 1.1 reveals that the overall level of digital literacy among the surveyed audit staff is predominantly at a medium level. The largest share of responses, at 66.7%, falls into the "Medium" category. This suggests that the majority of the audit staff has a basic or functional understanding of digital tools, but may not be highly proficient or comfortable with advanced technologies. These findings suggest the barriers affecting the adoption of digital auditing tools with this level of digital literacy among staff.

The Medium literacy rate of 66.7% is a reflection of a state of a normative lag, that exist between the time technology is being introduced to the time is it fully immersed into organizational

cultures. From the Institutional Theory Perspective, DiMaggio & Powell, (1983), professional standards are pushing more towards digitalization and instilling digital competency among audit staff; yet the institutional norms and culture still lag behind to introduce effective trainings and monitoring mechanisms that will uplift the digital literacy rate. The auditing profession in developing nations is filled with auditors who meet basic operational needs but lacks the competence to operate advanced digital technologies.

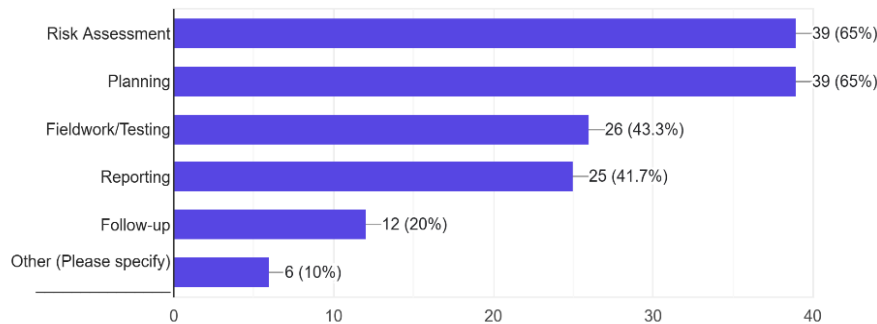
Moreover, about 87% of auditors are within the Low and Medium literacy tiers, this could be an indication of the Perceived Ease of Use (PEOU) which directly influences the Perceived Usefulness (PU) during the application and use of digital tools, Davis (1989). This suggests that while auditors may have recognize the importance of using technological tools within their processes in enhancing performance, their competence level to adopt these tools creates a cognitive friction. Lacking the skills to utilize advance digital software and programs reduces the PEOU, that refrains auditors from using these technologies.

Rogers (2003) emphasizes complexity as the degree to which an innovation is perceived as difficult to understand and use. The use of advanced technological tools is always associated with perceived complexity affecting its widespread adoption. The findings have revealed that most auditors are lacking the competencies required to use software such as TeamMate, Arbutus, causing them to perceived these tools as sophisticated.

Fig. 1.2

Which audit areas have you digitalized the most? (Select all that apply)

60 responses



Source: Own elaboration

Fig. 1.2 identified that Planning and Risk Assessment are the most digitalized areas. With 39 responses (65%), audit planning is the most common area for digitalization. This suggests that firms are using digital tools for scheduling, resource allocation, and preliminary risk assessments. However, the field work and reporting are still manually inclined with 26 responses (43.3%) for the fieldwork and 25 responses (41.7%) for the reporting. This is a significant finding, as it suggests that a large portion of the hands-on auditing work is still being done manually. The finding also indicates that manual operations are highly linked to these phases but there is still the use of certain digital tools incorporated within the processes. The least digitalize phase according to the survey is the follow-ups, with just 12 responses (20%). This indicates a potential gap in the end-to-end digitalization of the audit process.

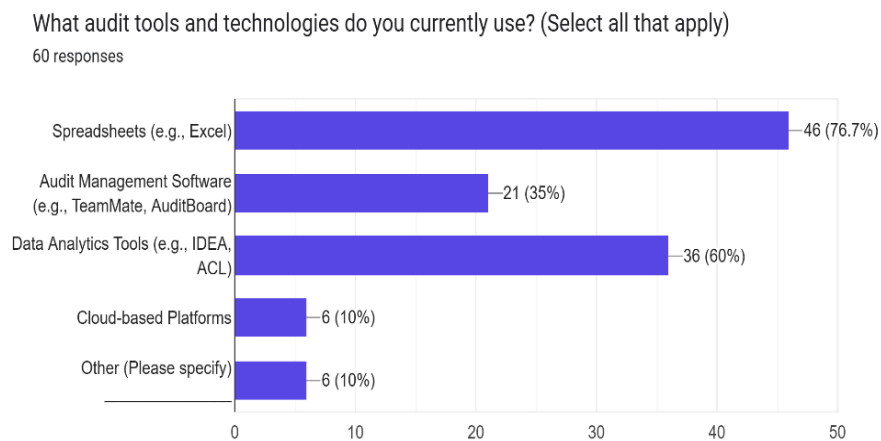
According to Venkatesh et al., 2003, the performance expectancy is defined as the degree in which an individual believes that using the system will help attain gains in job performance. This performance expectancy is linked with the effort expectancy, indicating that the more work is done, the higher the gains will be. In fieldwork execution, the interpretation could be in line with this theory, thus auditors perceive that the high effort required to manually extract client data

outweighs the immediate performance gains, leading to low adoption in testing phases (43.3%). The responses also suggest that, cloud platforms (10.0%) suffer from non-existent facilitating conditions in environments within the developing nations' context.

Moreover, digitalization is concentrated in planning (65.0%) and risk assessment (65.0%) largely to satisfy Coercive Isomorphism. This pattern could indicate that organizations within the developing nations are more concern with the manner in which their audit processes are being presented to external oversight bodies, in ensuring that the planning and risk assessment stages are properly documented following a certain standard. Since actual fieldwork testing occurs behind doors, audit institutions might not take much consideration to follow digital compliance and might revert to the manual way of testing procedures.

In developing nations' context, there is high likelihood of weak infrastructure to accommodate the use of advanced software especially at the client level. The low percentage of the fieldwork digitalization (43.3%) can be attributed to the client IT infrastructure thus not compatible with high technological tools. Most audited entities in emerging economies operate manual accounting systems, advanced audit analytics lack compatibility (Rogers, 2003).

Fig.1.3



Source: Own elaboration

Fig.1.3 has highlighted the main digital technologies currently being incorporated within the auditing process of users. About 76.7% has responded to use spreadsheets such as Excel (46 out of 60), followed by data analytics tools (ACL) of about 60% of the respondents. The use of audit management software as in likes of TeamMate and AuditBoard is also on the rise, with a total of 21 respondents admitting to have these tools within their processes. Cloud-based platforms marking the least used technology indicates a major loophole of how data is being retained and stored in developing nations' context. This can suggest that most reports are manually kept instead of being digitally stored for future references.

The dominant reliance on Excel (76.7%) over specialized platforms like TeamMate (35.0%) or Cloud infrastructure (10.0%) illustrates TAM's core trade-off between PEOU and PU (Davis, 1989). Excel is perceived as a user-friendly tool compared to most digital auditing tools and thus

offers maximal PEOU. Even though specialized tools offer superior PU, the steep PEOU learning curve deters adoption. Auditors navigate more towards the excel spreadsheet, sacrificing technical capability to maintain operational comfort.

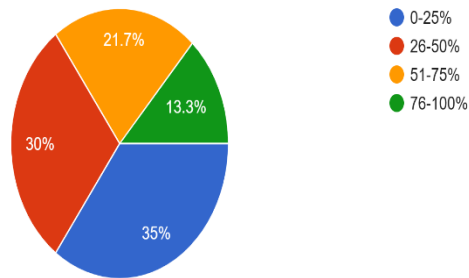
From the perspective of the DOI (Rogers, 2003), the use of spreadsheets possesses complete compatibility, high trialability, and low complexity. This enhances its universal adoption by auditors within the developing nations. In contrast, cloud-based platforms (10%) score the lowest, indicate the technical gaps in digital infrastructure that emerging economies are challenged with, such as acquisition cost of cloud and other more advanced tools. This can also be attributed to the compatibility issues of local IT infrastructure which is characterized with unreliable internet supply.

Specialized platforms like TeamMate (35.0%) are adopted through mimetic isomorphism, (DiMaggio & Powell, 1983). The results suggest that audit institutions within emerging economies are pressured to appear a certain way and thus tends to copy Big 4 structures to gain institutional legitimacy. However, without local software support ecosystems, organizations default to spreadsheets for daily operations.

The low adoption of cloud platforms and other software can also be a reflection of a deficit in the facilitating conditions (Venkatesh et al., 2003), specifically non-existent regulations on maintaining and usage of cloud platforms. In addition, the Unified Theory of Acceptance and Use of Technology, on high effort expectancy can be associated with the use of specialized audit software drivers such as spreadsheets, where effort is expectancy is minimal.

Fig. 1.4

How much of the audit process is currently digitalized in your organization/client
60 responses



The digitalization process in most organizations within the developing nations' context is at a low level with only 25% of the total process being said to be digitalized. The survey has shown 35% of the respondents agreeing that only a quarter of the auditing process makes use of digital technology. This finding signals the current level of digital adoption tools in the auditing process of emerging economies. A small percentage of 13.3% have almost successfully digitalized about three-quarter of their processes.

The results highlighted that digital auditing tools are currently in the Early Adoption phase in The Gambia (Rogers, 2003). Only an elite minority (13.3% in the 76–100% tier) function as Innovators or Early Adopters, while the majority (65%) face significant adoption barriers. Moreover, the wide gap between low (0–25%) and high (76–100%) reflects an uneven Coercive and Normative pressures across sectors. Auditors within well-funded parastatals experience a stronger need to comply with international demands and expectations, while those within smaller audit entities remain in the early adoption stages due to resources constraints.

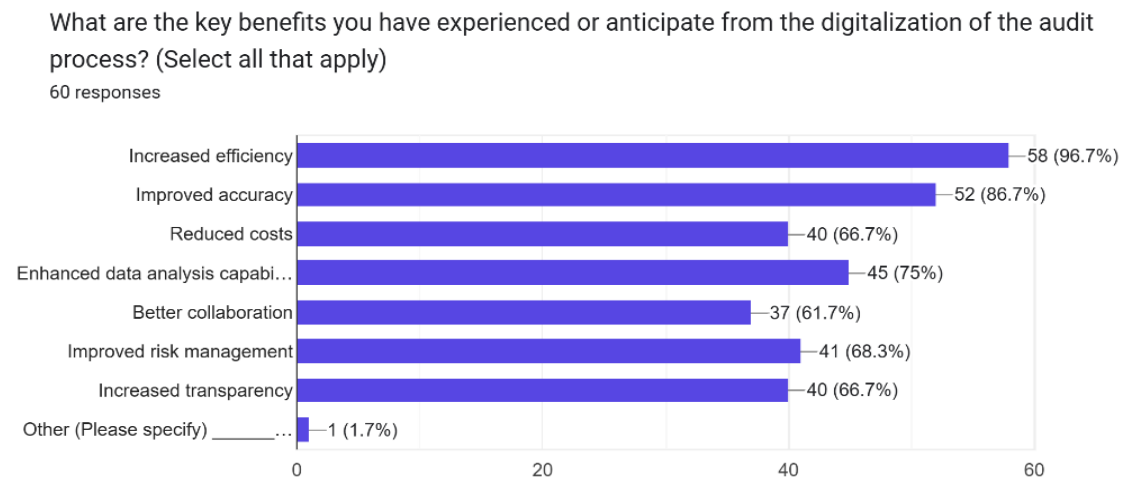
The technical and infrastructural lapses such as lack of hardware, the high cost of license and unreliable power supply can be a limitation to the facilitating conditions (Venkatesh et al., 2003) that could enhance digitalization. This finding suggests that, even when leadership executes

high-performance expectancy, operational limitations can affect the general workflow of institutions.

4.2.2 Research question 2: What is the perceived impact of the digitalization of auditing on audit efficiency and effectiveness in the context of The Gambia?

The findings related to the perceived benefits attributed with the use of digital auditing tools is highlighted below in figures 1.5, 1.6, 1.7, & 1.8.

Fig.1.5



Source: Own elaboration

Fig.1.5 has demonstrated some of the perceived benefits that the adoption and application of digital auditing tools will have in the auditing process. The most anticipated benefits are increased efficiency and improved accuracy. Nearly all respondents selected these options, with 96.7% (58 out of 60) and 86.7% (52 out of 60) respectively. This indicates a very high level of agreement that digital tools can streamline workflows and reduce human error.

The results revealed that there is a high Perceived Usefulness (PU) on the use of technological tools within the audit process, with a specific focus on Efficiency (96.7%) and Accuracy

(86.7%). Auditors therefore recognize the performance value of digital tools but on the adoption aspect, they still fall short due to its Perceived Ease of Use (PEOU). The high benefit ratings from the responses confirm that the relative advantage of digital auditing over manual auditing is well understood. In Rogers' model, clear relative advantage is essential for moving innovations past the knowledge stage into active adoption.

