

College of Business and Economics
School of Commerce
Department of
Business Administration and Information System

Assessing the Readiness of Ethiopian Audit Firms for Digital Transformation

Submitted by: HermelaAdmassu

Advised by: MinaleAshagrie (PhD)

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DECLARATION

I, Hermela Admassu, hereby declare that this thesis titled 'Assessing the Readiness of Ethiopian Audit Firms for Digital Transformation' is my original work. I have carried out this research independently under the guidance of my advisor, Dr. Minale Ashagrie. All sources of information used in this study have been duly acknowledged through proper citations and references. This thesis has not been submitted previously for any degree or qualification at any other university or institution.

Name: Hermela Admassu
Signature: _____

Date: June 30, 2026

CERTIFICATION

This is to certify that the thesis prepared by Hermela Admassu, entitled 'Assessing the Readiness of Ethiopian Audit Firms for Digital Transformation,' complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Approved by:

Dr. Minale Ashagrie (PhD)

Principal Advisor

Signature : _____

Date: _____

_____

Internal Examiner

Signature: _____

Date: _____

_____

External Examiner

Signature: _____

Date: _____

APPROVAL SHEET

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

This thesis entitled "Assessing the Readiness of Ethiopian Audit Firms for Digital Transformation" submitted by Hermela Admassu has been examined by the undersigned Examination Board and is hereby approved as meeting the requirements of Addis Ababa University for the award of the relevant Master's Degree.

EXAMINING BOARD

_____

Dr. Minale Ashagrie (PhD)

Principal Advisor

Signature: _____

Date: _____

_____

Dr. .....

Internal Examiner

Signature: _____

Date: _____

_____

Dr. .....

External Examiner

Signature: _____

Date: _____

_____

Chairperson, Department Graduate Committee

Signature: _____

Date: _____

_____

Dean/Director, School of Commerce

Signature: _____

Date: _____

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Abstract

Digital transformation is transforming the audit profession globally, forcing audit firms to adapt new technology in order to raise audit quality and efficiency. Ethiopian audit firms' readiness towards digital transformation has not yet adequately identified. This study examined digital transformation readiness of Ethiopian audit firms based on the effect of awareness & strategic understanding, adoption of technology, human capital development, risk management & audit quality, regulatory environment and client expectation. The research employed a cross-sectional descriptive and explanatory mixed methods approach. Data was gathered from 122 licensed auditors of Addis Ababa through a questionnaire and analyzed using descriptive statistics, correlation and multiple linear regressions. The finding shows that Ethiopian audit firms have a high to moderate digital readiness (Mean=3.76, SD=0.56). Regression model results proved to be statistically significant (R^2=0.73, $p<0.001$) with 73 percent of variation in the digital readiness being explained by the 6 independent variables; and awareness & strategic understanding have a greater influence while regulatory environment is the weakest predictor; which emphasizes the institutional support. It is concluded that increasing the level of digital awareness, developing and increasing technology adoption capability, providing on-going training and updating the regulatory framework is significant to expedite digital transformation of Ethiopian audit firms. The findings have implications for audit firms, regulators and policy makers, and add on to literature on digital transformation in audit profession of developing economies.

Keywords: *Digital readiness, audit firms, digital transformation, technology adoption.*

LIST OF ACRONYMS

AABE	Accounting and Auditing Board of Ethiopia
AI	Artificial Intelligence
CAATs	Computer-Assisted Audit Techniques
CPD	Continuing Professional Development
DV	Dependent Variable
IAASB	International Auditing and Assurance Standards Board
IESBA	International Ethics Standards Board for Accountants
IFAC	International Federation of Accountants
ISQM 1	International Standard on Quality Management
IV	Independent Variable
RPA	Robotic Process Automation
SPSS	Statistical Package for the Social Sciences
TAM	Technology Acceptance Model
TRAM	Technology Readiness and Acceptance Model

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Chapter 1. Introduction

1.1 Background of the Study

The modern audit profession is at a critical inflection point which is challenged by the ubiquitous nature of digital technologies that lead us reconsideration how assurance services are designed, executed, and delivered. The application of advanced data analytics, robotic process automation, artificial intelligence and computer-assisted audit tools are no longer isolated experiments for large international corporations, but are fast-emerging expected operational components for every audit firm that aspires to be relevant, credible and competitive within an information-rich business world (Appelbaum, Kogan, & Vasarhelyi, 2017). Not only have these technologies changed how auditors work in practical terms but they represent a fundamental shift in the positioning of the profession itself, requiring auditors to possess specific knowledge, skills, and standards of practice (Coyne, & Walker, 2018). For firms operating in developing economies where institutional capacity, digital infrastructure and human resource development have historically lagged behind the developed world, the impetus for understanding this evolution has taken on much greater urgency.

At a macro level, the awareness and understanding of digital transformation among audit professionals has been identified as a critical prerequisite for adoption of technologies into the audit practice. Without a foundational understanding of how advanced data analytics, artificial intelligence, and similar technologies impact the evidence needed for an audit, the risk assessment process, and auditor judgment, audit firms cannot effectively make strategic decisions related to investment in technology, training, or service delivery model alternatives (Issa, Sun, & Vasarhelyi, 2016).The Technology Acceptance Model originally developed by Davis (1989) has consistently supported the contention that perceived usefulness and awareness of technology capabilities are critical antecedents to both individual and firm-level adoption behavior. Similar findings are also evident in research focusing on audit firms internationally, where the presence of a visionary technology approaches by firm leadership is often directly correlated to successful adoption of new technologies (Schmitz & Leoni, 2019). For the nascent audit profession in Ethiopia, with its still-evolving foundation, the existence of such a comprehensive understanding of the digital transformation process is a matter that has not yet been empirically investigated.

The maturity and penetration of digital technology use in core auditing tasks is the second key element of readiness. Audit firms globally have moved from standalone use of audit software to integrated environments where data analytics tools analyze the full populations of client transactions, artificial intelligence agents identify misstatements that would not be identified through manual inspection and automated robotics processes extract data and perform reconciliations with little or no human involvement (Cao, Chychyla & Stewart, 2015). Repeatedly the International Federation of Accountants has emphasized that the correct governance of technological integration materially improves audit quality due to increased financial data coverage, earlier identification of misstatements and enhanced analytical understanding of client operations(IFAC,2021).

Ongoing technology-related activities from the International Auditing and Assurance Standards Board, such as standard changes pertaining to automated tools and techniques, continue to emphasize that technological integration is not a competitive advantage but is an expectation that is built into the international regulatory environment (IAASB, 2022). For Ethiopian audit firms that overwhelmingly utilize manual and paper-based methods, the distance between current practices and expected international standards constitute a competitive disadvantage and an increasing audit quality and credibility risk.

The growth of the industrial economy is a critical element of digital transformation discussions often identified as the one variable capable of both accelerating and constraining successful technological adoption. According to the Resource-Based View of the firm (Barney, 1991) argued that human capital is an inimitable, rare, and valuable resource, the development of which will provide sustainable competitive advantage. This leads us to investment in human digital skills should be noted not as a cost, but as an investment in a competitive advantage. Several empirical studies from other developing country contexts support this argument. Studies in Ghana have shown that the lack of training programs and competency frameworks within audit firms have greatly hampered successful technology adoption, even if software has been purchased (Anomah, 2025). Similar studies in Morocco and Vietnam found that training level of audit professionals in areas like data analytics and computer-assisted audit techniques had strong predicting effects on the depth of technological integration (El Omari, Cherqaoui, & Benhayoun, 2024; Anh, Tran, & Le, 2024). In Ethiopia, the small proportion of audit professionals with Information Systems audit qualifications, such as CISA designation, and the general lack of integration of digital competencies into the continuing professional development requirements suggest that human capital development is one of the barriers to a modernized audit profession (Wassie & Pter, 2024).

The extent to which audit firms are prepared to tackle the risks inherent in digital operations and in maintaining the quality of the audit in technology-enabled environments represents a further element of readiness worthy of deep investigation. The advent of digital audit technologies introduces new classes of risk that traditional quality management systems were not built to encompass. Such risks range from potential algorithmic bias, to cybersecurity concerns, an over-reliance on automated outputs and ethical dilemmas presented by artificial intelligence-driven decisions (IESBA, 2021). The most explicit acknowledgement by the profession of such emerging risks is found in the International Standard on Quality Management issued by the (IAASB 2022), which calls on audit firms to embed technology related risk assessment and response into their quality management system. In the developing country context, research suggests that risk management readiness with regard to digital operations tends to be substantially lower than in developed economies, as many firms are not equipped internally to assess the reliability and limitations of the digital tools they are adopting (Wassie & Lakatos, 2025). There are few traces in the Ethiopian auditing world to be found of formal cybersecurity policies, artificial intelligence governance frameworks, or protocols for assessing digital risk among auditing firms, making risk management readiness a relatively underexplored aspect of the digital transformation of Ethiopian audit firms.

The regulatory environment in which audit firms operate has significant implications for their pace and direction of digital transformation that a firm's internal actions alone cannot override. According to institutional theory, as framed by DiMaggio and Powell (1983), organizations operating within a common institutional field tend to converge in their expectations, actions and normative structures around the lead of dominant institutional agents. In the auditing industry these institutional agents consist of professional regulatory bodies, government authorities and international standard setters. Policies enacted, continuing professional development requirements mandated, registration standards established and monitoring functions implemented by the relevant national auditing regulator. Therefore, heavily influence the nature and extent of a firm's pursuit of digital transformation. Audit firms, in countries where regulators have promptly updated their existing framework of continuing professional development requirements, technology-related audit standards training, and guidelines for emerging technology adoption, typically exhibit much greater levels of readiness and adoption (Anomah, 2025). The Accounting and Auditing Board of Ethiopia, the ultimate professional regulatory authority, thus plays a pivotal role in shaping the future path of digital transformation within the entire Ethiopian audit profession. The question of whether its existing continuing professional development framework, registration mechanisms, and compliance monitoring protocols adequately equip the sector to face the demands of the digitally transforming profession remains unanswered and of critical importance.

In addition to regulatory pressures, client expectations and demands have emerged as another powerful external factor driving the audit profession to invest in the development of its digital capabilities. With the growing volume of data being generated and managed in the digital environment by private and public entities, audit professionals are increasingly required to efficiently handle data in its digital form, employ the right analytical tools to manage large, complex data sets and produce more than just the "assurance" element traditionally associated with financial statement audits (IFAC, 2021). Evidence from various developing economy settings demonstrates that digitally capable clients (i.e., clients that use ERP systems on a routine basis, prepare automated financial reports and expect data-driven discussions from their advisors) exert a quantifiable impact on audit firms to invest in matching digital competencies (Anh et al., 2024).

Failure to be perceived by clients as digitally competent could lead to loss of clients to more technologically advanced firms, a competitive market incentive for change that complements regulatory and professional stimuli. In Ethiopia, client digitalization efforts are accelerating across the banking, telecommunications, and public sectors. Understanding to what degree these client expectations influence audit firm strategy is critical for understanding a full complement of stimuli to and impediments from digital transformation.

The six dimensions, awareness and strategic understanding; adoption and maturity of technology; human capital development; audit quality and risk management readiness; regulatory environment; and client expectations represent the components of a professional accounting firms' digital readiness. Whereas, a growing body of research has collected and disseminated evidence on each of these components in developed economy, and to some degree developing economy countries,

Ethiopia's profession lacks a similar body of knowledge. The nation's professional accounting and audit system is characterized by relatively young regulatory and institutional frameworks, developing digital infrastructure, and no prior studies systematically examining its level of digital readiness. This study addresses that gap by offering a holistic perspective and the first empirical examination of the digital readiness in the Ethiopian auditing profession across all six dimensions, focusing on licensed audit firms located in Addis Ababa-where most of the nation's professional auditing services are consumed and provided.

1.2 Problem Statement

The audit profession worldwide is undergoing an accelerated technological evolution that will inevitably reshape the standards of practice, the required professional skill sets, and the expectations of regulators, clients and society. Artificial intelligence, advanced data analytics, robotic process automation and computer assisted audit techniques, now considered no longer peripheral, have moved into the forefront of strategic planning in auditing firms within developed economies and provide measurable improvements in audit quality, risk identification and efficiency (Cao et al. 2015).By modifying quality management standards, issuing technology guidance and integrating digital competence the International standard setters like the International Federation of Accountants and International Auditing and Assurance Standards Board have responded to this technological trends(IAASB, 2022). While the direction of the profession toward a digitally enabled future is certain, the critical questions facing the audit profession in developing economies is not whether the transformation will arrive, but are they prepared for it?

Evidence in Ethiopia suggests that the audit profession is at an early and vulnerable stage of digitalization. While the vast majority of licensed audit firms in Addis Ababa still utilize traditional paper-based systems, manual audit processes and conventional spreadsheet tools, the adoption of specialized digital auditing technologies prevalent in more developed audit markets appears to be significantly lagging (Wassie & Pter, 2024). Coupled with this, the level of human capital development is at a deficit: the rate of Ethiopian audit professionals that possess internationally recognized digital auditing qualifications such as Certified Information Systems Auditor certification and have the training to apply those skills to auditing activities are significantly lower than in other comparable developing country environments and the continuing professional development programmers have not been sufficiently developed in line with this need (Wassie & Lakatos, 2025). Combined, this leads to an audit profession that has a material difficulty meeting the emerging demands of their clients and the requirement to perform audits of higher quality, risk identification and comprehensiveness.

Other developing economies are well-equipped with studies highlighting both the level of challenge and conditions that allow the progress of this transformation. In Ghana, Anomah (2025) identified that while artificial intelligence and data analytics adoption by auditing firms had started showing improvements this was reliant on the level of organizational support, strong regulatory support, effective structured learning and training activities and the presence of organizational

culture which supports experimentation with technology. In Morocco, El Omari et al. (2024) indicated that greater development of human capital in conjunction with more digitally inclined leaders in audit firms leads to a higher level of digital integration of their practice. In Vietnam, Anh et al. (2024) highlighted that senior auditors who have awareness of digital transformation in audit are significantly differentiated from those with less awareness in the extent of integration of new digital audit technologies. In all three developing countries the results point to the conclusion that an audit profession that embraces digital transformation can be divided along the dimensions of awareness, human capital, risk management, client needs and regulatory support.

Ethiopia is a more challenging environment than any of the comparison countries here. Unlike Ghana, with its more mature system of institutional framework for professional regulation, or Vietnam, with its reliance on robust, state-driven investments in digital infrastructure, Ethiopia's audit profession is developing within a regulatory context that is not yet adequately attuned to the imperatives of digital transformation (Wassie & Pter, 2024).

While the Accounting and Auditing Board of Ethiopia continues to perform its core functions of registration and oversight, it has yet to systematically update its requirements for continued professional development, registration criteria, and compliance monitoring processes in line with the evolving competencies required by a digitally transformed profession. As a result, market forces and firm level initiative are expected to bear the main responsibility for driving digital transformation a burden unfit to many of the smaller, limited resourced firms in Ethiopia's audit industry.

The challenge is exacerbated by the absence of any significant body of empirical research examining digital readiness in the Ethiopian audit context. In the absence of such a systematic evidentiary base, neither policy makers, nor professional bodies, nor firms can gain a clear sense of the appropriate interventions, where investment of capacity-building resources should be focused, nor how Ethiopian firms compare to their counterparts in developing countries or advanced economies. Existing research tends to focus on specific issues like technology related use or quality of financial reporting, without providing a comprehensive multi-dimensional assessment of readiness (Wassie & Lakatos, 2025). This absence of knowledge has clear implications not only for the academic literature, but for the quality and credibility of audit services.

The risks involved in failing to bridge this readiness gap are further heightened by the rapid escalation in client demands. Those Ethiopian companies across a variety of sectors, including banking, telecommunications, manufacturing, and the public sector are accelerating their own investments in digitalization, producing greater volumes of transaction and operational data of increasingly varied formats and complexities than traditional auditing methods can handle effectively (IFAC, 2021). Therefore, Businesses are expecting their auditors not only to verify historical transactions but to provide meaningful insights and analytical services that digital tools and methodologies are well-suited to offer. Those firms that are unable to demonstrate clear expertise with digital technologies are now increasingly vulnerable to competition from other

domestic firms that may have invested more in digital transformation or global networks. This pressure from clients, therefore, serves as an additional, market-driven driver of change beyond the formal constraints of the existing regulatory environment and professional standards.

In light of the unprecedented speed of global technological change and clear evidence of domestic deficits in digital capabilities, comparative observations from peer developing countries, and the near absence of a comprehensive body of empirical evidence in the Ethiopian audit context, this study aims to conduct a systematic analysis of the digital readiness of licensed audit firms in Addis Ababa.

Through this assessment is conducted on six distinct dimensions that are awareness and strategic understanding, adoption and maturity of technology, development of human capital and audit quality preparedness, regulatory environment and institutional support, and finally client expectations and competitive pressures. So, this study provides the empirical evidence needed to inform effective policy making, shape strategic investments in training and giving guidance on decision-making processes of firm leadership toward digital audit practices. The study also contributes to filling a substantial void in the developing country digital auditing literature and provides valuable guidance to the Accounting and Auditing Board of Ethiopia and the Ethiopian Institute of Certified Public Accountants and licensed audit firms.

1.3 Research Questions

In order to overcome the issues of this research problem and to fulfill its objective the research attempt to answer the following research questions:

1. To what extent are digital technologies (such as artificial intelligence, data analytics, and computer-assisted audit techniques) adopted and integrated into the audit processes of Ethiopian audit firms?

2. How do organizational cultural and human capacity factors such as resistance to change, digital skill gaps, and limited infrastructure affect the readiness of audit firms to adopt and implement digital auditing technologies?

3. How do institutional frameworks, including the role of the Accounting and Auditing Board of Ethiopia (AABE) and client expectations, influence the strategic readiness and digital transformation efforts of Ethiopian audit firms?