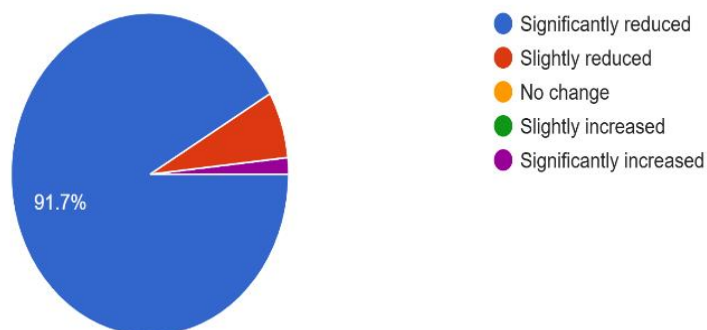
In the perspective of institutional theories, the high expectations for Transparency (66.7%) and Risk Management (68.3%) aligns with Normative Isomorphism. The findings indicate that professional standards emphasize data integrity and accountability, thus leading auditors to view the use of technological tools as essential for professional credibility.

Likewise, overwhelming agreement on efficiency gains (96.7%) reflects exceptionally high-performance expectancy. According to UTAUT, Performance Expectancy is the strongest predictor of behavioral intention, confirming strong underlying demand for digital solutions. This is crucial to understand the direction developing nations are navigating towards in embracing technology.

Fig. 1.6

How do you think digitalization will impact the time spent on different audit tasks?

60 responses



Source: Own elaboration

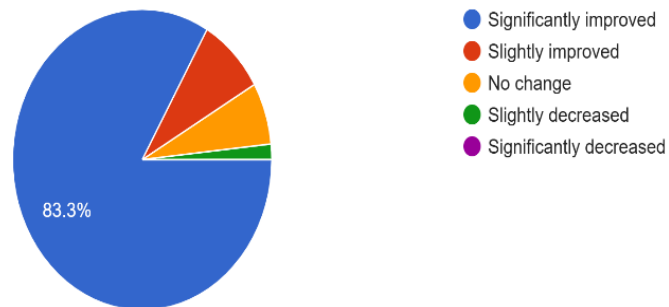
The findings in fig. 1.6 suggest that digitalization will reduce the time spent on audit tasks. This finding is a strong indicator of the perceived efficiency gains that can drive the adoption of new technology in The Gambia's auditing sector. The results revealed that 91.7% of respondents believe digitalization will significantly reduce the time spent on audit tasks. 7.3% believe it will be slightly reduced and a combined total of only 1% believe there will be no change or an increase in time spent.

The majority of responses have broadly agreed on significant time reduction (91.7%) and improved evidence quality (83.3%) reinforces high Perceived Usefulness (PU). The responses demonstrate that majority of auditors agreeing to the use of technological tools during the audit process significantly reduces the time spent on tasks. This from the DOI perspective, relates to a positive correlation when early adopters demonstrate clear efficiency gains, thus manifesting the benefits of innovation to the broader professional community. This concrete performance gains also strengthen performance expectancy across management tiers. This as a result may encourage the leaderships within audit institutions to adopt digital tools in saving the time spent on processes pushing for social influence (Venkatesh et al., 2003) amongst auditors.

Fig. 1.7

How do you think digitalization will affect the quality of audit evidence?

60 responses

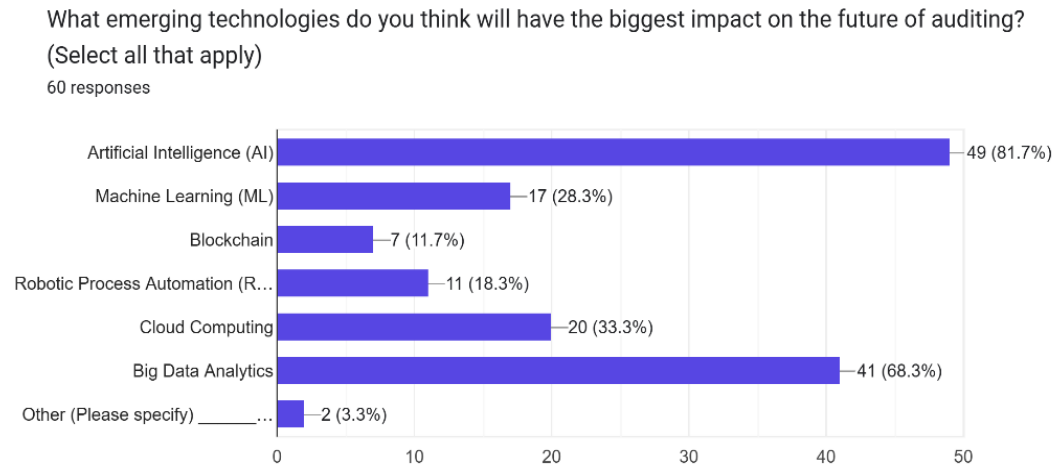


Source: Own elaboration

The findings in fig. 1.7 reveals that there is high expectation among respondents that digitalization will improve the quality of audit evidence. The data from the 60 responses shows 83.3% believe the quality will be significantly improved, 9% believe it will be slightly improved and combined total of just 7.7% believe there will be no change or a decrease in quality.

The results give evidence on the PU (Davis, 1989) of the impact technological tools could have on the audit process, with more than eighty percent believe that it will significantly improve audit quality (Zhu & Yue 2024). This suggests that audit and account professionals within developing nations already have a positive attitude towards the effects of digitalization but may be limited due to scarce resources.

Fig. 1.8



Source: Own elaboration

In the case of the emerging technologies with the biggest impact in the digitalization of the auditing process, fig. 1.8 respondents from the survey indicate that Artificial Intelligence (AI) and Big Data Analytics are widely seen as the emerging technologies that will have the biggest impact on the future of auditing.

The most significant finding merges towards the power of AI, with 81.7% of respondents (49 out of 60) selecting it. This shows that the majority of auditors and stakeholders recognize AI's potential to automate tasks, detect anomalies, and provide deeper insights. Closely following AI, Big Data Analytics was selected by 68.3% of respondents (41 out of 60). This indicates a strong understanding that the ability to process and analyze large volumes of data is essential for modern auditing.

The high interest in AI (81.7%) and Big Data (68.3%) reflects high projected Perceived Usefulness (PU). However, the lower interest in ML (28.3%) and RPA (18.3%) suggests low current Perceived Ease of Use (PEOU) which might be related to limited skills and technical

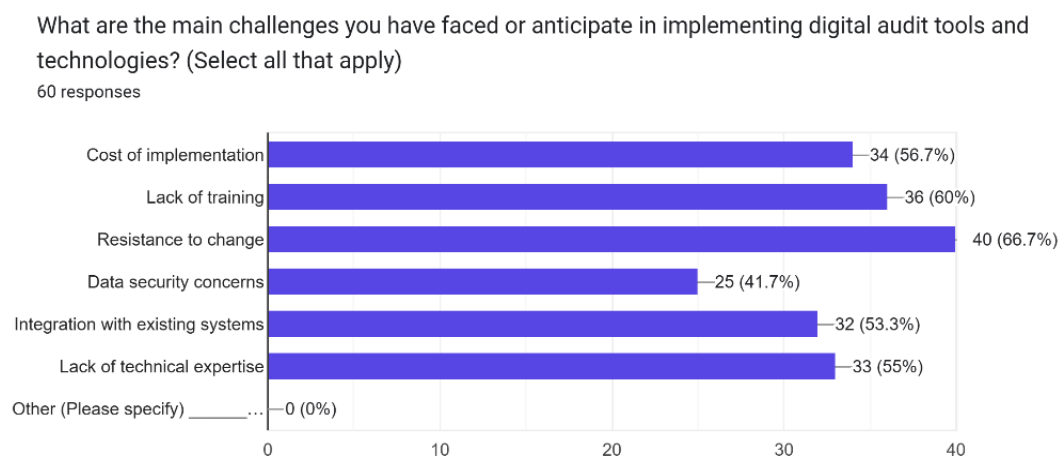
familiarity with advanced technological tools. In addition, there is high public visibility and observability of AI and Big Data within the developing nations. In contrast, certain technologies such as Blockchain (11.7%) are deemed complex and sophisticated impeding its involvement within the auditing process.

The high interest in AI and Big Data by auditors within emerging economies may also be linked to Mimetic Isomorphism. This could indicate that many audit institutions in developing nations track global trends, and usually align their strategic expectations with new innovations popularized by international firms.

4.2.3 Research question 3: What are the key drivers and barriers influencing the adoption and implementation of digital auditing technologies by audit firms and their clients in The Gambia?

The challenges and limitations institutions may face in the adoption of digital auditing tools is presented in figures 1.9, 2.0 & 2.1.

Fig. 1.9



Source: Own elaboration

Fig. 1.9 above reveals the findings from 60 respondents indicate that the main challenges to implementing digital audit tools are primarily related to human behavior and a lack of skills, followed by financial and technical issues. The most significant challenge is resistance to change, cited by 66.7% of respondents. This indicates that organizational culture and individual reluctance to move away from traditional practices could be the biggest obstacle to digitalization.

The responses received during the survey has highlighted Lack of Training (60.0%) and Lack of Technical Expertise (55.0%) as challenges faced by professionals. These high percentages directly reduce the Perceived Ease of Use (PEOU) of audit professionals lacking the expertise to make use of digital tools in the audit process. When professionals are faced with issues challenging their expertise, they may feel reluctant to use certain software eventually leading to behavioral resistance.

About 67% of the respondents attribute the potential limitations and barriers of digital adoption to Resistance to Change. This phenomenon highlights the cultural incompatibility between traditional manual routines and digital workflows (Rogers, 2003). The resistance to change phenomenon can also be aligned with weak leadership, or social influence (Venkatesh et al., 2003) having little or no influence on the professionals within audit firms, in persuading them to accept the use of digital tools. Moreover, the high implementation cost of 56.7% reduces the trialability aspect of smaller audit firms (Rogers, 2003), preventing firms from testing advanced software before committing capital.

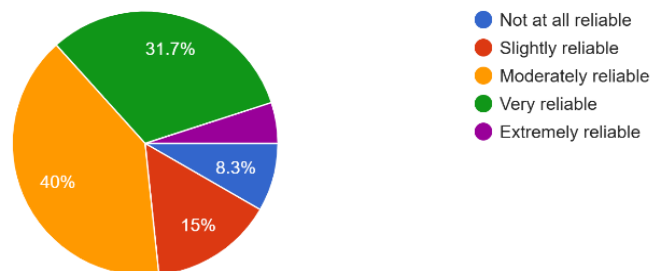
DiMaggio & Powell (1983) highlighted the issues of Institutional Inertia, of firms resisting to adopt new methodologies and techniques into their organizations. The survey respondents set a

record of 66.7% to demonstrate the long-established practices of structural reluctance by audit and accounting professionals. Also, the System integration issues (53.3%) may indicate an underdeveloped local institutional environment signaling the gaps found in the Human dimension observed in this study.

The results have demonstrated key barriers including lack of training (60.0%), high costs (56.7%), and technical gaps (55.0%) which are facilitating conditions to be present for digitalization to be successfully integrated. This suggests that the facilitating conditions needed to fully embrace digital auditing tools are missing (Venkatesh et al., 2003), highlighting the need to improve on the technical and infrastructural gaps examined by the research.

Fig. 2.0

How readily available and reliable is internet access in your organization and for your audit teams in the field?
60 responses



Source: Own elaboration

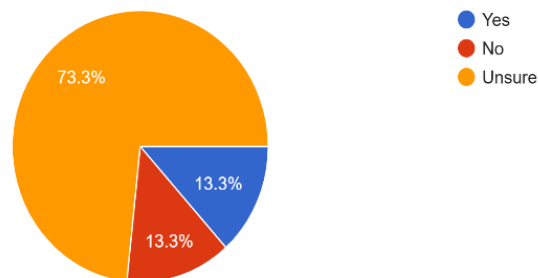
Based on the survey findings in Fig. 2.0, the unreliability of internet access is a significant barrier to the adoption of digital auditing tools. While no one reported a complete lack of reliability, a combined 23.3% of respondents rated their internet access as "Not at all reliable" or "Slightly reliable." More critically, the largest portion of respondents, 40%, described their

internet as only "Moderately reliable." This indicates a widespread issue with inconsistent and unstable connectivity.

The Unreliable internet (63.3%) creates constant technical disruptions, lowering Perceived Ease of Use (PEOU). This finding explains the technical gaps emerging nations are faced with. The unreliable supply of internet connection may also be a factor to discourage audit and accounting professionals to consider the use of certain software such as cloud-based or other connected audit platforms. Likewise, the high network instability creates a fundamental incompatibility between cloud audit solutions and local infrastructure (Rogers, 2003). In order for audit institutions to fully integrate advanced technologies, all the key ingredients within the process of digitalization needs to be present and well-functioning, thus the facilitating conditions need to be present and responsive (Venkatesh et al., 2003). Additionally, limited awareness of local vendors (73.3% unsure) reduces Observability and restricts local support channels (Rogers, 2003).