1.4 Research Objectives

1.4.1 General Objective

The overall goal of this study is to evaluate the readiness of Ethiopian audit firms to undergo digital transformation.

1.4.2 Specific Objectives

To achieve the main objective, the study will pursue the following specific objectives:

- Assess the level of understanding and knowledge regarding digital transformation among professional staff of the audit firms operating in Ethiopia.
- To evaluate the extent and maturity of digital technology adoption in core audit processes.
- Analyze the adequacy of digital skills development and training of staff and the investment in capacity development programs on digital auditing.
- To examine the preparedness of audit firms in upgrading methodologies and risk management practices to address digital fraud and audit quality.
- Assess the contribution of the Accounting and Auditing Board of Ethiopia (AABE) towards digital transformation through auditor registration, surveillance, and CPD framework.
- To investigate how client expectations and pressures influence the digital transformation strategies of Ethiopian audit firms.
- Propose a set of evidence-based recommendations for the enhancement of the digital readiness and innovation strategies of the audit firms and the regulators in Ethiopia.

1.5 Hypotheses of the Study

Based on the conceptual framework shown on the section 2.4 of this proposal, and the research questions the following hypotheses are formulated to guide the quantitative analysis. Each hypothesis is presented in both null (H0) and alternative (H1) form to ensure testability.

- H1a: Higher awareness and strategic understanding of digital transformation among auditors positively influences the digital readiness of Ethiopian audit firms.

- H0a: Awareness and strategic understanding of digital transformation have no significant influence on digital readiness.

- H1b: Greater adoption of digital audit technologies (AI, CAATs, RPA, data analytics) is positively associated with the digital readiness of Ethiopian audit firms.

- H0b: Adoption of digital audit technologies has no significant association with digital readiness.

- H1c: Human capital development (training, CPD, IT skills) moderates the relationship between technology adoption and digital readiness, strengthening the positive effect.

- H0c: Human capital development does not moderate the relationship between technology adoption and digital readiness.

- H1d: Strong regulatory support from the Accounting and Auditing Board of Ethiopia (AABE) positively influences the digital readiness of audit firms.

- H0d: Regulatory support has no significant influence on digital readiness.

- H1e: Pressure from digitally sophisticated clients positively influences the digital readiness of Ethiopian audit firms.

- H0e: Client expectations have no significant influence on digital readiness.

These hypotheses were tested using descriptive statistics, correlation, and regression analysis in Chapter 3, while qualitative data from interviews will provide complementary insights into regulatory and strategic perspectives.

1.6 Significance of the study

The present study aims to add to the thin existing literature on digital transformation in the audit profession by investigating the readiness of audit firms operating in Addis Ababa, Ethiopia. Specifically, it highlights how the readiness is influenced by the awareness level, technology adoption, human capital development, readiness for strategy, regulatory impact and client

expectations from a developing country perspective. The results of the study may provide audit firms with a clear picture of their existing capacities and the need for additional training in order to take wise strategic and investment related decisions. The regulatory body (e.g., AABE) also has benefit from the study, in terms of data that may enable them to form regulatory frameworks for digital auditing, understand the adaptation rate of the profession along with technological changes and enhance auditors' CPD. The study can hence, be useful to future research on digital audit readiness.

1.7 Scope of the Study

The scope of this research is limited by geographical location, method of study, research variables, study population and research instruments, in order to maintain focus within the constraints of time, money, and capacity of research work.

Geographically, the study is limited to Addis Ababa, Ethiopia where the bulk of the licensed audit firms and related regulatory institutions are headquartered. Limitation in geographical scope is justifiable in the capital as it holds the highest density of audit firms and serves as the central point for major corporate and industrial clients in Ethiopia. As most of the audit market share is held by these firms that also serve highly digitally-transformed organizations, the findings for Addis Ababa provide a representative look at the overall audit landscape in Ethiopia, and consequently, on the digital readiness and transformation status in the Ethiopian audit profession at large.

The methodology of this research design utilizes a mixed method research design where data are gathered from structured questionnaire survey (quantitative) and semi-structured interviews with partners and representatives of the audit firms and AABE (qualitative). The use of mixed methods will ensure comprehensive and deeper understanding of the concept of digital readiness from both quantitative analysis perspective and from strategic, regulatory standpoints.

The study's variables consist of digital readiness features as represented by awareness of digital transformation, readiness with respect to technology adoption, human capital development, preparedness to address the challenges from digital fraud and the resulting audit quality risks, influences of regulation and expectations of clients. Financial outcomes, technical evaluation of specific software are not considered as variables.

With respect to the study subjects and research instruments, partners, managers and senior auditors are considered as study subjects for professional staff of licensed audit firms, and a self-administered questionnaire is used as a sole research instrument for data collection purposes from professional staff, Junior staff, non-audit staff and advance technical testing is excluded due to less relevance and limitation of resources.

1.8 Definitions of Key Terms

Artificial Intelligence (AI): Technologies that enable computer systems to perform tasks that normally require human intelligence, such as pattern recognition, anomaly detection, and predictive analysis, within audit processes (IFAC, 2022). Within auditing, AI is often used for support of risk assessment, fraud detection, and advanced data analysis.

Digital auditing: auditing in a digitized environment that relies on technology and automation to increase efficiency and effectiveness of audits, and to enhance risk assessment, fraud detection, and overall audit quality (Becker, 1964; IFAC, 2021). Effective human capital development in the context of digitally-enabled audits promotes auditors' application of their professional judgment.

Regulatory environment: A framework of laws, professional standards, and oversight mechanisms that guide the auditing practices and the application of technology and especially by the Accounting and Auditing Board of Ethiopia (IFAC, 2020; AABE, 2023). The influence of regulation on digital readiness can manifest itself in various ways, through standards to adhere to, requirements to comply with.

Chapter 2. Literature Review

2.1 Introduction

This chapter covers a broad spectrum of theoretical and empirical literature pertinent to the study of digital transformation and readiness of the audit profession. Specifically, this chapter looks into definitions of key terms and theories of digital transformation and readiness in auditing, an review of prior studies conducted on the adoption of digital auditing technology, examines the dimensions of human capital and organizational, discusses the regulatory environment and client-driven pressures. Finally, it summarizes the research gaps that was addressed by this study and then presents the research conceptual framework.

2.2 Theoretical Framework

2.2.1 Technology Acceptance Model (TAM)

Originally theorized by Davis (1989), TAM still is the most popular one, which is widely accepted and used as a paradigm that explains why and when a particular information technology is accepted or rejected by the end users in an organization. The core notion of the TAM is about behavioral intention to use a technology based on users' attitudes towards using a particular system that is defined as a consequence of two key determinants of a user's attitudes toward use of a system. These are: perceived usefulness (PU), which reflects the degree to which an individual believes that using a particular technology will improve his or her performance, and perceived ease of use (PEOU), which indicates the degree to which an individual expects that the technology is free of effort (Davis, 1989). As these two variables determine attitudes toward technology, TAM proposes that an individual's attitude is a predictor of his or her acceptance and use of that technology. According to Davis (1989), it also suggests that the two construct 'PU' and 'PEOU', together predict a user's behavioral intention toward accepting and using the information system. For auditors, these factors of acceptance are very influential when the auditors are asked to make decision to adopt any CAATs and data analytics tools, or they decide to accept/ reject these technologies that will improve or damage their job performance. Later studies suggest that TAM could be enriched with some additional construct to increase its prediction performance, for example, some Scholars propose that trust in technology, another aspect to consider and is likely to increase the PU that has positive impact on intention of use, which is particularly relevant for auditors because when auditors have trust in a new algorithm, they will find more useful to employ it in evaluating audit evidence (Kommunuri, 2022; Kelly et al., 2023). In addition to that, strategy management and social influence have been shown to have a direct effect on technology adoption and training and firm support affect self-efficacy and individual innovativeness. For this study, TAM model offers a general conceptual framework to provide insights on factors that shape auditors' decision for adoption of CAATs in context like Ethiopia, where technology familiarity and infrastructure development may present challenges for effective implementation of such systems (Wassie and Lakatos, 2024).

2.2.2 Technology Readiness Index (TRI)

Parasuraman (2000) developed the Technology Readiness Index (TRI) which takes an individual and organization's view regarding their predispositions to use, and to adapt to, new technologies by encompassing four dimensions: optimism (belief that technology will bring them and society at large some benefits) , innovativeness (tendency to be among the early adopters and developers of technology) , discomfort (lack of control people feel about the technology), and insecurity (distrust of and skepticism about technology). Applied to the audit firm environment, TRI helps us to understand why a firm readily adopts or resists digital transformation and to realize that a readiness toward digital transformation is not just a technical aspect, but rather a cultural and psychological one (Parasuraman and Colby, 2015). Empirical studies provide support that a favorable organizational culture and human factors contribute to the success of digital transformation while innovation and optimism increase technology adoption and whereas discomfort and insecurity hinders it (Mutua et al., 2024; Oyeyemi et al., 2023). In Ethiopian audit industry where technology has only recently started to gain traction, these inhibiting factors could be of much significance (Wassie and Lakatos, 2024). Recent extension of the TRI concept has been made towards technology acceptance literature focusing on an AI specific context called AI readiness, which refers to how prepared an organization is to successfully leverage and exploit Artificial Intelligence in practice. It usually involves technological maturity, readiness of human capital, awareness of risks, opportunities, the necessary infrastructure, as well as a clear vision for AI's role in the future (Li et al., 2023; Karaca et al., 2021).