Fig. 2.1

Are there any local vendors or service providers in The Gambia that offer digital audit solutions or support?
60 responses



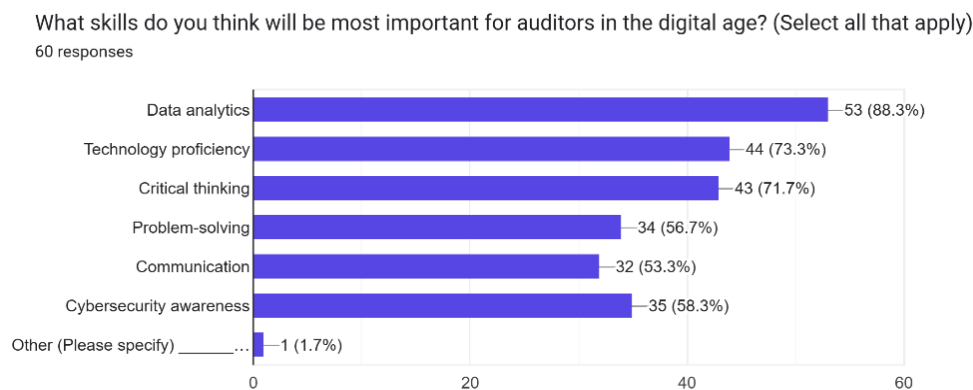
Source: Own elaboration

Fig. 2.1 suggest there is a significant lack of awareness regarding the availability of local digital audit service providers in The Gambia. The most striking finding is that a large majority, 73.3% of respondents, were "Unsure" if any local vendors or service providers offer digital audit solutions or support. This high unawareness highlights a missing supporting Institutional Infrastructure (DiMaggio & Powell, 1983) and information gap in the market. Most audit institutions within developing nations depend on foreign software vendors, increasing the cost of acquisition and high license maintenance. The results suggest that, emerging economies are lacking local software developers who could eventually reduce the cost of procuring these new innovations.

4.2.4 Research question 4: How might the increasing reliance on digital auditing tools impact employment trends and the skills gap within the Gambian auditing profession?

The finding for employment trends and skills gap is outlined below in figure 2.2

Fig. 2.2



Source: Own elaboration

The findings presented in fig. 2.2 indicate that most important skills for the digital age are predominantly technological and analytical. Data analytics is ranked as the most crucial skill (88.3%), followed closely by technology proficiency (73.3%). These findings highlight a clear shift in the profession, where auditors need to be more than just accountants. They must be able to work with and interpret large datasets. The chart also reveals that while core skills like critical thinking (71.7%) and problem-solving (56.7%) remain highly valued, the growing importance of cybersecurity awareness (58.3%) and communication (53.3%) reflects the changing nature of the auditor's role. This includes new inherent risks and a need to effectively convey complex findings in a digital world.

There is widespread recognition that technical skills are essential to improve Perceived Ease of Use (PEOU) this is reflected on the high demand for Data Analytics (88.3%) and Technology Proficiency (73.3%). From Rogers, (2003) perspective, prioritizing analytics and technical skills helps reduce perceived complexity. The results revealed that professionals are ready to build their competencies in order to adopt digital tools more confidently across engagement cycles.

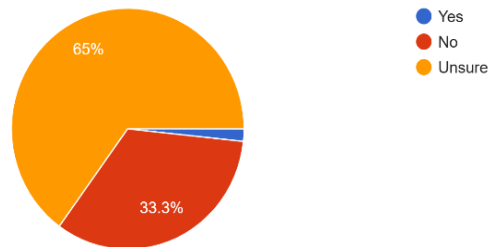
The demand for analytics and cybersecurity skills reflects evolving normative expectations (DiMaggio & Powell, 1983) across the auditing profession. Audit institutions within emerging economies should incorporate training programs to align with global competency standards. Training audit professionals to be equipped with certain technological skills will enhance the facilitating conditions needed for effective digital integration. This will also serve as a solution to address the Human gap this research examines.

4.2.5 Research Question 5: To what extent do government policies and initiatives aimed at digitalization impact the auditing profession's adoption of digital technologies in The Gambia?

The findings for government policies and initiatives aimed at digitalization is outlined below in figure 2.3

Fig. 2.3

Are there any specific regulatory requirements or legal frameworks in The Gambia that impact the digitalization of audit processes?
60 responses



Source: Own elaboration

Based on the pie chart, there is a significant lack of clarity and awareness among auditors in The Gambia regarding the legal and regulatory framework for digital auditing. A large majority of respondents (65%) are "Unsure" whether specific requirements exist, and an additional 33.3% believe there are none, with only a small minority (1.7%) confirming their existence. This finding indicates a potential regulatory vacuum that could lead to inconsistent practices across the industry, increasing the risk of data privacy and security issues. This uncertainty may also serve as a barrier to the wider adoption of digital auditing technologies, as firms are likely hesitant to invest without clear legal and regulatory guidance.

The survey responses reveal there is absence of clear legal guidelines. This creates high risk of non-compliance using advanced technological tools. It also reduces compatibility with local legal frameworks, slowing the diffusion of digital audit methods.

A combined 98.3% who are unsure or report no framework indicates an institutional void.

Missing Coercive legal standards may force audit institutions to rely on mimetic isomorphism by adopting international guidance to fill the domestic regulatory gap.

4.3 Quantitative review summary

The numerical data has uncovered that 96.7% has perceived benefits using digital auditing tools could enhance the auditing process, 66.7% responded that one major obstacle or challenge to digitalize the auditing process could be related to resistance to change. Respondents also measured the digital literacy rate at Medium during the quantitative analysis. Nonetheless, these statistics are only part of the story. To uncover the narratives, experiences, and details behind these numbers, this chapter will now consider the qualitative elements.

The findings show a strong recognition among auditors that data analytics and technology proficiency are the most important skills for the digital age. Though the results from this research shows that the most critical phase of the auditing process, fieldwork and testing is one of the least digitalized areas. This creates an irony as auditors are aware of the necessary skills but are not in the position to utilize them in the most crucial stages of the auditing process.

The Technology Acceptance Model (TAM) can be used to analyze the disconnect between perceived skills and practical application by explaining why auditors who value digital tools may not be using them for crucial tasks like fieldwork. Building on the original TAM framework, more recent work by Venkatesh, Thong, and Xu (2012) suggests that technology adoption is

driven by key factors such as Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Although auditors clearly perceive data analytics and technology proficiency as useful (a high PU), their low adoption in fieldwork and testing suggests they may find the specific tools for these tasks difficult to use (a low PEOU), which hinders their practical application. As Alles, Kogan, and Vasarhelyi (2015) have noted in the context of continuous auditing, this disconnect can be a symptom of a lack of appropriate training and organizational investment, which negatively impacts auditors' perceptions and prevents the full integration of technology into the core audit process.

4.4 Qualitative results

The qualitative results seek to reveal and highlight the specific roles played by those charged with governance (management) and people within the implementation phase in the context of digitalizing the auditing process in developing nations especially within the Gambian. This method will also fill the gap that the quantitative method failed to address in obtaining specific perspectives from individuals charged with decision-making to highlight the perceived benefits and challenges faced by emerging economies in accessing and maintaining technology and other sophisticated tools within the auditing process.

The targeted respondents for the interview were designated one or more of the following titles; certified chartered accountants, professional certified auditors, Master's degree holders with over five years of experience within the field of auditing and accounting. This is to ensure that they have valuable knowledge in the auditing and accounting field in order to provide pertinent insights that will shape the findings of this study. Twelve participants were selected for the semi-structured interviews and each participant is given a code such as P1, indicating participant 1. This is in line to conform with the principle of anonymity when reporting the information

gathered from the interview sessions. Table 2 below shows the participants' roles, organization type, educational background, length of the interview, medium of the interview and the given code assigned to each participant.

Table 2: Interview Respondents' background

Assigned Code	Role	Organization	Education	Length of interview	Medium of the interview
P1	Senior Audit Manager Internal Audit	Government Parastatal	MSc	23 minutes	Via Zoom
P2	Director of A & CO	Private Audit Firm	ACCA	30 minutes	Via Zoom
P3	Senior IT Officer	Government Parastatal	MSc	37 minutes	Via Zoom
P4	Head of Internal Audit	Private Owned Company	MSc CFE	22 minutes	Via Zoom
P5	Finance Director	Private Owned Company	ACCA	31 minutes	Via Zoom
P6	Audit Manager	Government Parastatal	ACCA BSC	21 minutes	Via Zoom
P7	Audit Manager	Government Parastatal	ACCA	21 minutes	Via Zoom
P8	IT Audit Manager	Government Parastatal	CIMA MSc	42 minutes	In person
P9	Director General	Government Parastatal	MSc CPA	40 minutes	In person
P10	Auditor General of The Gambia	Government Parastatal	ACCA MASTERS (AUDIT & LAW) CFE	31 minutes	In person
P11	Internal Audit Director	Government Parastatal	MSc ACCA	55 minutes	In person

P9, P10 & P11 are all in charge of governance within their institutions. Their voices will be very visible during the presentation of the findings, as they are key informants and represents central institutions. In addition, P3 works with the financial overseeing body of The Gambia and their contribution will also be seen during the analysis of results. P2 & P4 represents the private audit firms in The Gambia, whilst P6, P7 & P8 represents the government auditors. P5 represents the finance personnel from the private sector as well as P1 who provides audit services to some government agencies.

4.5 Thematic Analysis

The qualitative findings will be presented in a theme-based structure that would group the findings into the themes emerged from the series of in-dept interviews conducted during the research. Each theme represents a key concept or pattern that recurred across multiple interviews and directly relates to the research questions and the gaps identified in this study.

The interview sessions were designed and structured into three sub-sections in order to capture the relevant information needed to address the research questions and gap of this study. The first section contained primary information which helps informs the competency level of the respondents of the use of digital auditing tools. The respondents were given the opportunity to discuss their current roles and how they interact with digital auditing tools, identifying the digital tool(s) they make use of if any. The second section, dived into the perceived impact, benefits and limitations they face when using the digital tools, or how its absence affects their work. The final section focuses on government regulations and the current adoption level of digitalization in general using the Gambia as a center of discussion. Quotations will be inserted to capture the exact reactions of respondents obtained during the interview.

The following presents the findings and analysis from the interviews in a thematic format:

4.5.1 Theme 1: Current Digital Infrastructure Overview

This theme primarily addresses the infrastructure-policy gap highlighted in chapter two of this research study. The adoption and application of digitalization within the auditing process in developing nations necessitate an understanding of the current state of digitalization within audit institutions and other relevant stakeholders to assess their digital awareness and readiness. This theme is essential as it links with the research objectives in providing an overview on the state of digital readiness and the infrastructure needed to effectively accommodate new technological evolutions in developing nations. Moreover,

When asked to describe their current auditing process and some of the digital tools they've adopted within their process, several respondents described the process as mostly manual with excel as a main tool being used;

All of the respondents have described their auditing processes to be manually intense. According to them, the auditing process is characterized by manually verifying physical documents instead of using data on digital platforms. The use of excel spreadsheet has been unanimously mentioned as a staple tool used during the audit process. The respondents described the tool as useful and helps with the analysis when executing the audits. P6 mentioned the use of ACL as a digital tool used for sampling during the start of the audit. Several others, P1, P4, P7 and P8 all mentioned the adoption of Arbutus, describing it as an essential tool for analysis, performing and reporting. P1 & P2 both mentioned the use of Quick books as a tool used during the audit exercises.

From the perspectives of those charged with governance, developments are on the way in strengthening the needed infrastructure to accommodate digital auditing tools;

“Recent server upgrades include higher capacity, performance, and disaster recovery systems, the integration of remote access software allowing staff to work from various locations with dedicated IT support initiatives” (P8)

“The Gambia Revenue Authority has introduced TeamMate audit software which is being populated with audit programs, involving finance and management stakeholders, aiming for full system implementation by the end of next year” (P11)

“The internal audit directorate have a software cloud-based system that has been integrated within the auditing process as of September 2024, individuals are now able to log into the system and access information during a particular audit assignment”. (P9)

Analysis

The responses gathered from the participants who are in charge of the affairs of their organizations have highlighted the need to enhance their systems in order to embrace digitalization. Developments are on the way and some have already committed resources towards digitalization.

This theme highlights a significant structural divide within audit institutions operating in developing nations. The results clearly outline the existing gap between the ground-level auditors who remain tied to manual routines and spreadsheet-based verification, and the executive leadership actively building out backend IT capabilities and cloud infrastructure. It will be evident to evaluate these findings through established analytical models illustrating the precise behavioral, structural, and institutional forces driving this gap.

The use of excel spreadsheet has been highlighted as a dominating tool in both the survey and interview sessions. The Technology Acceptance Model demonstrates why Microsoft Excel

continues to dominate daily operations within audit firms in developing nations. Using the excel spreadsheet is proven to have a high PEOU which also corresponds with the skill level of most auditors in these institutions. The excel spreadsheet is used as an analytical tool as mentioned by some respondents, and thus being used as a replacement for more complex data analytical gadgets. This creates a functional comfort-zone trap where audit personnel default to familiar tools rather than specialized software like ACL or Arbutus. Although these specialize tools are highly regarded by auditors in terms of their high-performance value and analytical power (high PU), operating them is seen as complex (low PEOU).

To analyze some structural deficiencies in the context of adopting more digital software, emphasizes can be made on the absence of a robust structure to accommodate the use of digital tools. From the perspective of Diffusion of Innovations theory, there is an issue of compatibility with heavy reliance on manual processes employed by auditors, in relation to the use of advance technological tools. Advanced digital audit tools are designed for digital data environments, making them structurally incompatible with paper-based client systems. This mismatch can be addressed in practice by those charge with governance (TCWG), to investment in server upgrades, disaster recovery systems, and remote access software. This will be an enabling factor to create sound infrastructure in order to pilot platforms like TeamMate and other digital tools by audit organizations with lower operational risk before requiring full adoption.