2.2.3 Technology-Organization-Environment (TOE) Framework

Tornatzky and Fleischer (1990) developed the Technology-Organization-Environment (TOE) framework to provide a holistic perspective on technological adoption decisions of organizations and it identifies three main dimensions as drivers of such decisions: technological characteristics and availability; the characteristics of the organization, including its size, human capital, resources, and management structure; and the context provided by the firm's environment, such as regulation, competitive landscape, and market dynamics (Tornatzky and Fleischer, 1990; Zhu and Kraemer, 2005). TOE framework has been applied extensively by many scholars in developing countries to investigate the adoption of computer assisted auditing techniques (CAATs) in many countries (Wassie and Lakatos, 2024). Ethiopian empirical studies based on TOE framework on adoption of CAATs reveal that among technological attributes, compatibility and relative advantage have significant effects on adoption while, IT competency is the main organizational driver, and intensity of competition is a crucial factor in the environment. In other words, if there is compatibility between new technologies and auditors' routines and a higher IT competency of the staff in audit firms, CAAT adoption would increase. Higher competition intensity will also boost this adoption (Wassie and Lakatos, 2024). The TOE model, therefore, directs this multi-faceted study towards assessing the influence of technological, human capital, and environmental factors on readiness in an Ethiopian auditing context.

2.2.4 The Nature of the Digital Transformation in Auditing

2.2.4.1 The Definition of Digital Transformation in Auditing

Digital transformation in auditing is generally defined as the fundamental integration of digital technologies-such as AI, RPA, data analytics, and CAATs-within planning, evidence gathering, risk assessment, and reporting activities, thereby fundamentally reshaping the planning, evidence gathering, risk assessment and reporting processes within audit engagement (IFAC, 2020; IAASB, 2024). Instead of merely incorporating individual tools and systems into the existing workflow, it encompasses a comprehensive revision of how audit work is conceived, designed and performed. As businesses have grown in scale and geographic spread, ensuring the performance and robustness of corporate IT systems and controls lies with internal and external audit and assurance service providers playing a crucial part in assisting worldwide digital transformation initiatives (Mani, 2023). Digital transformation has had a profound effect on audit practice, introducing advanced technologies, which have the potential to improve audit quality, and empirical studies have explored how digital tools affect the accuracy, efficiency, and overall quality of audit services (Angeles et al., 2023; Ebirim et al., 2024; Guo et al., 2024).

There has been a consistent body of literature identifying this transformation as a move from point-in-time, sampling-based auditing, towards continuous, data-driven, risk-focused audit models (Alles, 2015; IAASB, 2024). Corporate digital transformation has also been reported to impact on audit opinion where auditors take into account digital transformation in formulating their opinion based on the digital strategy implementation of their clients and in instances where governance is murky (Min et al., 2026; Zhao et al., 2024).

2.2.4.2 Audit 4.0 and the Fourth Industrial Revolution

Audit transformation is situated within the broader paradigm of Industry 4.0, where it is referred to as 'Audit 4.0' by some researchers. While technologies brought about by Industry 4.0 (AI, digital manufacturing, Internet of Things, data science & analytics, machine learning and big data) are underpinning organizational growth, auditors must respond through the development of technically competent and analytically skillful professionals (Mani, 2023). For auditors, it means that they must develop the capability to identify digital risk environments, analyze information produced by AI and leverage automated tools to perform substantive testing – competencies, which go beyond accounting and auditing expertise (Eulerich et al., 2024).

The significant development of technology has brought revolution in the corporate world and fundamentally changed the ways businesses manage operations and processes, so companies embrace digital transformation in pursuit of business efficiency, sustainability and competitive advantages; however, the impact of digital transformation on audit quality and risk management remains significant to investigate, particularly in developing countries (Kraus et al., 2021; Dai et al., 2023; Hunjra et al., 2024). The increase of complexity and information asymmetry between auditor and client due to the digitization of its business activities makes the deployment of digital tools a necessity rather than an option (Min et al., 2026).

2.2.5 Adoption of Digital Audit Technologies

2.2.5.1 Artificial Intelligence in Auditing

One of the most prominent emerging technologies, artificial intelligence, is considered to have the most significant impact on auditing processes. AI-powered technologies, such as machine learning, deep learning, and natural language processing, have been used in various aspects of audit engagement (Hasan, 2022; Bradley et al., 2024). Using AI tools offers a way of streamlining labor-intensive processes and improving data analytics for a more precise risk assessment and fraud detection. Thus, the audit process is accelerated by efficiency, shifting the auditor's focus toward analytic and judgmental procedures (Mitan, 2024). Furthermore, this integration could reshape auditors' role in terms of a strategic partner capable of creating value beyond compliance in an era where technology reigns supreme (Zulkarnain et al., 2024).

The rate of AI implementation is increasing significantly in the audit field. KPMG's global survey (2024) indicated that 72 percent of the companies currently implement selected AI capabilities in the financial reporting and expect this rate to be 99 percent in the future, whereas Gartner (2024) indicated that 41 percent of internal audit teams are implementing or will implement generative AI within the current year (cited in PMC, 2025). Given that 58 percent of executives are prioritizing generative AI as their primary technology agenda, the expectations put on auditors to match clients' increasing technical sophistication are rising (Zulkarnain et al., 2024).

In relation to fraud detection, AI demonstrates notable efficiency gains compared to conventional rule-based systems. While traditional rule-based systems achieved 60 percent accuracy in fraud detection, machine learning achieved 85 percent accuracy in similar tests conducted on major financial institutions (Fedyk et al., 2022). Nonetheless, the effectiveness of machine learning may vary significantly across industries due to diverse data quality or operational complexity. Manufacturing industry, for instance, demonstrated substantially lower accuracy as compared to others due to complex operational processes and data quality issues (Wassie and Lakatos, 2024). Moreover, automated testing, for example automated data analysis, is proven to reduce routine testing procedures by 40%, enabling auditors to focus on the higher-level analytic tasks (Ilori et al., 2024).

A framework has recently been developed specifically for AI in audit practice, arguing that a theoretical underpinning for AI implementation needs to take into account not only efficiency but also the consistency between automated judgments and professional ethical principles (Leocdio, Malheiro and Reis, 2024). Explainable AI (XAI) has also been introduced as a key area within audit context due to its necessity for accountability and stakeholder confidence (Zhang, Cho and Vasarhelyi, 2022).

2.2.5.2 Data Analytics in Audit Evidence and Risk Assessment

Data analytics can transform auditors from reliance on sampling to examine all transactions of an entire population; that is, it will revolutionize the evidential foundation of the audit opinion (Alles, 2015; Appelbaum et al., 2017; Gao, Huang and Wang, 2020). Technology like data analytics, AI and robotic process automation are redefining internal audit functions and enhancing the effectiveness, efficiency, and performance of internal audit processes; with performance being designated one of the critical components of modern internal audit functions in the 2024 Global Internal Audit Standards (IIA, 2024; Mab-online, 2025). The use of data driven evidence in the audit opinion has, on the other hand, placed high demands on auditor competencies. An internal audit leaders survey recently revealed that their biggest skill/talent gaps lie in areas such as the enabling technologies for the digitalized internal audit including, amongst others, data analytics, machine learning, artificial intelligence, and process mining; thus the digital revolution of the audit profession demands corresponding investment in the professional workforce (Mani, 2023). Furthermore, the adoption of big data technology has challenges related to establishing Mega-Data Audit Platforms, managing data quality, integrity and governance etc. (Ma, 2023).

2.2.5.3 Robotic Process Automation (RPA) in Auditing

The primary benefit of the implementation of robotic process automation is that it frees up auditors from tedious, rules-based, low-value work, allowing them to focus more on judgment-intensive activities. The advent of robotic process automation and related digital technologies is dramatically changing the business models of the traditional accountancy and auditing services sector but there is little academic research related to this subject, especially relating to implementation in accountancy and auditing firms, and implementation problems are due to a range of factors ranging from practical limitations to deficits in relevant accountants' education (Tiron-Tudor et al., 2024). Issues in implementing and preparing for RPA are not only technical in nature but also inherent to the professional development opportunities that the auditing personnel has (Tiron-Tudor et al., 2024). In practice, internal audits will benefit from internal audit efficiency and quality by minimizing time-consuming repetitive tasks and auditors would be able to spend their time focusing on tasks which would bring them added value such as advance analysis and strategic decision making (Eulerich et al., 2024). The implementation of robotic process automation will also serve to aggregate and collate audit evidence from various client systems. These may range from things such as audit confirmations, reconciliations, generation of emails and automated communications can be enhanced with RPA, but the most key usage is to obtain audit evidence. This will involve collating information from a range of disparate systems which have not been integrated, and then applying it to analytics in order to provide insight for risk assessment procedures (KPMG, 2021). The results of a systematic literature review are similar. Robotic process automation helps auditors to improve audit quality in faced of risks in their work and the performance of internal auditors through enhancement of productivity, extension of scope of risk coverage, and overcoming the shortage of resources (Sari et al., 2023).

2.2.5.4 Computer-Assisted Audit Techniques (CAATs)

CAATs appear to be the form of digital audit technology with the widest documentation in the literature concerning the developing world, a significant gateway technology for firms to make the transition toward digital transformation (Wassie and Lakatos, 2024). With the implementation of tools such as CAATs and Generalized Audit Software, auditing processes could be streamlined, large datasets can be analyzed and tasks automated but there are other institutional and cultural barriers in developing countries such as reluctance to change and poor regulation which might pose a hindrance to adoption of these technologies (Wassie and Lakatos, 2025). Forms of CAATs include electronic working papers, fraud detection software, generalized audit software, audit history databases, computer-based training, network security testing and ongoing monitoring systems (Nasrah et al., 2023; Hendi and Kuntadi, 2024). CAATs have shown to improve audit quality internationally through enhanced accuracy and thorough analysis (Omonuk and Oni, 2015) and internal auditors could greatly improve efficiency with the implementation of CAATs. These could also be essential to ensure competitiveness and long-term survival, as large datasets and the scale and nature of transaction data become larger and more transformed with large data technology (Coderre, 2000; Ma, 2023). A systematic literature review and meta-analysis further confirmed that CAATs assist auditors to improve audit quality in faced of risks in their work (Sari et al., 2023). Editing data is not possible with some forms of CAATs maintaining audit evidence integrity and permitting automated tests, though this also creates problems when it is required to perform flexible work (Coderre, 2000). Specific research regarding Ethiopia highlights that CAATs adoption is correlated to client relationships, employee commitment and operational efficiency but this is moderated by organizational readiness (Wassie, 2025). Another survey of internal auditors in Ethiopia revealed that CAATs adoption levels are moderate, and that firm size has a negative relationship to the clients' AIS complexity on CAATs adoption. This indicates it is the first study in the field providing evidence of CAATs adoption in audit firms in developing countries (Wassie and Lakatos, 2024). Lastly, Ethiopian research into internal auditor use of CAATs suggests a positive relationship between CAATs use and sustainable performance, where increased usage by internal auditors is associated with increased opportunity of recognizing financial misstatements and thus reduced organizational loss (Wassie, 2024)

2.2.6 Human Capital and Organizational Readiness

2.2.6.1 The Digital Skills Gap in Auditing

It is widely acknowledged that the major barrier toward the successful digital transformation in audit practice is the lack of auditors possessing appropriate digital competence (IFAC, 2021; Mani, 2023). This workforce problem and more specifically the lack of auditor with digitally relevant knowledge increases the urgency with which digital transformation has to be pursued, and in the absence of well-directed investment into audit software and relevant training, audit firms was ill-equipped to satisfy stakeholders and avoid financial wrongdoings (Hasan, 2022; Waltersdorfer et al., 2024). This transition toward digitally appropriate methods demands new technical skills and has created significant issues for traditional education and apprenticeship systems of the

profession (Ivakhnenkov, 2023). This problem is exacerbated in Africa. Out of the world's twenty countries with the worst digital skills, twelve were African. Only eleven percent of African tertiary graduates hold formal digital training, highlighting the widespread issue of deficient digitally related human capital for businesses in Africa and the entire continent in general (BCG, 2022; World Bank, 2023). For Ethiopian audit firms trying to compete with increasingly technology savvy firms, this continent-wide deficiency creates substantial barriers to the successful and continuous use of advanced digital tools (Anomah, 2025). It is often the case that employers report their inability to find workers possessing necessary digital competencies, and this has often been attributed to insufficient digital skills being provided in tertiary education or in vocational programs (World Economic Forum, 2021).

2.2.6.2 Continuous Professional Development (CPD) and Auditor Upskilling

There has been an increased emphasis from the international profession on Continuous Professional Development (CPD) in terms of closing the digital skills gap. The importance of strong human capital development programs through continuous professional development, education and training allows for the efficient application of audit expertise in digitally advanced audit environments (IFAC, 2021). Effective human resource planning should be carried out by audit organizations so as to enable audit team members and audit professionals adapt to rapidly growing changes driven by new technologies and extend audit scope, reduce audit time and enhance audit quality, ultimately assuring the entity with high assurance (Mani, 2023). The need to continuously develop auditing professionals' data analytics and AI skills is being recognized as integral to audit practice development rather than an optional component of training (Aldoseri, Al-Khalifa and Hamouda, 2024). Many audit firms face issues trying to align outdated systems and skill sets with newer technology, and the demand for real-time assurance from various stakeholder groups (especially when operating in highly digitized industries) further solidifies the need for flexible, digitally powered audit approaches which rely on a culture of ongoing professional development, not episodic training (IFAC, 2024; Waltersdorfer et al., 2024). Specifically, regarding Ethiopia, AABE has initiated some training to both report entities and auditors as capacity building measures, but the need for longer term structural solutions such as having a National CPA Qualification Board are regarded as crucial (AABE, 2023).

2.2.6.3 Organizational Culture, Resistance to Change and Change Management

As well as technical expertise, it is the organizations culture that determines the speed and depth of digital transformation (Kraus et al., 2021). Resistance to change is identified as a barrier for auditors in a global context and is magnified in the absence of technological literacy and high perceived personal costs (Anomah, 2025; El Omari, Cherqaoui and Benhayoun, 2024). In the absence of strong governance, internal controls over digital systems are often not sufficiently embedded, affecting audit outputs, and bureaucratic firms appear less responsive to digital threats (Min et al., 2026; Chung et al., 2019).

This problem is compounded in developing economies by institutional factors. Auditors are likely to be confronted by cultural and institutional challenges in the form of resistance to change and minimal regulation, thus limiting adoption of available technology even if cost-effective (Wassie and Lakatos, 2025; Dube and Ndlovu, 2021). To overcome this issue, it not only requires technical training, but a deliberate strategy of change management and leadership, alongside the development of a learning culture (Van Veldhoven and Vanthienen, 2022). A learning culture is essential in order to maintain competitiveness, and firms that encourage learning tend to have less staff turnover and higher levels of technology adoption (Ibrahimov et al., 2024).

2.2.7 Regulatory Environment and Institutional Frameworks

2.2.7.1 International Standards and the IAASB's technology agenda

Digital transformation in auditing has led to significant developments in international accounting standards. The IAASB, in response, have established a Technology Position to guide how they adapt to the interplay of auditing and assurance with technology, which is based on eight actions to promote technology use by firms and practitioners, and where applicable, to improve the quality of their audit and assurance work (IAASB, 2024). The new standard ISQM1 – International Standard on Quality Management for Firms, demands a quality management system that incorporates auditors' competence in technology such as AI tools, and a focus on managing risks associated with the use of automated tools and techniques (IAASB, 2022; Egger, 2025). Auditors' responsibility under ISA 540 (Revised) - Auditing Accounting Estimates - involves having an understanding of management's process for developing estimates, which may involve complex AI algorithms that require analysis of both inputs and outputs (Egger, 2025). In June 2025 the IAASB launched the Technology Quality Management initiative focusing on the impact of technologies such as AI in auditing and assurance engagements and its effect on the application of quality management standards, through 240 stakeholders globally on six continents and a number of roundtables looking at quality maintenance, governance and risk management (IAASB, 2025). The 2023-2024 edition of the IAASB Handbook addresses quality management, including the requirements within ISA 600 (Revised) – Group Audits, as well as the challenges that a firm can face as a result of advancements in technology (IAASB, 2024).

2.2.7.2 The role of the Accounting and Auditing Board of Ethiopia (AABE)

The AABE is the regulator of audit professionals within Ethiopia. Set up as a statutory body under the Council of Minister Regulation 332/2015, AABE aims to facilitate investment and public interest through appropriate supervision of accounting and auditing professionals (AABE, 2015). Its role is to issue regulations and guidelines concerning financial reporting and auditing standards, license and register auditors, record and file financial statements, assess the appropriateness of financial statements and conduct quality reviews of audit firms (AABE, 2023).

However, capacity at the AABE remains a constraint on driving digital transformation. Lack of trained professional accountants poses a severe threat to the quality of financial statements and

audit, and the AABE does not have sufficient trained staff to perform effective quality assurance reviews (AABE, 2023). AABE is working towards developing the Ethiopian Institute of Certified Public Accountants (ETICPA) into an IFAC recognized professional accountancy organization with the aim of improving accounting skills locally and consequently reducing the shortfall in qualified accountants, while also working to integrate sustainability reporting and developing corporate governance regulations (ACCA, 2023).