4.5.2 Theme 2: Digital Literacy Assessment & Stakeholder Digital Readiness

This theme addresses the human element gap and the institutional readiness examined in this research. The digital literacy assessment criteria and stakeholder readiness is key in understanding the research aims in developing a concept for modernizing the auditing process. In adopting digital auditing tools and embracing new technologies that would smoothen, strengthen

and enhance the overall auditing process in developing nations, especially in The Gambia. This theme is also vital to correlate what other key stakeholders play in the adoption of digital tools to enhance and shape the auditing process.

Several interviews taken highlighted some of the key findings in gauging the level of digital literacy both by audit firms and the firms audited by the audit institutions.

When asked the digital literacy level within their respective entities and stakeholder readiness;

The average response from the participants gave it an average 5 out of ten. According to the them, the auditors within their institutions are in great need of trainings on data analysis and relevant skills that will help to execute audit functions;

“Estimated 60-70% digital literacy rate within SAI Gambia due to predominantly young workforce.” (P10)

“5 over ten, there is a limited knowledge in terms of excel, which needs a wider knowledge”. (P2)

“I am going to give it maybe 4 over 10”. (P3)

“I would say 5 to be honest is low, we really need training in terms of the use of digital tools because we are used to be doing manual, so on the level of proficiency is still low”. (P7)

“I would say like 6, because we still have some auditors who would want to rely on manual procedures which is really tedious and it incurs a lot of cost and it wouldn't save time and be effective”. (P4)

“I would rate my organization around 5, although there are some tools available that are not directly related to the audit process.” (P5)

“I will say 5 out of ten. Although some staff are very digitally inclined, there is still a good number that would need extra support to be on the similar level with the rest” (10)

“I will give an average of 6 out of 10, so why I am even saying 6 is because some are actually very technical savvy, whereby there are lot of others that you know are still trying to catch up especially the older generation who are still concern about the manual extraction”. (P6)

The analysis revealed that the Perceived Ease of Use of digital auditing tools is relatively high among the younger generation whilst the older generation struggle to keep up with the new innovations. As stated by P10, *“young population provides competitive advantage for technology adaptation compared to the older generation”*.

On the part of stakeholder readiness, the digital literacy rate is also at an average with new developments taking its course by the day;

“The Accountant General Department implementing digital payment gateway system integrated with existing systems through APIs within the IFMIS system has been a major development in the application of digital tools within their processes”. (P10)

“The GRA claims digital advancement in the application of e-invoicing and the introduction of the AYSCUDA world software throughout the process of revenue collection of customs and excise duties”. (P10)

“Audit programs and checklist are being input into the TeamMate system to enable practical implementation, the system will involve multiple stakeholders including finance department and management teams for performance and financial statement audits” (P11)

“I know of present day, a lot of institutions are trying to digitalize their processes for accountability purposes such as the ITAX system at the level of the Gambia Revenue Authority”

(P6)

“The Central Bank is in the process of rolling out capacity building trainings on digitalization”

(P3)

However, the responses are not all positive and this can be seen from the reaction given by P1;

“Not fully satisfied, I will give it an average score. Because the process like I said would be different when it comes to the implementation, you go certain departments they make your audit process very disrupt and not in line with the activities that you intend to carry out. The audit process is documented but sometimes you have to deviate from the usual process because of the challenges that you encounter at the level of the client”. (P1)

The Gap in stakeholder awareness of audit process responsibilities was also highlighted by P10.

According to them; *“entities' governance and management don't understand their role in auditing process wasting half of our time on talking to people who should have known better”*

(P10)

Analysis

This indicates that the stakeholders within the auditing process have started to embrace digitalization but there is still room for improvement on the side of both the audited entities (stakeholders) and the audit firms. The level of digital adoption in developing nations from the analysis of the semi-structured interview is on average and just a little above average in few situations.

The theoretical analysis of Theme 2 examines the human element and institutional readiness shaping digital audit transformation in developing contexts. The Unified Theory of Acceptance and Use of Technology make emphasizes on how effort expectancy, social influence, and other demographic factors determine sustained system usage. The semi-structured interview has revealed low overall literacy ratings which directly reflect elevated effort expectancy. The responses suggest that auditors within the developing nations expect that executing automated procedures will require excessive effort due to training gaps faced by most institutions. The findings have highlighted the issues related to generational differences accounting for age and experience, noting that the older professionals have greater anxiety when introduced to new digital platforms, reducing their behavioral intention to use them. On the other hand, successful integration of new methods and digital platforms will necessitate the management of institutions to generate positive social influence and drive software rollouts to all staff and the same time provide continuous training and monitoring (facilitating conditions).

This could also be interpreted in light from the Rogers' model perspective, the younger generation who are most likely to embrace advanced technological innovations are seen as early adopters while the older generation are classified as late adopters. On the part of stakeholder readiness, the results reveal an issue with compatibility on the aspects of audited entities adopting digitalization, whilst the Supreme Audit Institution (NAO) is still holding on to manual processes. In the case of The Gambia, audited entities like the Accountant General's Department and the Gambia Revenue Authority are advancing digital tools such as IFMIS API integrations, ASYCUDA World, and the ITAX system within their systems, however, the audit processes employed by the NAO is still manually intense. The NAO would need to better understand the digital platforms employed by the audited entities and to also revise their auditing processes to

reflect the current automated systems. The gap reveals that whilst the auditees are digitalizing their processes, the auditing institutions are still on the traditional auditing practices of manual processes (Dudina et al. 2022). This incompatibility reveals shortfall on digital skills (low PEOU) and outdated auditing approaches that no longer reflect the current situation at some audited entities. This gap aligns with the Human dimension this research examines, and to address this issue, there is need to integrate IT audit skills within the audit institutions to enhance digital literacy as a predominant factor in effectively and efficiently carrying audit exercises.

4.5.3 Theme 3: Perceived Benefits of Digitalization

The benefits of digitalization especially within the auditing process corresponds with the research question, *“What is the perceived impact of the digitalization of auditing on audit efficiency and effectiveness in the context of The Gambia?”*

Findings gathered during the semi- structured interviews could be presented under a common denominator, describing the adoption and application of digital auditing tools as effective in improving the quality of audit reports and reducing the time spent in analyzing and acquiring data;

“Quicken the auditing process and helps to pull and analyze large data files, assist in the review process and contribute to the safe-keeping & archiving of audit reports after every audit exercise”. (P9)

“Digital systems improve audit file completeness and review processes”. (P8)

“Digital systems have reduced manual processes and improved revenue collection efficiency”.
(P11)

“Digital audit systems will provide management aspect guidance, time-bound processes, and error reduction through minimal human intervention”. (P11)

“I think it will help the audit greatly, immensely, yes...because these tools they help us to save time, and of course in our analyses process it gives us the option to analyze large sets of data ”.
(P6)

“Digitalization is the future, we know it helps improves efficiency given the fact that our auditors are mainly from Senegal, our neighboring country, it will help them sit in their offices without having to travel to The Gambia for a week or more to perform the audits”. (P5)

“Reduces the turnaround time in reviewing documents, because if the system is automated there are certain things instead of you doing it manually, it will just be a matter of clicking few buttons to get results.” (P5)

“It quickens the process and enhances communication between the auditee and the audit team”
(P9)

Analysis

The semi-structured interview has revealed a unanimous agreement of the importance technological tools impact the quality of audit output. Under the Technological Acceptance Model, the perceived usefulness is shifted away from simply speeding up the auditing process towards using these digital tools to detect errors and identify anomalies and observing behavioral patterns (Vitali & Giuliani 2024). The benefits of automating the auditing process, has been perceived to increase the scope of audit exercises whilst enhancing multi-tasking, enabling auditors to focus on more special need areas (Rahman & Ziru 2022). Automated audit processes positively impact the quality of audit reports and enhance continuous review and monitoring

processes of audited entities. From the perspective of Diffusion of Innovations, there is clear evidence on the advantages technological tools have over traditional manual processes. The respondents overview, informs this research on the gaps automated processes will fill in helping auditors eliminate the risk of overlooking errors and instilling a sound control environment.

P8, P9, and P11 emphasize that digitalization provides far more than raw analytical computing power, in their responses, digitalization establishes structural governance, process discipline and enables record retention. Using digital tools enforces standardized workflows and enhances complete audit trials whilst respecting the timeliness of audit reports. The Institutional Theory explains this trend as a shift toward institutional control and administrative legitimacy. The use of audit software platforms like the TeamMate or GamSeat will allow for audit processes to be consistent across various audit teams. This feature will allow for effective collaboration and comparison during the verification and monitoring processes. The standardized workflows will prevent individuals from deviating from the set procedures and thus enhances compliance of auditing standards and completeness of audit files (Yang et al. 2026). The Perceived Usefulness (PU) of these review software platforms will increase for managers and supervisors as the software automatically tracks for compliance and file completeness.

P11 connects the impact of audit software directly to macro-level institutional performance, citing that the use of technological tools streamlines manual workflows and significantly enhances the revenue collection process. The use of digital tools is perceived to be a catalyst in enabling efficient governance to ensure fiscal stability. Adopting digitalization is seen as a strategic priority in strengthening the revenue collection process, by enhancing higher revenue yields and ensuring tighter fiscal oversight. Within the framework of UTAUT, the perceived economic outcomes dramatically increase performance expectancy among political authorities,

regulatory oversight bodies and the management of institutions (Otia & Bracci 2022). From the P11, perspective, integrating technological tools is not seen as a simple mechanism improving on time spent on audits but extends to being a useful mechanism to yield measurable financial gains. These findings commensurate with the results obtained during the survey questionnaire, proving that audit and accounting professionals within developing nations have high regard of the use of digital technological. The use of digital technological tools within the audit process, improves the overall audit process and enhances transparency and accountability whilst strengthening internal control systems.

4.5.4 Theme 4: Technical Challenges and Infrastructure

To address the research question; *What are the key drivers and barriers influencing the adoption and implementation of digital auditing technologies by audit firms and their clients in The Gambia?* The interviews shed light on some key major findings that were deemed relevant as challenges and limitations hindering the adoption of digital auditing tools in The Gambia and developing nations alike. The findings from this theme also responds to the infrastructural gaps that were identified in the previous chapters.

A major finding related to this research question is predominantly related to the *cost* of acquiring the digital tools by emerging economies:

“The cost of acquiring and maintain the license is very expensive. About 2 million Gambian Dalasi was paid for the acquisition of ten license.”. (P9)

“The NAO has estimated to spend between \$200,000 -300,000 USD for a digital forensic laboratory which is very costly for the office to currently undertake this initiative and thus creates the need for financial support for digital infrastructure”. (P8)

“The financial gap in terms of having the financial muscle to acquire those kind of software, one of the software was bided for about hundred thousand plus dollars and the second was bided close to three-hundred thousand pounds, so we’re just currently reviewing the proposals. Its super expensive” (P1)

“Budget constraints, some organizations are willing to venture into some of these things but there is not much budget allocated” (P4)

“The fee to purchase these licenses are expensive, that is another challenge faced by these organizations” (P7)

Another reoccurring phrase is the human element; most respondents has highlighted the resistance to change by certain individuals and also the knowledge gap in the technology adoption process;

“Change management is the primary barrier to digital transformation, requiring cultural adaptation and stakeholder engagement to mitigate inefficiencies” (P10)

“It’s the human intervention, that is the main one in fact, we have a lot of people who still are not very comfortable with these tools they still want to rely on manual tools.” (P4)

“Out of 150 staff, we have few that are very conversant with the use of digital tools” (P7)

“Lack of preparation and lack of understanding of what needs to be done in adopting digital tools, the willingness of users to accept these tools in helping them to be more effective” (P3)

“Users adapting to digitalization and users adapting to technology, as IT personnel is one of the biggest challenges I face” (P3)

“The previous TMIS software failed due to inadequate change management and communication, as well as a lack of collaboration between the IT audit and financial teams” (P8)

“The biggest challenge I face at my job right now is working with the clients, the issues of acquiring documentation from our clients is quite tough. If things were more digitalized, we wouldn’t need to ask for certain payment vouchers etc. it can just be a matter of logging into a system with access codes and getting the information we need from the audited entities.” (P6)

Data security and integrity is mentioned as a hindering factor to accept the use of certain digital platforms. P6 states some concerns users of these technologies would say as indicated by the following quote: *“Is our data as secure if we’re using these digital platforms like AI” (P6)*

Moreover, a barrier to adapt digital auditing tools in developing nations as mentioned by most respondents during the interviews is the issue of a reliable and affordable internet connection especially in the rural areas.