2.2.7.3 Regulatory gaps and the pace of technology adoption

The gap between technological advancement and regulatory awareness is a systemic issue for developing countries. A lack of technological regulation slows down progress, causing inconsistency in audit quality, and erosion of public confidence (Waltersdorfer et al., 2024; Mkander, 2023). In Sub-Saharan Africa more generally, weak institutional frameworks and poor enforcement mechanisms make actual adoption of technological standards difficult (Anomah, 2025; Dube and Ndlovu, 2021). Therefore, improving the capacity of the AABE to mandate, monitor, and support the uptake of technology by imposing CPD requirements focused on technical skills, criteria in quality review to monitor technology use and setting requirements for license approval represents a key policy intervention to promote adoption of technology in Ethiopian firms (Wassie and Lakatos, 2025).

2.2.8 Client Expectations and Market Pressures

2.2.8.1 Client-Driven Demand for Technology-Enabled

Audits Clients' expectations are a crucial external catalyst for digital transformation in accounting firms (Knechel et al., 2013). As clients' operations become increasingly digitized and generate substantial volumes of data (both structured and unstructured), these clients expect auditors to employ technologically sophisticated tools and methodologies for analyzing that data in meaningful ways (Anh, Tran and Le, 2024). The increased clients' demand and expectation for more agile and efficient technology-based audit services have an important impact on an audit firm's strategic decision on how to transform and adapt its digital operations; and it compel the firms to upgrade their auditing systems to survive in competitive environment (Knechel et al., 2013). More digitalize client activities pose higher audit risk (e.g. Cyber security risk, risk from complicated IT internal control system, and risk from algorithmic trading activity), therefore require more technology use (Hasan, 2022; Ivakhnenkov, 2023). As 58% of financial reporting executive considered that Generative AI is the #1 technological goal to invest for the next years, the audit firms serving those clients pressure to adapt using AI based audit solution (Zulkarnain et al., 2024). This client pressure is complemented by the need to stay competitive; audit firms that are unable to provide technology-enabled services would be risk losing to much larger, digitally advanced firms, and in markets, in which technically competent clients (e.g. Publicly listed companies, multinational subsidiaries, large SOEs) often represents largest, most lucrative audit opportunities (El Omari, Cherqaoui and Benhayoun, 2024).

2.2.8.2 Technology-Enabled Audit Value Proposition

The strategic importance of digital transformation is also driven by the evident value it provides to clients. It shows the importance of the application of technology into audit functions for risk mitigation and improving the quality of audit with implication for public policymakers and for the managers in organizations that operate in this digital era (Dai et al., 2023). Auditors must shift from a simple reporting based to a preventive risk management approach using digital tools such as advanced analytics tools to deliver predictive and continuous audits. Digital competences for auditors are a must for their continuing competitiveness (Asian Institute of Research, 2025). AI driven innovation has already been established as a key element in supporting impact within an industry, including audit and assurance; a key benefit is the capability it offers to achieve higher accuracy in operations and increased efficiencies while simultaneously monitoring the regulatory compliance on a continuous basis (Aldoseri, Al-Khalifa and Hamouda, 2024). In the case of Ethiopia's audit firms, these clients' pressure might become more than a barrier but an opportunity and this creates a stronger case for investment in digital technology, a move that may be harder to justify on internal operational efficiencies alone (Anh, Tran and Le, 2024; Anomah, 2025).

2.2.8.3 Ethical Considerations in Digital Auditing

The implementation of AI and other digital technologies in the auditing processes poses an array of ethical dilemmas and has thus attracted increasing research interest. In a systematic literature review of bias in and ethics in AI in the auditing processes, bias sources were classified into five main types. The literature on the topic drew on a multi-disciplinary range, spanning computer science, accounting, management, and ethics, and found both the technical challenges, such as opaque algorithmic operations, and ethical issues like accountability and data protection, to be of paramount importance for the auditing profession (Walter’s dorfer et al., 2024). As artificial intelligence becomes a ubiquitous tool within audit firms, the ethical implications relating to algorithmic opacity, data governance and the overall accountability of auditors, have come under scrutiny as audit firms, given their role in the economy, are expected to uphold the highest ethical standards (Wamba et al., 2024; Mkander, 2023). Even with the potential for AI and other technologies, such as collaborative virtual environment tools, to aid auditing in areas such as brainstorming sessions or fraud detection, any integration must consider ethical challenges, such as the possibility of the AI autonomously producing audit conclusions without transparency to clients, the regulators or the public (Fotoh and Mugwira, 2023; Gu et al., 2023). In developing economies like Ethiopia with limited resources for oversight and supervision, specific attention should be given to the ethical governance framework for the use of AI for auditors, to assure that technology does not compromise the quality and trustworthiness of the audits performed (Wassie and Lakatos, 2025; AABE, 2023).

2.2.9 Digital Readiness in Developing Economies: Comparative Evidence

2.2.9.1 Evidence from Ghana, Morocco, and Vietnam

Studies conducted in comparable emerging economies can help inform the likely state of readiness for digital transformation in Ethiopia. In Ghana, research focusing on the adoption of CAATs among internal audit units of public enterprises noted the multifaceted influence of organizational, technological, and environmental factors on adoption decision, and found that quality control acts as a moderator of the relationship between technology adoption drivers and adoption decisions (Anomah, 2025). In Morocco, the active adoption of data analytics and AI in auditing functions was identified and emphasis was placed on the importance of enabling environment of institutional structure, on the importance of IT infrastructure, and the private sector's effort on staff training for driving digital adoption in audit (El Omari, Cherqaoui and Benhayoun, 2024). In Vietnam, the factors affecting digital transformation readiness were found to be dependent on interaction of several variables such as auditors' competencies, organizational culture and type of audit tasks, which resemble our conceptual approach (Anh, Tran and Le, 2024). In summary, evidence from similar countries indicates that the digital readiness depends not only on technological resources but also on human skills and institutions, which vary substantially between developed and developing countries (Anh, Tran and Le, 2024; El Omari, Cherqaoui and Benhayoun, 2024; Anomah, 2025).

2.2.9.2 The Ethiopian Context

In contrast, Ethiopia represents a special case with underdeveloped digital infrastructure, limited development of a professional accounting body, and weak institutional and regulatory support structures for the adoption of digital technology. In Ethiopia, a relative advantage and compatibility are significant technological attributes impacting the adoption of CAATs in audit firms and the level of IT-competence of an auditor acts as significant organizational attribute driving IT adoption, thereby highlighting the critical interplay of the fit of the technology with existing organizational processes and the skill level of users (Wassie and Lakatos, 2024). The findings from an Ethiopian sample of internal auditors confirmed moderate usage of CAAT in performing audit duties, despite evidence that such software applications could enhance the use of internal controls, fraud detection, and corporate sustainability disclosure; there is a clear gap between the awareness of such tools and their practical application (Wassie, 2024). Size of the audit firm in Ethiopia affects CAAT adoption such that the impact of clients' AIS complexity on adoption choices is reduced by firm size, which indicates that smaller firms - which currently represent the bulk of the Ethiopian market - face the double challenge of size barriers and complex client systems (Wassie and Lakatos, 2024). Beyond CAATs adoption, other types of advanced audit technologies including data analytics, and AI use in Ethiopian audit firms remain nascent, with most companies still rely on traditional methods, which is characterized by deficiency of the required skills, lack of adequate training, lack of access to necessary financial and non-financial resources, and absence of enabling regulatory frameworks (Wassie and Peter, 2024). In summary, a comprehensive and integrated study on the drivers and barriers for digital transformation readiness considering a

simultaneous view of awareness, strategy alignment, digital competencies, institutional factors, and client pressures has not been conducted yet in the Ethiopian context, hence creating the main research gap that this study aims to fill.

2.2.9.3 Summary of Empirical Gaps and Research Positioning

Review of literature suggests a wealthy, but unevenly distributed body of empirical research on digital transformation in auditing globally, with most evidence centered in developed economies or East and Southeast Asia, whereas Sub-Saharan Africa, and Ethiopia in particular, is relatively neglected (Anomah, 2025; Wassie & Lakatos, 2024). Where Ethiopian research exists, most research is focused on either technology (especially CAATs) or specific areas such as internal audit units, rather than measuring and explaining multidimensional firm-level digital readiness comprehensively (Peter, Wassie & Lakatos, 2024). The key gaps include: lack of a comprehensive, integrated multidimensional readiness measure, encompassing technological, human, strategic, client and regulatory dimensions (Anh, Tran & Le, 2024); lack of sufficient research on the role of AABE as a facilitator and impediment to digital transformation in audit firms (AABE, 2023); lack of research on the positioning of Ethiopian audit firm readiness in the framework of international standards of IFAC and IAASB (Wassie & Peter, 2024). This research is aimed to fill in these gaps by developing and measuring a multidimensional construct for digital readiness in licensed audit firms in Ethiopia (Addis Ababa) using mixed methods approach.

2.2.10 Interrelationship of the Theoretical Models

Although the Technology Acceptance Model (TAM), Technology Readiness Index (TRI), Technology Organization Environment (TOE) framework, and Institutional Theory were developed independently, they are complementary in explaining organizational digital transformation. TAM explains how auditors' perceptions of usefulness and ease of use influence technology acceptance (Davis, 1989). TRI complements TAM by assessing the psychological readiness of individuals and organizations to embrace new technologies through optimism, innovativeness, discomfort, and insecurity (Parasuraman, 2000). The TOE framework extends the analysis to the organizational level by emphasizing that technology adoption depends on technological, organizational, and environmental contexts (Tornatzky & Fleischer, 1990). Institutional Theory further explains how external pressures, including regulatory requirements, professional norms, and client expectations, shape organizational decisions regarding digital transformation (DiMaggio & Powell, 1983).

Together, these theories provide a comprehensive framework for assessing digital transformation readiness in Ethiopian audit firms. TAM and TRI explain individual and organizational readiness to adopt digital technologies, while TOE and Institutional Theory explain how organizational capabilities and external institutional pressures jointly influence technology adoption. Their integration provides a robust theoretical foundation for examining the multidimensional factors affecting digital transformation readiness in the Ethiopian auditing profession.

2.3 Conceptual Framework

2.3.1 Theoretical Foundation

The conceptual framework for this study is grounded in established models of technology adoption and organizational change particularly the Technology Organization Environment (TOE) Framework (Tornatzky& Fleischer, 1990), the Technology Readiness and Acceptance Model (TRAM) (Parasuraman, 2000), and Institutional Theory (DiMaggio & Powell, 1983). These models have been widely applied in auditing and accounting research to explain how technological, organizational, and environmental factors influence digital transformation readiness (El Omari et al., 2024; Anomah, 2025; Wassie &Lakatos, 2024). This study adapts and contextualizes these established models by integrating Ethiopia as specific determinants into the framework. However, existing frameworks were developed largely for developed and emerging economies such as Morocco, Vietnam, and Ghana. They do not fully capture the unique challenges of developing countries like Ethiopia specifically the cultural resistance, infrastructural limitations, and regulatory readiness gaps.

2.3.2 Framework Variables and Classifications

Based on the literature review and the Ethiopian context, the framework identifies key variables (independent, dependent, mediating, moderating variables) that influence digital transformation readiness in audit firms. Detailed in Table 2.1

Table 2. 1 Variable Classification and Descriptions

Variable	Type	Description	Source Literature	Researcher's Contribution
Technological Readiness	Independent Variable	Level of adoption and integration of AI, CAATs, RPA, and data analytics in audit processes	Anh et al. (2024); El Omari et al. (2024); Pan & Zhu (2024)	Adopted from global frameworks and applied to Ethiopian audit context
Human and Cultural Readiness	Independent Variable	Digital literacy, openness to innovation, resistance to change, and access to digital training	El Omari et al. (2024); Van Staden (2024); Wassie & Péter (2024)	Expanded to include resistance to change and local skill gap issues specific to Ethiopia
Institutional and Regulatory Support	Independent Variable	Readiness of AABE to integrate digital technology through policies, registration, monitoring, and CPD frameworks	Wassie & Lakatos (2024); Anomah (2025)	Contextualized to include the specific role of AABE as a regulatory enabler
Client Expectations and Market Pressure	Moderating Variable	Influence of client demand for technology-enabled audit services on the strength of readiness-transformation relationships	Vitali & Giuliani (2024); El Omari et al. (2024)	Applied as a moderator for the first time in Ethiopian auditing studies
Limited Digital Infrastructure	Mediating Variable	Structural constraints such as connectivity issues and technology access that mediate the relationship between readiness factors and transformation outcomes	Wassie & Lakatos (2024)	Newly introduced as a mediating variable unique to Ethiopia's infrastructure context
Digital Transformation Readiness	Dependent Variable	Overall preparedness and capability of audit firms to shift from traditional to technology-driven auditing practices	Bani et al. (2025); synthesized from multiple transformation studies	Adopted as the dependent outcome variable measuring overall readiness

2.3.2 Conceptual Model

The conceptual model describes the relationships among the variables identified above. Figure 2.1 shows the framework.

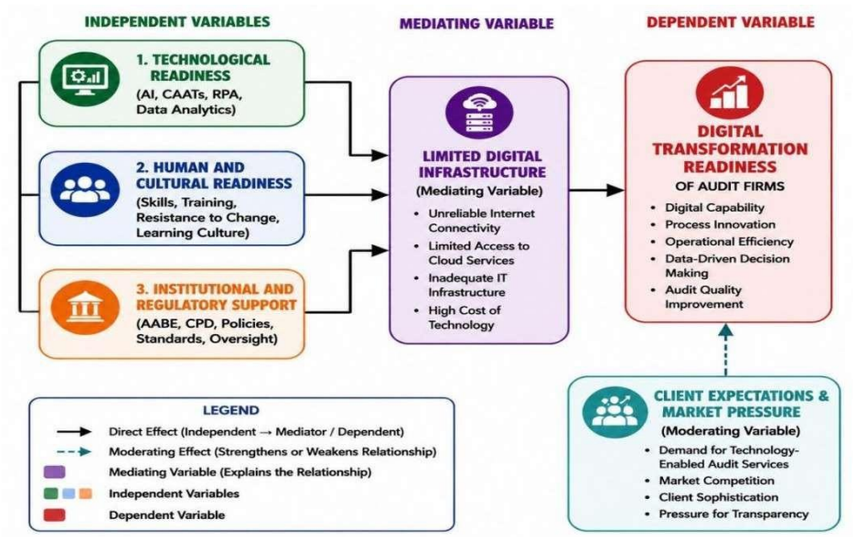


Figure 2.1: Conceptual Framework for Digital Transformation Readiness Source researcher (2026)

2.3.3 Framework Explanation and Hypothesized Relationships

The framework explains the following relationships:

Independent Variables → Dependent Variable

Technological Readiness: The adoption and integration of digital technologies such as AI, CAATs, RPA, and data analytics are expected to directly affect digital transformation readiness.

Human and Cultural Readiness: Digital literacy, training availability, and organizational learning culture positively influence readiness. On the other hand, resistance to change is significant factor in the Ethiopian context may negatively affect transformation efforts.

Institutional and Regulatory Support: by providing guidance, legitimacy, and incentives for adoption regulatory bodies gives clear digital standards, and robust CPD requirements from AABE are anticipated to accelerate digital readiness.

2.3.4 Mediating Effect of Limited Digital Infrastructure

Limited digital infrastructure acts as a mediating variable that explains how readiness factors translate into actual transformation outcomes. Even when firms possess technological, human, and institutional readiness, infrastructural constraints (unreliable internet connectivity, limited access to cloud services, and inadequate IT infrastructure) may hinder the realization of digital transformation.

2.3.5 Moderating Effect of Client Expectations and Market Pressure

Client expectations and market pressure moderate the relationships between the independent variables and digital transformation readiness. When clients demand technology enabled audit services, the effect of technological, human, and institutional readiness on transformation is strengthened. On the contrary it will weaken these relationships.

2.3.6 Researcher's Contribution

This framework contribution lies in its contextual adaptation to the Ethiopian auditing firms. Specifically, the researcher has:

1. By expanding the human readiness dimensions, it can incorporate resistance to change and digital skill gap issues which are critical behavioral factors in Ethiopia.

2. Contextualized institutional support by explicitly modeling the regulatory readiness of AABE a factor that has not been empirically examined in prior digital auditing studies in Ethiopia.

3. Introduced limited digital infrastructure as a mediating variable, recognizing that structural constraints unique to developing economies mediate the relationship between readiness and transformation.

4. Applied client expectations as a moderator for the first time in the Ethiopian auditing context, reflecting how market dynamics influence the pace and extent of digital adoption.

This localization makes the framework uniquely applicable to developing economies with similar institutional, infrastructural, and cultural dynamics, extending the applicability of established technology adoption theories to contexts where they have been underexplored.

Chapter3. Research Methodology

3.1 Introduction

This Chapter outlines the approach and procedure that is going to be employed in examining the study. It contains the details about the description of research area, research design, data collection methods, sampling methods and methods used in data analysis. It also contains the ethical aspects of the study.

3.2 Description of the Study Area

Ethiopia is a developing economy located in East Africa and has witnessed enormous financial and institutional changes over the last decade. The recent reforms introduced have improved fiscal sustainability, transparency and institutional accountability (World Bank 2023, IMF 2024). This has made the role of the audit profession significant in fostering public trust and in ensuring the integrity of financial reporting across the spectrum of entities (AABE 2022, Wassie & Lakatos 2024, OECD 2023).

This study was conducted in Ethiopia a developing economy situated in East Africa which has a vibrant, dynamic and evolving financial and regulatory landscape. Ethiopia has experienced significant economic reform processes and initiatives that have occurred over the last decade, as well as increased pressure for transparency, accountability, and high-quality financial reporting. As a result of these reform processes, audit professionals in Ethiopia have an ever-increasing significance in strengthening public trust and promoting high-quality financial reporting, regulatory compliance and sound corporate governance practices across both public and private sector entities (Wassie, B., & Lakatos, C., 2025).