The findings revealed that internet connectivity is still a major obstacle in developing nations especially in the adoption of sophisticated technologies that are majorly linked to the availability of a strong internet connection;

“Internet connectivity and power supply are critical challenges for digital tool implementation, with government services failing to meet necessary standards” (P11)

Analysis

The interview data illustrates a critical financial gap of acquiring and maintaining software. The high cost of procuring licenses cost about GMD 2 million for just ten licenses, while a standard digital forensic laboratory will require a concrete budget between \$100,000 to over \$300,000 USD. The adoption drivers; trialability and observability, under the DOI framework becomes

practically impossible for most firms in developing nations to access and test these advanced technologies on trial basis. This is due to the high upfront licensing fees software vendors will demand, limiting the possibility for small scale experimentation. For new technologies to be integrated within processes, it will be prudent to first have a phase for testing in order to proof their value before embarking on a full financial commitment. This, however will not be the case for most audit institutions within developing nations due to the high purchasing cost of licenses, making it a limiting factor to embrace digitalization even when the organizations exhibit clear desire to modernize their processes. The lack of capital allocation effectively halts the adoption pipeline before development can begin.

A common dominating factor cited by most respondents is the issue of change management which corresponds to human resistance and cultural reluctance as dominant obstacles (Fotouh & Lorentzon 2024). P8, highlights a key historical lesson, where previous audit software rollout failed not due to technical glitches, but because of poor management, ineffective communication and rigid working relationships between IT and financial audit teams. The Technology Acceptance Model categorized non-adoption as low Perceived Ease of Use (PEOU). In emerging economies context, most auditors lack the technical confidence to exploit new platforms and thus perceived it as a burden rather than being helpful. This situation triggers a form of behavioral stress and pushing audit professionals away from embracing new platforms and revert to their usual manual workflows where they are most confident. The Institutional Theory explains this persistence as deep-seated institutional inertia. Organizational cultures of most firms within developing nations are deep-rooted with their manual routines. The deviation from these practices creates perceived professional risk, causing auditors to hold onto their manual procedures even when management mandates new digital software.

P6 highlights a daily operational frustration audit teams face from the part of the audited entities in receiving requested documentation. The documents requested are usually in manual formats as in physical documentation of payment vouchers and other relevant documents. The problem posed in this situation is the absence of digitalized databases from the clients' level, maintaining all of their documents in manual forms. The UTAUT and DOI theory describe how external factors could influence the way organization behaves. The delay caused by the audited entities has proven to affect the time spent on audit exercises and thus highlight the dependency level of firms' external facilitating conditions (Yuhan Zhang et al. 2024). This has been pointed as a major barrier that disrupts the auditing process in most firms in The Gambia, thus digital audit tools cannot function effectively in an environment where client records remain non-digitalized. The digital maturity of the clients' institution greatly affects the manner in which the audit exercises are being executed. In order to address this barrier, it will be evident to strengthen the external facilitating conditions at the client's level in enhancing their digital maturity. Until client accounting operations transition to accessible, secure digital platforms, audit teams are forced into hybrid workflows that undermine the efficiency gains of digital tools.

Participants voice persistent concerns regarding data integrity, particularly when using advanced platforms like AI (P6). Furthermore, P11 stresses that unstable power supply and weak internet connectivity present foundational barriers across developing regions. From an Institutional Theory perspective, the issues surrounding data integrity and security highlights an institutional void. The results reveal the absence of data protection laws, legal frameworks for electronic evidence and clear regulatory guidelines that institutions can rely on (Saputra & Paranoan 2024). This regulatory void leads to extreme risk aversion. There is also the issue of technical and environmental gaps in integrating cloud and other high bandwidth software within the auditing

institutions in The Gambia. From the DOI theory's perspective, the compatibility of cloud-based software, un-sustained power grids and unreliable internet connectivity has been a major setback for audit firms in emerging economies due to the infrastructural and technical gaps. When key public utilities fail to meet basic technical standards, the use of technological tools become operational liabilities rather than drivers for efficiency.

4.5.5 Theme 5: Revenue Impact and Performance

To assess the perceived impact on revenue collection of the digitalization of auditing on efficiency and effectiveness in the context of The Gambia, the findings has revealed major benefits associated with the collection and accountability of revenue collection using digital auditing tools and having digital systems in place within processes;

“Revenue for 2024 has reached 22 billion, surpassing the target of 19.2 billion aided by digital system efficiencies and the Sipper Project for alcohol taxation”. (P11)

“Domestic tax processes largely digitalized with upcoming e-invoicing implementation. The e-tracking systems implemented for customs escorts, replacing manual vehicle tracking.” (P11)

According to P11, the introduction of the ASYCUDA software within its revenue collection processes has blocked revenue leakages within the revenue collection cycle. The introduction of the Sipper Project implemented last year for alcohol taxation at production level, also boost revenue collection at a higher margin. According to them, this significant improvement has enhanced the work of the Internal audit department within the GRA to improve its audit processes in leveraging other audit components that are still lacking the needed improvement.

The central bank is also championing a centralized payment platform that will allow easy tracking of revenue inflows and outflows within the economy;

“Part of this strategy that we are working on is to have a centralized platform to Integrate all the different players in the ecosystem such that you can transfer money from your account to one’s wave wallet or you can move money from a microfinance to a credit union to someone in the village” (P3)

Analysis

The findings present a clear economic outcome: the Gambia Revenue Authority (GRA) generated GMD 22 billion in revenue for 2024, surpassing its GMD 19.2 billion target due to digital system efficiencies and targeted monitoring projects like the Sipper Project for alcohol taxation. Within the Technology Acceptance Model (TAM), this performance surplus serves as a powerful validation of perceived usefulness. The perceived ease of use principle, using these digital technologies will depend on the manner in which the technologies were introduced to users and their digital competency level. The internal audit unit at the GRA explicitly regarded the use of digital tracking systems as enablers in optimizing revenue. Under the Unified Theory of Acceptance and Use of Technology (UTAUT), the performance expectancy is triggered by the amount of revenue generated by departmental managers within the GRA.

The deployment of the ASYCUDA world software within the customs department at the GRA has immensely helped with regulating customs collection by automating e-tracking for transit cargo and introducing e-invoicing systems, which fundamentally restructures revenue protection and internal auditing. From the lens of the Diffusion of Innovations (DOI) theory, the specific functions provided by these software programs provide a decisive relative advantage over traditional manual oversight. In the past, before the introduction of these digital tools, the GRA relied upon manual audit verifications using physical paper receipts and spot-checks, which left gaps for human error, possible manipulation and altercation of data causing huge revenue

leakages for government. Introducing these automated platforms has enable the Gambia Revenue Authority (GRA) to conduct continuous digital audit trails, real-time data capture, and algorithmic monitoring. This has enhanced transparency and accountability throughout the revenue collection process.

P11 notes that automating core operational processes frees up capacity within the internal audit department, allowing teams to leverage digital capabilities in audit areas that previously lacked modernization. The Institutional Theory provides a clear framework for analyzing this operational shift. Historically, public sector entities faced structural irregularities, where high level policies not matching the realities on the ground. The implementation of the ASYCUDA and digital payment gateways have helped to align operational execution directly with formal government frameworks. The introduction of these advanced technologies has enabled the internal auditors at GRA to redirect their resources towards higher-risk operational areas. This shift strengthens normative practices across the institution and the same time ensures that audit procedures are applied consistently across all revenue streams.

P3 highlights a major strategic initiative led by the Central Bank, developing an integrated payment system that embodies commercial banks, microfinance institutions, credit unions and mobile wallets to track monetary inflows and outflows across national economy. This payment ecosystem, as described by P3, represents the facilitating conditions needed for a well digitalized payment environment. From an Institutional Theory perspective, this integration applies strong coercive and normative pressures across all financial actors. It enhances systemic accountability by creating a platform that involves both the formal and informal sectors of the economy, and thus provides auditors with complete data trails across both public and private sectors.

4.5.6 Theme 6: Regulatory Considerations

The issue of non-regulatory reforms/policies and obsolete laws not directly addressing the introduction of new technologies as well as the adoption of digital tools has been a major obstacle at the government and legislation level. This could be linked with the research question of *to what extent do government digitalization policies influence uptake in the Gambian auditing profession?*

The findings revealed that most developing nations are lacking adequate laws and policies to cater for new developments of improved technologies within the systems of governance and operation, especially in the area of data protection and integrity;

“There is an urgent need for new regulations to govern the use of AI and other digital tools in auditing, addressing ethical concerns and accountability challenges”. (P10)

“The Gambia is faced with obsolete policies and laws in many areas particularly in the adoption and implementation of digital auditing tools” (P9)

“I think there are some policies that government already rolled out promoting digitalization, in the auditing field particularly I am not sure, I am not aware of any.” (P4)

On the part of regulatory considerations, some respondents made it vividly clear that works are on the way to digitalize certain areas within the economy;

“I can say we have the influence to really push for digitalization in the economy, like you mentioned as the top financial institution in the country, we are mandated to oversee all financial institutions in the Gambia, this includes banks, microfinance, insurance, I mean fintech and forex bureaus. As you know now, fintech companies are going wild in terms of innovations, in terms of technology and as the Central Bank we need to be up there with them so that we know what they

are doing so we can supervise them properly and ensure whatever they doing is right. We can push certain policies, at national level and can mandate banks to follow certain policies they need to follow our directives or penalize them or fine them if they don't comply” (P3)

“I haven't heard of exact policy but I know as at present day, a lot of institutions are trying to digitalize their processes, like I said mainly because of accountability. Maybe there is not a law or a regulation governing such but institutions are very aware of the need for accountability and transparency purposes and are moving more towards digitalization” (P6)

“I don't know how far they have gone, let's say for Social Security they recently introduced a system where people make payments of their dues and then log it in virtually online. I think that is a step that government has taken in improving digitalization”. (P5)

Analysis

The responses gathered from the semi-structured interview has highlighted an explicit point on a critical gap between policy mandates and technical realities. The results reveal non-existent and outdated regulations that fails to address the current innovations of digital technologies. This is a common phenomenon in many developing nations, where most policies and laws were being formulated well before the era of technology. P4 notes a complete lack of dedicated digital audit policies, while P10 stresses an urgent need for legal frameworks to govern AI ethics and digital accountability. Viewing through the lenses of Institutional Theory, this gap unveils a breakdown in coercive and normative isomorphism. In a standard setting, the coercive mechanisms such as statutory laws, mandatory digital audit guidelines, and legal frameworks for electronic evidence informs and guides institutions within this context. However, with the absence of these laws and policies, institutions are faced with normative uncertainties. The absences of clear regulations

and defined guidelines on the use of advanced technology, has led to many institutions within developing nations tend to frown upon fully transitioning to digitalize systems.

In contrast, statements from central financial authorities reveal a top-down regulatory push. P3 outlines how the Central Bank of The Gambia (CBG) leverages its statutory oversight to compel financial institutions including commercial banks, microfinance institutions, and fintechs. The CBG ensures these institutions adhere to the centralized digital monitoring systems which is backed by regulatory fines and enforcement directives. This is crucial as it gives a positive indication of the role the Gambia government is playing in ensuring compliance at the central bank level. In addition, under the UTAUT theory, the supervision role played by the CBG contributes towards the facilitating conditions that is essential within the financial ecosystem. When supervisory bodies enforce API integrations and automated reporting guidelines, auditees are legally required to provide accessible digital data streams.

P5 and P6 observe that even without explicit national laws mandating digital audit tools, public and semi-public bodies such as the Social Security and Housing Finance Corporation (SSHFC) are independently implementing virtual payment platforms and online submission portals to enhance transparency and administrative accountability. This demonstrates the perceived usefulness of the use of technology within processes even in the absence of legal mandates. This attitude towards digitalization represents mimetic isomorphism. This indicates that institutions that are forward looking voluntarily adopts digital platforms to align with international standards (DiMaggio & Powell, 1983).

4.5.7 Theme 7: Institutional Support and Strategic Plans

In addressing how institutional pressures shape the digitalization of auditing practices in The Gambia, the key points highlighted during the interview is majorly focused on the roles top management has played in the integration of digital auditing tools within their processes and the way forward to further strengthen this quest. This theme also attributes its finding as a respond to the Institutional Isomorphism and Adoption Motives discussed in this research.

When asked *the way forward and what strategic plans do institutions have in place to embrace digitalization:*

“Significant infrastructure investments have been made in the National Audit Office following public finance management reforms to prepare for technological disruption”. (P10)

“One recent engagement we have with SAI Saudi Arabia is majorly related to the integration of digital collaboration and partnership between SAI Gambia and SAI Saudi Arabia. The two SAIs are looking forward for great partnership in fostering efforts towards digitalization.” (P10)

“The central bank is in the process of formulating a national payment strategy, this is something that was not existing before, so we did like a strategy articulation not long ago, this strategy brought all the stakeholders in the payment ecosystem in the Gambia. This includes the government, accountant general, ministries and all the private players in the ecosystem and we all sit in one room and then draw kind of a roadmap as to where do we want our payment ecosystem to be in the near future, in five years time in ten to thirty years. This is forcing a policy about digitalization, having a digital payment ecosystem in ensuring that we meet our digitalization target. So yes, the Central Bank has that influence to push for digitalization” (P3)

In addressing the issues related to institutional isomorphism and adoption, P4 made reference to the practices certain private audit firms within the Gambia emulates and mimics the international Big four audit firms. To quote from their response, *“The private audit firms are aligning to the big four, if you look at it, it’s the same set of international standards whether is the IFRS or other standards. Most of these software and digital tools that they are using is emulated from the big four firms.”*

On the issues of adoption motives and how embracing digital auditing tools could technically affect the recruitment process of the audit profession. Most respondents agreed that digital tools could eventually shape the recruitment process noting that the new added skills will mainly be related to data analysis techniques and technology;

“I definitely do believe now that if there is recruitment taking place, I believe management will start asking questions such as what are your IT skills and how can they benefit the audit”. (P6)

“Going forward, if we are using these digital tools, during the recruitment, probably one of the criteria might be to see whether the candidates are proficient in terms of digital tools” (P7)

“We have not made that emphasis yet for people to have those skills, but I think overtime that will change, because I think those are important to understand how to manipulate data” (P9)

In relation to the role Gambia government can play to enhance digitalization, P2 stated that *“Government policy initiatives can have a positive impact on the audit profession. One, increase the use of electronic tax system, digital government services, electronic payments, online regulatory reporting and encourage businesses and professional firms to adopt digital systems”.*

Analysis

The study seeks to understand how audit institutions in developing nations are embracing digital auditing technologies within their processes. This theme is essential to take a deep dive in understanding the strategic plans audit institutions and audit stakeholders have in place in the digital adoption process. From the responses received during the interview, the NAO has been engaging with key partners to generate resources towards the digitalizing the audit process. This initiative according to the respondents, is in line with the strategic NAO plan highlighted within the context of digital auditing adoption.

The Central Bank of The Gambia (CBG) as a key financial oversight body, is also taking the lead to create regulations and policies that are guiding both the private and public sectors. The CBG has been involved with many initiatives in creating the needed facilitating (Venkatesh et al., 2003) conditions that are crucial in enabling technology adoption at a national level.

The findings have also revealed a structural change on the employment pattern in recruiting audit and accounting professionals. There is a needed call to reformulate the auditing syllabus at the tertiary levels to include data analyses, Artificial intelligence, machine learning and other digital formations in the school's curriculum. The respondents all agreed that, in the near future, audit institutions will tend to consider auditors with data analytical skills and strong IT background (Fotoh & Lorentzon 2024).

4.6 Qualitative review summary

The findings reveal a clear and compelling vision among auditors and stakeholders regarding the benefits of digitalization. There is a near-unanimous belief that digital tools will significantly reduce audit time, improve the quality of evidence, and enhance overall efficiency and accuracy. This strong perception acts as a powerful driver for change, indicating a widespread willingness to embrace new digital technologies. In a developing nation's context, the findings have highlighted the existing gaps found in the Technical, Human and Institutional gaps that audit professionals continue to face in the process of accommodating advanced technologies. The results have highlighted the non-existent regulations and policies guiding the use of digital platforms in The Gambia. This is a fundamental barrier needed for the integration of digital tools in emerging economies. Institutions within The Gambia has highlighted the struggle of acquiring advanced technology due to the high cost associated of maintaining licenses from external developers. There is also an issue with the low digital literacy rate amongst audit and accounting professionals, thus the Human element needs to be strengthened in order to ensure effective application of advanced technologies. This is compounded by a profound lack of essential training related to digital literacy and technical infrastructure, limited human capacity and weak institutions to facilitate the process of embracing advanced technological tools within firms in developing nations. The most critical finding is the pervasive issue of resistance to change, which is identified as the single biggest challenge, overshadowing even concerns about cost and data security.

The interviews have also shed light on the roles stakeholders and those charged with governance are playing to ensure institutions are well digitalized and embrace technology. Stakeholders such as The Central Bank of The Gambia, The Gambia Revenue Authority and private audit firms are

gradually digitalizing their processes, forcing the Supreme Audit Institution (NAO) to improve on their audit methodologies and processes in order to reflect the current realities.

Going forward, the results have highlighted the need to strengthen the facilitating conditions in order to successfully integrate technology within institutions. These facilitating conditions are but not limited to improving the digital literacy level of audit and account professionals by providing continuous training; allocating sufficient budget for the acquisition of digital platforms; instilling a positive response for change within institutions; enhance the digital integration of stakeholders within the auditing cycle and ensure government policies and regulations are in line with the current technological developments.

CHAPTER FIVE: SUMMARY, CONCLUSION, LIMITATIONS & RECOMMENDATIONS

5.1 Summary of Research Findings

The objective of this research was to explore how developing nations are adopting technological tools within the auditing process, using The Gambia as a case study. The research was conducted in line with the five research questions that are evident to test the adoption rate of digital tools and the prospects of institutions within the audit ecosystem in embracing advanced technologies. The study has highlighted the importance of using advanced technological tools within the auditing process in enhancing transparency, accountability and improves the internal controls and thus the quality of audit reports. In the developing nations' context, audit institutions and stakeholders within the auditing ecosystem are aware of the importance and the impact of digitalization. However, the underlining issues surrounding the adoption is aligned with the technical, human and institutional gaps that affects the majority of developing nations.

This research has revealed evidence of gradual adoption of digitalization by major stakeholders in The Gambia. This is influencing a great force for oversight bodies such as the NAO and other private audit firms to digitalize their processes and reform the traditional audit methodologies. Government is encouraged to improve on policies and regulations that are in line to guide the use of technologies in different domains. The private sector has also shown a level of dedication in finding sustainable ways that could help with embracing digitalization and the same time factoring the spillover effect of charging higher audit fees.

First the study seeks to identify the current level of digital auditing tool adoption and proficiency among professional auditors in The Gambia. We found out that the digital literacy level of audit

professionals is at medium-low, and thus signaling the need for concise training programs aligned with technological adoption in order to enrich the human dimension. Most audit institutions within developing nations are composed of staff with traditional auditing skills, with limited knowledge on data analysis and machine learning. From the prior research context, Yang et al. 2026, describe digital literate auditors are best at identifying anomalies and analyze complex data more efficiently. This corresponds with the call for Gambian audit institutions in providing audit professionals with the necessary tools and skills needed in the process of embracing technology. Their study conceptualizes auditors' digital literacy as a specialized form of human capital by embarking on capacity building programs in enabling them understand and apply technology more effectively.

This research also examined the perceived impact of the digitalization of auditing on audit efficiency and effectiveness in the context of The Gambia. We found out that digitalization improves the overall quality of audit institutions and also the audited entities. The impact positively help with the compliance of audit standards, reduces the risks of fraud and error and most importantly in the developing nations' context; used as a mechanism to combat corruption and revenue leakages. This study has revealed the significant impact of adopting advanced technologies at the Gambia Revenue Authority in enhancing their revenue collection process and minimizing fraud. Zhu & Yue 2024 in their study *"Does the adoption of artificial intelligence by audit firms and their clients affect audit quality and efficiency? Evidence from China"*, highlighted that the adoption of Artificial Intelligence improves internal control design and enhances real-time transactions. This is crucial in The Gambian context, where most audit institutions are struggling with audit back-logs affecting the timeliness and relevance of audit reports.

We also analyzed the key drivers and barriers affecting the adoption and implementation of digital auditing technologies by audit firms and their clients in The Gambia. The research has revealed key issues affecting the three dimensions examined in this study; Technical, Human and Institutional Gaps. We found that Gambian audit firms lack the financial muscles to acquire advanced technologies. This adversely affects the smaller audit firms with tight budgets, compared to the NAO. The NAO however, could access certain software platforms but faces the challenge to maintain the high licensing fees for the renewals of these tools. According to those charged with governance, most of the high cost of software maintenance is due to the external dependence on developers, since there are no locally available digital service providers in this category. There is also the issue of change management, of staff being reluctant to embrace new methodologies and advanced technology. This was listed as the most dominant factor cited by respondents during the research. Certain software platforms were said to have failed its testing from the trial stage. This has pointed the need for developing nations to strategize their means of introducing new methodologies and technological platforms to ensure that the PEOU is high. There is also the need for audit and accounting professionals to embark on continuous trainings related to digital adoption.

This research has scrutinized how might the increasing reliance on digital auditing tools impact employment trends and the skills gap within the Gambian auditing profession. The study has revealed that, in due time most audit institutions will start to consider more auditors with technological backgrounds on data analysis and machine learning. In the Gambia, the auditing sector hasn't gone through this transformation yet, but the NAO has already established an IT Audit department responsible for IT related issues. The challenges face by the NAO and most other auditing firms in The Gambia, is having a team of auditor with financial knowledge and the

same time skilled with IT background. This combination is rare and thus, the IT Audit team do not possess sufficient financial background needed to sufficiently assess financial reports and the same time exploring IT auditing tools. Fotoh & Lorentzon (2024) on their publication, *“From 'audit machines' to tech-savvy auditors: Auditors' quest for professional security with respect to digital transformation”* examined the concept of Tech-Savvy Auditors. According to them, there is a competitive advantage for hybrid auditors with strong financial background coupled with a high intellect on the use of technology. This concept applied in the context of The Gambia will reveal a void that most institutions lack in emerging economies.

Finally, this research analyses to what extent do government policies and initiatives aimed at digitalization impact the auditing profession's adoption of digital technologies in The Gambia. During the time of writing this thesis, we found that there is no government policy in The Gambia developed to promote and guide the use of advanced technologies within the auditing processes. However, The Gambia government has taken several initiatives towards the adoption of digital platforms in most sectors in the economy as seen in the case of the GRA and the CBG examined in this study. The government has also established a Ministry for digital economy, responsible for the affairs of technology adoption. This research has revealed the information asymmetry on the issues of current policies and regulations governing digitalization in general. A small portion of the economy is well informed about the availability of digital streams, leaving the average Gambian without knowledge of these developments. Carlos Santiso (2022) on his study *“Govtech against corruption: What are the integrity dividends of government digitalization?”* emphasized the need for governments to shift from the traditional anti-corruption strategies to modern digitalized state functions in creating structural integrity dividends to minimize corruption, revenue leakages and enhance public trust. This is evident as

seen in the case of the GRA and the CBG where the adoption of digitalization has enhanced the revenue collection processes and reduces revenue leakages. In this situation, the institutional gaps within the GRA and the CBG are being narrowed and thus seen as a limelight by other institutions to emulate.

5.2 Implications of the findings

The findings from institutions like the National Audit Office (NAO), the Gambia Revenue Authority (GRA), and the Internal Audit Directorate demonstrate a clear commitment from central government and its key agencies to digitalize. These institutions are heavily investing in software platforms and other server operators in order to ensure a smooth efficiency of technological adoption within their processes. Despite these efforts, there is still the issue of high acquisition and maintenance cost of advanced technologies, such as the D2 million annual licensing fee paid by the GRA and other institutions. This creates a significant barrier for most firms in The Gambia and developing nations alike to adopt technology.

Although the cost of acquiring and maintaining technological tools has been highlighted as a major obstacle in this research, it still does not supersede the human element. The study has revealed that the major obstacle in technology adoption is largely related to the resistance to change by the users of these technologies. The qualitative data has strongly revealed this correlation as a major issue leading to failures of most technologies being introduced to the staff of the NAO due to inadequate change management.

The study has proven that for a successful digitalization to occur, there needs to be certain facilitating conditions that must be present and functioning. Facilitating conditions for technology adoption in a developing nation's context will largely depend on the infrastructures such as a

reliable electricity supply and a high-speed internet supply. These factors are crucial in ensuring that the process of embracing technology is smooth and free from hurdles. In addition, the absence of regulations and laws governing the use of new technologies poses a high risk and uncertainties to the users of these technologies. There is need to have an update of new regulations and policies that will address and promote technological adoption by audit firms and other stakeholders within the auditing cycle. This is seen as government's effort in promoting accountability and providing an environment for monitoring and control.

The study has revealed a direct link between digitalization and improved processes at the revenue collection department of the GRA, in enhancing their revenue collection processes. Although this is a positive correlation, it has also highlighted the existing gap to be fulfilled by the NAO as an oversight body in order to update their auditing methodologies to suit the new advanced techniques already being deployed by the GRA. This indicates that while some departments within the GRA are equipped with advanced technologies, the internal audit functions are still manually inclined, often playing catch-up in meeting the new demands of these audited entities.

5.3 Conclusion

To conclude, this study has strategically examined the institutional change and the digital transformational journeys within a developing-nation context, specifically The Gambia. The objectives of the research were to analyze the Technical, Human and Institutional drivers needed for a successful integration of advanced technologies within emerging economies in the auditing process. The research has provided a comprehensive overview of the role advanced technological tools have on the auditing process, in terms of improving financial reporting, clearing back-logs, strengthening internal control systems and promoting accountability and timely monitoring. The study has revealed that the main obstacle faced by developing nations in embracing technology is

majorly depended on organizational and systemic issues. This is coupled with the issue of high cost of software and advanced technologies, a fundamental digital literacy gap among staff and issue of change management. The process of digitalizing the auditing process in The Gambia is also faced with the issue of underdeveloped infrastructure, particularly poor internet and electricity supply needed for the efficient exploitation of cloud-based systems. The issue of non-existent laws and regulations in governing and guiding the use of advanced technologies within the Gambia has also caused a form of uncertainty among users of these technologies. This research therefore, serves as a reflection of the current realities faced by The Gambia and other developing nations alike. This research makes a vital contribution to the limited body of literature focused on technology adoption within the auditing field, in a developing-nation context. The findings and recommendations of this research will be beneficial to the relevant stakeholders within the auditing ecosystem in The Gambia. The recommendations can be used by policy-makers, government institutions and other relevant bodies in shaping a conducive environment for digital adoption within institutions. In addition, future researchers can leverage these findings to further expand the scope and examine specific areas in examining technological adoption in other fields.

5.4 Limitations of the study

The study poses certain limitations to conclude on the evidences provided during this research. Although the study reflects the situations in most developing nations or emerging economies, the samples examined and analyzed were solely based in The Gambia creating a geographical limitation. This, however, may not be fully representative but it gives a strong indication of the state of digital adoption within audit institutions in most developing nations.

Moreover, the interviews were purposely limited to a number of participants meeting a set criterion. This has narrowed the participants number and also excluded other auditors that are

within the targeted institutions but not meeting the set criteria base on education level and experience. The survey questionnaire was also limited within the auditing and accounting sectors and do not take into account other professions within the Gambian economy. These decisions were intended to attain relevant results that informs our research questions and meets the objectives of this study. The research also examined few case studies in The Gambia, considering only the case of the GRA and the CBG in relation to the NAO.

5.5 Recommendations

5.5.1 Infrastructural Developments

There is a strong need for infrastructural developments in areas related to electricity supply, and reliable internet connection. To combat the issue of unreliable internet connection, it will be recommended to use solar panels as a sustainable means to supply constant electricity. In the case of a high-speed internet, it will be prudent to adopt intranet grid supplied by government internet companies in order to reduce the cost of acquiring internet connection.

5.5.2 Capacity Building

The research has revealed a skill gap amongst auditors in adapting to new technological innovations affecting the auditing profession. Capacity building programs in areas related to data analysis and advanced information technology courses needs to be incorporated in university curriculums and other professional programs to prepare aspiring auditors and accountants. Training programs related to software manipulations and techniques needs to be a staple within audit institutions in ensuring continuous learning and development.

5.5.3 Policy Reforms

The non-existent policies and regulations guiding the users of these advanced technological tools has triggered the need for new policy reforms by the governments in developing nations. The Government of The Gambia needs to create policies and reforms that caters for the new technological innovations and developments.

5.5.4 Group Licensing and Local Software Developers

To combat the high cost associated with acquiring advanced technological tools, audit firms especially within the public sector can organize themselves and engage on group purchasing. This will reduce the average cost of acquiring advanced technological platforms, making it accessible to all audit institutions despite of their sizes and financial status. In addition, there is a high need to encourage local production of advanced technological software to be sourced within the jurisdictions in which these software are used and needed. This initiative will drastically reduce the cost of purchasing certain auditing tools that are deemed inaccessible by most firms in developing nations.

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Appendix 1: Summary of Literature on digital audit tools in developing nations

Author	Year of Publication	Title	Journal's name, volume, issue, pages	AJG Ranking
MJ Rahman, H Zhu, L Yue	2024	Does the adoption of artificial intelligence by audit firms and their clients affect audit quality and efficiency? Evidence from China	<i>Journal of Accounting and Public Policy</i> , 43(2), 101118. Volume 42 Issue 2	3 (Highly Regarded)
Solomon Christopher Friday, Iyabode & Damilola	2024	Reviewing the Effectiveness of Digital Audit Tools in Enhancing Corporate Transparency	<i>International Journal of Digital Accounting Research</i> , 24, 65–92.	1 (Ranked in the specialized Accounting Information Systems category)
D Leocádio, L Malheiro, JCG Reis	2025	Auditors in the digital age: a systematic literature review	<i>Journal of Financial Reporting and Accounting</i>	1 (Highly focused on the professional transition in accounting)
S Vitali, M Giuliani	2024	Emerging digital technologies and auditing firms: Opportunities and challenges	<i>Accounting, Auditing & Accountability Journal (AAAJ)</i> Volume 37 Issue 1	3 (Highly Regarded)
P Kafel, P Rogala	2022	Auditing management systems in digital transformation era	<i>Total Quality Management & Business Excellence</i> Volume 33 Issue 5-6	2 (Focused on business excellence and process management)
T Volodina, G Grossi	2025	Digital transformation in public sector auditing: between hope and fear	<i>Public Money & Management</i> Volume: <i>Forthcoming/ In press</i>	2 (A leading journal for public sector accounting and management)

ACB Aquino, AF Lino, RR Azevedo...	2022	Digital affordances and remote public audit practice	<i>Accounting, Auditing & Accountability Journal (AAAJ)</i> <i>Volume: 35</i> <i>Issue: 9</i> <i>Pages: 135–163</i>	3 (Highly Regarded)
C Santiso	2022	Govtech against corruption: What are the integrity dividends of government digitalization?	<i>Journal of Cyber Policy</i> <i>Volume 7</i> <i>Issue 2</i> <i>Pages: 190–211</i>	Although not being ranked by the AJG, this publication is crucial to address the link between digitalization and national integrity. In the Gambian context, where auditing is a tool for donor confidence and anti- corruption, these contributions provide the necessary 'Environmental Pillar' analysis required for this research.
N Daidj	2022	The digital transformation of auditing and the evolution of the internal audit	<i>Journal of Innovation Economics & Management</i> <i>Volume: 38</i> <i>Issue 2</i> <i>Pages: 143–171</i>	1 (Specialized in innovation management and organizational change)
KAK Saputra, S Paranoan	2024	Do Cyber security, Digitalisation and Data Visualisation Affect the Quality of Internal Environmental Audits?	<i>International Journal of Energy Economics and Policy</i> <i>Volume 14</i> <i>Issue 1</i> <i>Pages: 541–550</i>	1 (Specialized in policy and economic impacts of energy and environmental systems)

N Arabi	2024	THE FUTURE OF ACCOUNTING AND AUDITING IN THE ERA OF TECHNOLOGY AND METEVERSE	<i>Journal of Contemporary Financial Practice (or International Journal of Professional Business Review)</i> Volumn 9 Issue: 1	1 (Specialized in emerging business practices and digital frontiers)
A Alqatan, K Hussainey, M Hamed, K Benameur	2024	Impact of digitalization on reporting, tax avoidance, accounting, and green finance	<i>Journal of Financial Reporting and Accounting</i> Volume: 22 Issue 4 Pages: 841–865	1 (Highly focused on the intersection of technology and specialized reporting)
DSP Astuti, U Rohmah	2023	The effect of application of audit digitalization on auditor performance with professional ethics as a moderation variable:(survey on KAP in Central Java)	<i>International Journal of Economics, Business and Accounting Research (IJEBAR)</i> Volume 7 Issue 1 Pages: 234–245	Although this publication was not ranked in the AJG, it adds important elements that are vital to comprehend the effect of digitalization in of the auditing process that is key in this thesis. Relying solely on 'World Elite' journals would risk a Western-centric bias that ignores the 'facilitating conditions' specific to developing nations.
Samiolo, Rita	2021	Mediating instruments and institutional legitimacy in developing economies	<i>Accounting, Organizations and Society (AOS)</i> Volume 88 Article Number: 102146	4* (The highest possible ranking; a "World Elite" journal)

AE Artene, A Domil	2024	The Role of Accounting and Auditing in the Digital Age. From Digitization to Digital Transformation	<i>Journal of Risk and Financial Management (JRFM)</i> <i>Volume 17</i> <i>Issue 2</i> <i>Article Number/Pages: 62 (Pages 1–18)</i>	1 (Ranked in the Finance and Accounting category)
FN Ilmawan, IR Bawono	2024	Challenges And Opportunities Of Digital Auditing: A Look Beyond The Year 2020	<i>Journal of Economics, Business, and Government Challenges</i> <i>Volume 7</i> <i>Issue 1</i> <i>Pages: 12–25</i>	1 (Focused on contemporary challenges in business and governance)
N Peter	2023	The impact of digitalization on a companys' risk management	<i>Journal of Business Research</i> <i>Volume 155</i> <i>Article Number: 113410</i>	3 (Highly Regarded)
L Gutsalenko, V Aloslyn	2024	Directions of digitalization of going concern audit—a prerequisite for its efficiency increase	<i>International Journal of Digital Accounting Research (IJDAR)</i> <i>Volume 24</i>	1 (Specialized in Accounting Information Systems and digital audit transitions)

A Lascău	2022	The benefits of audit digitalisation and the effects on the work of auditors.	<i>Journal of Intellectual Capital</i> Volume 23 Issue 5 Pages: 1054–1075	2 (Leading journal on knowledge management and intellectual capital)
Tiron-Tudor	2021	Managing change with and through blockchain in accountancy organizations: a systematic literature review	<i>Management Decision</i> Volume 62 Issue 1	2 (Highly regarded for research on organizational management and decision-making)
JE Otia, E Bracci	2022	Digital transformation and the public sector auditing: The SAI's perspective	<i>Sustainability (Special Issue: Digital Transformation in Accounting and Auditing)</i> Volume 14 Issue 19 Article Number: 12465	1 (Highly cited in the field of public sector innovation and sustainable governance)
E Lugli, F Bertacchini	2023	Audit quality and digitalization: some insights from the Italian context	<i>Journal of Intellectual Capital</i> Volume 25 Issue 1	2 (Leading journal for knowledge management and organizational intellectual assets)

A Leng, Y Zhang	2024	The effect of enterprise digital transformation on audit efficiency—Evidence from China	<i>Journal of International Financial Management & Accounting (JIFMA)</i> Volume 35 Issue 1 Pages: 85–112	2 (Highly regarded for international accounting and finance research)
F Olurankinse, Al MAMIDU	2023	DIGITAL ACCOUNTING PRACTICES AND AUDIT PERFORMANCE IN NIGERIA: A PRAGMATIC EXPLORATION	<i>Journal of Accounting and Financial Management</i> Volume 9 Issue 6 Pages: 45–58	While this publication is not currently indexed in the AJG ranking, their inclusion is vital for this thesis. These sources provide rare empirical data on digital transition within West African and emerging institutional environments, which closely mirror the infrastructural and regulatory realities of The Gambia.
J Liu, Q Xia	2024	The impact of industry technology complexity on audit quality	<i>Journal of International Financial Management & Accounting</i> Volume 35 Issue 2 Pages: 215–238	2 (Highly regarded for international accounting research)

E Angeles, GBM Mabazza, A Pascua...	2023	Shift to digital audit: A study investigating the benefits and challenges of digitalization on the audit profession	<i>International Journal of Multidisciplinary: Applied Business and Education Research</i> <i>Volume 4 Issue 5</i> <i>Pages: 1462–1475</i>	1 (Focused on applied business research and multidisciplinary digital shifts)
P Peret	2022	Information System Audit: How to Control the Digital Disruption	<i>Expert Focus (The Swiss Review for Audit, Tax and Fiduciary)</i> <i>Volume: 95</i> <i>Issue: 12</i> <i>Pages: 894–899</i>	Although not ranked in the AJG, this publication is highly specialized in the practical and regulatory aspects of the Swiss and international audit market considering the effects of Information system audit. The findings in this study will directly informs some of the hypothesis tested in this thesis.
DA Dudina, ES Mandrakov, VA Vasiliev...	2022	Digital quality management audit with extra criteria for data safety and personal data requirement	<i>Quality Management (Special Issue on Digitalization)</i> <i>Volume: 207</i> <i>Pages: 3866–3875</i>	1 (Specialized in quality assurance and information security standards)
	2023			

A Schreuder, H Smuts		Perspective Chapter: Audit Digitalization–Key Impacts on the Audit Profession	<i>Digital Transformation and Its Role in Progressing the Economy (IntechOpen)</i> <i>Volume: 1</i> <i>Issue: Chapter 3</i> <i>Pages: 41–58</i>	The inclusion of practitioner-focused contribution, such as Schreuder & Smuts (2023) is justified by the need to capture the 'applied' shift in auditing which is an essential element to be considered in this thesis, despite the publication not being ranked in the AJG.
L Broccardo, E Truant, D Argento	2023	Digitalization and management control in the public sector: what is next?	<i>Meditari Accountancy Research</i> <i>Volume: 31</i> <i>Issue: 4</i> <i>Pages: 940-965</i>	2 (Highly prestigious journal for interdisciplinary accounting research)
Md Jahidur Rahman and Ao Ziru	2022	Clients' digitalization, audit firms' digital expertise, and audit quality: evidence from China	<i>International Journal of Accounting and Information Management</i> <i>Volume 31, Issue 2, pp. 221–246</i>	2
Rui Guo, Yuanyuan Jia & Lirong Shentu	2025	The effect of audit digital transformation on audit quality: evidence from digital bank confirmations	<i>China Journal of Accounting Studies</i> , 13:3, 247-281	1
XiaoHong Dong YinWei Jiang	2024	Does enterprise digital transformation affect audit opinion type? Based on business evidence of Chinese listed companies	<i>Economics & Politics</i> <i>Volume 36, Issue 3, pp. 1143–1163</i>	2

Chengming Huang, Sultan Sikandar Mirza, Chengwei Zhang, Yiyao Miao	2024	Corporate digital transformation and audit signals: building trust in the digital age	<i>Meditari Accountancy Research</i>	2
Nurul Fitri Mohd Noor, Zuraidah Mohd Sanusi, Zeti Suzila Mat Jusoh, Razana Juhaida Johari and Nur Fatin Kasbun	2024	The Mediation Effect of Audit Assessment on Audit Competency and Digital Audit to Audit Work Performance Effectiveness	<i>International Journal of Religion (IJOR) Volume 5, Issue 9, pp. 551–562, published</i>	N/A
Yuhan Zhang , Yuan Kang Zhang and Zichen Wang	2024	Digital Transformation of National Audits and Regional Sustainable Development: Quasi-Natural Experiment on the Establishment of National Audit Digital Departments	<i>Sustainability Volume 16, Issue 24, Article 10830, published</i>	N/A
Pupung Purnamasari and Indah Umiyati	2024	Greenwashing and financial performance of firms: the moderating role of internal audit quality and digital technologies	<i>Cogent Business & Management Vol. 11, No. 1, Article 2404236</i>	1
Lukman Surjadi Wiyantoro, Chao Yan, and Yan Liu	2025	How does sustainable audit digital explain the relationship between auditor empowerment and e- audit quality?	<i>Sustainable Futures Volume 10, Article 101229)</i>	1
Manal Yunis a, Nawazish Mirza , Adnan Safi , Muhammad Umar	2024	Impact of audit quality and digital transformation on innovation efficiency: Role of financial risk-taking	<i>Global Finance Journal Volume 62, Article 101026</i>	2
Federico Bertacchini, Gianluca Gabrielli, Ennio Lugli, and Pier Luigi Marchini	2024	The digital (r)evolution in internal audits: are we there yet? Some insights from Italy	<i>Managerial Auditing Journal Volume 40, Issue 2, pp. 129–152, 2025</i>	2

Mojtaba Hamzeh, Fereydon Rahnemay Roodposhti, Bahman Bani Mahd, and Mahdi Saleh	2025	The impact of digital audit on audit expectation gap	Journal of Islamic Accounting and Business Research	1
Tianyu Zhao, Wenjing Duan, and Yixiao Mao	2025	Auditors' Digital Expertise and Audit Quality: Empirical Evidence Based on China's A-Share Listed Companies	<i>Emerging Markets Finance and Trade</i> volume 62, Issue 2, pp. 420-438	2
Meng Yang, Lin Guo, Guodong Ren, Qiang Wang, and Yixing Liu	2026	The effect of auditors' digital literacy on reduced audit quality behavior: A chain mediation model and the moderating role of prosocial behavior	<i>PLOS ONE</i> Volume 21, Issue 7, Article e0350835	N/A
Lu Zhang and Sophee Sulong bin Balia	2024	Digital transformation and corporate audit risk: Mediating effects of auditor behavior	Finance Research Letters Volume 67, Article 105754	2
Dian Novita Sari, Novandra Rhezza Pratama, and Rahmat Nurcahyo	2023	Digital Transformation Capability Maturity Framework for Digital Audit Readiness in Public Sector (Case Study)	Proceedings of the 4th African International Conference on Industrial Engineering and Operations Management (IEOM)	N/A
Silfi Yaturrohman, Novi Darmayanti, and Isnaini Anniswati Rosyida	2026	READINESS TO FACE DIGITAL AUDITS, DIGITAL INTELLIGENCE, AND TECHNOLOGY ADAPTABILITY: INTEREST IN THE FUTURE AUDITOR PROFESSION	Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE) (Volume 9, Issue 2, pp. 12422–12439)	N/A

Lazarus Elad Fotoh and Johan Lorentzon	2024	From “audit machines” to tech-savvy auditors: Auditors’ quest for professional security with respect to digital transformation	Journal of Information Technology Volume 39, Issue 4, pp. 605–626	4
Wen Shi and Zenglian Zhang	2025	Exploring the role of digital governance: The effect of audit digitalization on firms’ internal control weaknesses in China	International Journal of Accounting Information Systems Volume 56, Article 100756	2
Nisreen Mohammed Said Almaleeh	2021	The Impact of Digital Transformation on Audit Quality: Exploratory Findings from a Delphi Study	Scientific Journal for Financial and Commercial Studies Volume 2, Issue 2, Part 1, pp. 267–304	N/A
Petros Lois, George Drogalas, Alkiviadis Karagiorgos, and Kostantinos Tsikalakis	2020	Internal audits in the digital era: opportunities risks and challenges	EuroMed Journal of Business Volume 15, Issue 2, pp. 205–217	2
Yan Peng and Hao Jin	2025	Effects of information and technology application in audits and digital economy on enterprise risk management level	Finance Research Letters Volume 73, Article 106593	2
iaoling Fang, Zichen Wang, and Li Dang	2025	Audit effort in the digital Era: Uncovering the dynamic interplay of business strategy and digital transformation	International Journal of Accounting Information Systems Volume 56, Article 100747	2
Yuanyuan Liu, Qianqian Liu, and Yanqiu Wei	2025	Digital finance, internal control, and audit quality	Finance Research Letters Volume 76, Article 107033	2
Hai-Xia Li, Shenghui Ma, Xin Gao, Ting Wang, and Yanan Li	2026	Crafting Resilient Audits: Does Distributed Digital Technology Influence Auditor Behavior in the Age of Digital Transformation?	Sustainability Volume 18, Issue 2, Article 623, published January 2026	N/A

Babalwa Ceki and Tankiso Moloi	2025	Technology Adoption Framework for Supreme Audit Institutions Within the Hybrid TAM and TOE Model	Journal of Risk and Financial Management Volume 18, Issue 8, Article 409	N/A
Javis Ebua Otia and Enrico Bracci	2022	Digital transformation and the public sector auditing: TheSAI'sperspective	Financial Accountability & Management Volume 38, Issue 2, pp. 252–280	3
Emmanouil Kalaintzis	2024	International Journal of Government Auditing (INTOSAI Journal)	Harnessing Real-Time Analytics for Public Accountability: The Digital Evolution of Supreme Audit Institutions	N/A
Fazlida Mohd Razali, Norhayati Sulaiman, Dewi Izzwi Abdul Manan, and Jamaliah Said	2025	Sustainability of Audit Profession in Digital Technology Era: The Role of Competencies and Digital Technology Capabilities to Detect Fraud Risk	SAGE Open Volume 15, Issue 1, Article 21582440241304974	N/A
Dragos Ovidiu Tofan and Dinu Airinei	2025	Digitalization Directions within Financial Audit Missions	Audit Financiar Volume 23, Issue 177, pp. 152–163	N/A
Minsi Lin, Fazlida Mohd Razali, and Razana Juhaida Johari	2025	Digital Transformation, Key Audit Matters and Financing Constraints: Evidence from China	Environment-Behaviour Proceedings Journal Volume 10, Issue 31, pp. 171–177	N/A
Dragoş Ovidiu Tofan and Dinu Airinei	2026	Fraud Detection through Emerging Applications – AI Agents	Audit Financiar Volume 24, Issue 182, pp. 397–407	N/A
Yan Ma and Haiyang Zhang	2026	Digital transformation and internal audit quality and efficiency: dual pathways through human capital and financial channels	Asian Review of Accounting Advance Online Publication / Vol. ahead-of-print	2

Ali Sologashvili and Tatia Udesiani	2026	Digital accounting and financial audit as the foundation of smart governance	Smart Cities and Regional Development (SCRD) Journal Volume 10, Issue 3, pp. 67–73, published July 2026	N/A
Syafira Ulya Firza, Sambas Ade Kesuma, and Iskandar Muda	2025	The role of digital transformation in improving audit and accounting information quality	New Applied Studies in Management, Economics & Accounting Volume 8, Issue 4 (2025), Pages 187–206	N/A
Babalwa Ceki and Tankiso Moloi	2025	Technology adoption and digital transformation by supreme audit institutions: a content analysis study	EDPACS: The EDP Audit, Control, and Security Newsletter	N/A
Constantin Viorel Marian, Dan Alexandru Mitrea, Dinu Ștefan Rusu, and Andrei Vasilateanu	2025	Transparent Digital Governance: A Blockchain-Based Workflow Audit Application	Applied Sciences Volume 15, Issue 21, Article 11694	N/A
Veronica Grosu, et al.	2023	The impact of digital transformation on the accounting profession	<i>Technological Forecasting & Social Change</i>	3
Irfan Zamzam, et al.	2024	Influence of Competency & Behavior on Internal Auditor Performance	<i>AABFJ</i>	1
Junaidi, et al.	2024	Fraud detection in public sector institutions: an empirical study	<i>Cogent Business & Management</i>	2
Vikash Kumar Sinha	2023	Legitimacy of internal auditing	<i>J. of Applied Accounting Research</i>	2

Appendix 2: Quantitative Survey Questionnaire

Digitalizing the auditing process in The Gambia

This survey is part of a research study investigating the potential and challenges of digitalizing the auditing process in The Gambia. The current auditing landscape often relies on manual, paper-based methods, which can be time-consuming, prone to errors, and limit efficiency. This research aims to understand the perspectives of auditors, accountants, and relevant stakeholders on the adoption of digital technologies in auditing. By analyzing your responses, we hope to identify key factors influencing the successful implementation of digital auditing tools and strategies, ultimately contributing to a more efficient, transparent, and robust auditing environment in The Gambia. Your valuable insights will help inform recommendations for policymakers, auditing firms, and businesses seeking to modernize their auditing practices.

section 1 of 10

Your Role in the Audit Process

Years of Experience in Auditing

Industry of your Organization/Client

Section 2 of 10

What audit tools and technologies do you currently use? (Select all that apply)

How much of the audit process is currently digitalized in your organization/client

Which audit areas have you digitalized the most? (Select all that apply)

What are the primary methods you use for data collection during audits? (Select all that apply)

Section 3 of 10

What are the key benefits you have experienced or anticipate from the digitalization of the audit process?

What are the main challenges you have faced or anticipate in implementing digital audit tools and technologies?

How do you think digitalization will impact the time spent on different audit tasks?

How do you think digitalization will affect the quality of audit evidence?

To what extent do you agree with the following statement: "Digitalization will improve the overall effectiveness of the audit process"

Section 4: Future of Digital Auditing

What emerging technologies do you think will have the biggest impact on the future of auditing?

What skills do you think will be most important for auditors in the digital age?

What recommendations do you have for organizations looking to further digitalize their audit processes?

Section 5 of 10

Specific to The Gambian Context (5 Questions):

Description (optional)

What is the level of digital literacy among your audit staff?

Are there any specific regulatory requirements or legal frameworks in The Gambia that impact the digitalization of audit processes?

If yes, please specify)

How readily available and reliable is internet access in your organization and for your audit teams in the field?

Are there any local vendors or service providers in The Gambia that offer digital audit solutions or support?

What kind of support or resources would be most helpful in facilitating the digitalization of audit processes in The Gambia? (Open-ended)

Section 6 of 10

Section 2: Current Audit Practices

What audit tools and technologies do you currently use?

How much of the audit process is currently digitalized in your organization/client

Which audit areas have you digitalized the most?

What are the primary methods you use for data collection during audits?

Section 7 of 10

Digitalization of Audit Process

What are the key benefits you have experienced or anticipate from the digitalization of the audit process?

What are the main challenges you have faced or anticipate in implementing digital audit tools and technologies?

How do you think digitalization will impact the time spent on different audit tasks?

Section 8 of 10

How do you think digitalization will affect the quality of audit evidence?

To what extent do you agree with the following statement: "Digitalization will improve the overall effectiveness of the audit process

What emerging technologies do you think will have the biggest impact on the future of auditing?

What skills do you think will be most important for auditors in the digital age?

Section 9 out of 10

What recommendations do you have for organizations looking to further digitalize their audit processes?

What is the level of digital literacy among your audit staff?

Are there any specific regulatory requirements or legal frameworks in The Gambia that impact the digitalization of audit processes?

If yes, please specify)

Section 10 of 10

How readily available and reliable is internet access in your organization and for your audit teams in the field?

Are there any local vendors or service providers in The Gambia that offer digital audit solutions or support?

What kind of support or resources would be most helpful in facilitating the digitalization of audit processes in The Gambia? (Open-ended)

Appendix 3: Interview Questions

1. Can you describe your current audit process, including the tools and technologies you use?
2. What is the perceived impact of the digitalization of auditing on audit efficiency and effectiveness in the context of The Gambia?
3. What is the level of digital literacy among your staff?
4. What are the biggest challenges you face in your current audit process?
5. How do you currently manage data security and integrity in your audit process?
6. How much time is spent on manual tasks in a typical audit?
7. How satisfied are you with the efficiency and effectiveness of your current audit process?
8. How readily available and reliable is internet access in your organization and for your audit teams in the field?
9. Which digital tools or technologies would be most beneficial for your audit process?
10. What are your biggest concerns or hesitations about digitalizing the audit process?
11. What level of training and support would be needed to successfully implement digital audit tools?
12. What is the current level of digital auditing tool adoption and proficiency among professional auditors in The Gambia?
13. How might the increasing reliance on digital auditing tools impact employment trends and the skills gap within the Gambian auditing profession?
14. What are the key drivers and barriers influencing the adoption and implementation of digital auditing technologies by audit firms and their clients in The Gambia?
15. To what extent do government policies and initiatives aimed at digitalization impact the auditing profession's adoption of digital technologies in The Gambia?
16. What are your thoughts on the potential impact of artificial intelligence (AI) on the audit process?