Professional accounting and auditing practice is under the regulation of both professional and regulatory bodies such as AABE, a body that is responsible for the regulation of accounting and auditing profession under an international accounting and auditing framework. Audit firms operating in Ethiopia range from international networks to small and medium enterprises and even sole practices. International networks offer audit services to the major public interest entities and multinational corporations whereas small and medium enterprises and even sole practices often specialize in auditing of local small private entities and the public sector as well as non-profit entities.

In spite of having the ISAs regulating the accounting and auditing profession in the country the audit profession in Ethiopia continues to lag in embracing technology based audit procedures. Traditional methods still dominate the profession in addition to basic computer based audit tools. High tech audit procedures such as CAATs data analytics automated audit systems, IT-based audit techniques remain in the domain of few firms owing to challenges in infrastructure, availability of trained and qualified IT experts, technology acquisition cost and organizational inertia toward change.

Application to auditing, sufficiency of staff training, and capacity building efforts, readiness to

respond to the risks associated with auditing in a digital environment and perceptions of regulatory support provided by the AABE. Using semi-structured interviews data was collected from selected firm partners and regulator representatives.

3.3 Research Design

The current research is a descriptive and explanatory research design. The design of the study is appropriate to describe the current status of the knowledge, technology implementation, human capital building, response strategy and regulatory effect among the audit firms and explain relation between different dimensions of these factors.

A mixed method research design is employed to provide a complete view of digital readiness by the combination of both quantitative and qualitative method. The quantitative component measures the auditor's knowledge level and technology adoption, suitability of training for the staff and readiness of organization within the audit firms and quantitative research provide the in-depth information on response strategy, regulatory factors and clients' drivers influencing the digital transformation choice.

The study uses a cross-sectional research design; information was collected from audit firms at one point in time. It is suitable in our case as our research aims to present the current readiness of the audit firms and not the change during some specific period. The cross sectional research allows for a useful comparison between different sizes of audit firms and audit firms in the same working and economic environment.

The study used an interpretivist methodology complemented by a positivist paradigm for the quantitative research in terms of objective measurements and analysis of the readiness indices, with the aim of understanding perspectives, behaviors, and situational factors influencing digital transformation, especially concerning regulatory frameworks and clients' demands, respectively. The method used is that of primary data which is obtained from the employees of professional and managements of licensed audit firms through structured questionnaires and semi-structured interviews. The questionnaires have been developed in line with the research objectives, to measure auditor's awareness and strategic understanding on digital transformation, extent of utilization of digital technologies within audit process, suitability of the training conducted and capacity development program carried out, readiness to deal with digital audit risks and perception of regulatory supports provided by the AABE. Semi-structured interview has been conducted with selected partners of the firms and also a few regulatory officials.

3.4 Research Approach

This study adopts a mixed-methods research approach, integrating both quantitative and qualitative approaches in assessing Addis Ababa's audit firms' readiness for digital transformation. A mixed methods design is appropriate due to the multidimensional nature of the topic which may comprise the aspects of technological, human, strategic, and regulatory. Using both a quantitative and a

qualitative approach allows for the topic to be explored to a greater depth and will minimize the weaknesses of one approach through its opposite. The quantitative approach was applied to objectively measure dimensions including auditors' awareness and understanding of the strategic dimension of digital transformation, auditors' adoption of technology in the primary audit processes in the firm, adequacy of the training provided to auditors regarding digital aspects and firm's preparedness in dealing with risks concerning digital audit. A structured questionnaire was distributed to auditors in audit firms to capture quantifiable data which can be statistically analyzed, thereby supporting the objectives of the study. Qualitative approach would supplement quantitative results by providing a deeper understanding of the underlying contextual and behavioral factors affecting the digital transformation of audit firms. Semi-structured interviews was undertaken with audit firm partners, senior managers as well as regulatory parties including representatives of AABE to get a greater understanding of strategic responses, regulator demands and client pressure. Philosophically, the study was guided by the pragmatic research philosophy whereby methods were chosen in line with research objectives rather than conforming to a particular epistemological stance. This will enable integration of data from the qualitative and quantitative measures to generate pragmatic policy recommendations and implications for audit firms.

3.5 Population and Sample Size Determination

3.5.1 Target Population and Sampling

3.5.1.1 Target Population

Licensed auditors working in Addis Ababa form the population for this research as a majority of Ethiopian audit firms are based there (AABE, 2025). By December 18, 2025, there were 237 licensed auditors registered with the accounting and auditing board of Ethiopia. However this research is confined to the 174 auditors who are licensed and working in Addis Ababa where a large part of Ethiopia's economy and audit firms are based, thus ensuring environmental similarities (client pool, access to digital technology and regulatory agencies of the AABE, 2025).

3.5.1.2 Sample Size Determination

In order to obtain a representative sample of this population size of 174 a sample size was calculated using Yamane's formula with 95% confidence level and 5% error margin (e=0.05). Standard social and business research often use these sample size parameters because it strikes a reasonable balance between accuracy and practicability (Israel, 1992; Saunders et al., 2019). A 95% confidence level requires that in the long run, 95% of the time the obtained result was within the sample size and a 5% error margin determines the limit above and below the true population value that a respondent's results can be. These values were chosen as the acceptable confidence level and error margin for a population size below 500 because it represents a relatively accurate sample but ensures a manageable and cost-efficient study (Kothari, 2004; Creswell & Creswell, 2018).

The formula is:

$n = N/(1+N(e)^2)$ Where;

n = Sample Size

N = Target Population in Addis Ababa (174)

e = Margin of Error (0.05)

Plugging in the values into the formula we get:

$n = 174/ (1+174(0.05)^2)$

$n = 174/ (1+0.435)$

$n = 174/ 1.435$

$n = 121.25$

Based on this calculation, 122 auditors licensed in Addis Ababa targeted for a quantitative survey. The study was also conducting interviews with the planned 11 auditors.

3.6 Sampling Techniques

The sample is drawn using combination of probability and non-probability multi-stage sampling methods. A quantitative stratified random sampling is used to ensure a representation of small, medium and large audit firms in the sample. In each stratum, professional staffs are selected using simple random sampling to minimize the bias and ensure representativeness.

For qualitative interview, purposive sampling method is used. It involves selection of key informants such as audit firm director, partners, and officers in AABE who have significant knowledge and strategic perspective concerning the changes that digital transformation and regulations have brought to the professional development and the auditing profession as whole.

3.7 Data Collection Methods

The study uses primary data collection methods, supported by relevant secondary data sources.

- **Questionnaire Survey**

Structured questionnaires were prepared to professional staff of audit firms. The questionnaires are designed using closed-ended questions measured on a Likert scale and is divided into sections addressing:

- Awareness and strategic understanding of digital transformation
- Extent and maturity of digital technology adoption in audit processes
- Staff training, digital skills development, and capacity building
- Preparedness for managing digital audit risks and ensuring audit quality
- Perceptions of regulatory support and client-driven pressures

- **Semi-Structured Interviews**

The interviews were held with a sample of directors/partners and senior managers of audit firms and with AABE. Semi-structured interviews allow in-depth research into decisions regarding strategy, regulation, problems in applying technology and client's demands.

Secondary Data

These include previously published academic articles, IFAC, IAASB, AABE standards and policies documents, to support and expand primary findings.

3.8 Research Instruments

The questionnaires are based on literature and international standards (IFAC, IAASB, ISQM 1) as well as the research aims. Content validity is examined through supervisors and accounting and auditing professionals.

A pilot test is performed on a limited number of audit firms not in the final sample. The test's primary goal is to examine the clarity, appropriateness, and consistency of questionnaire items, and any shortcomings are rectified in the questionnaire.

Cronbach's alpha was employed for reliability testing, and a value of at least 0.70 is indicative of internal consistency, and indicates the extent to which measurement items measure construct.

3.9 Detailed Data Collection Procedures

To assure the validity and reliability of the study systematic process for gathering of both quantitative and qualitative data is considered and outlined as follows:

Preparation Phase

- Instrument Development: Design of questionnaires with a closed end based on the objectives and hypotheses of the study was done. Semi-structured interview guideline was prepared that addresses regulatory and strategic aspects.
- Pilot testing: Before distributing the survey questionnaire to the whole population of auditors, pilot testing was done with few auditors not included in the sample study to assess the clarity, reliability and relevance of questionnaire. Based on pilot testing questionnaire was revised if it needs so.
- Ethical Clearance: To respect ethical aspect for participants' confidentiality and volunteer participation, permission letter was taken from Addis Ababa University and consent forms for participants was prepared.

Quantitative Data Collection (Questionnaire Survey)

- Sampling: A stratified random sample size of licensed audit firms in Ethiopia was taken. A sample from within each firm, including the partners/directors, managers and senior auditors was included.
- Distribution: Survey questionnaire was distributed by personally to the target respondents or through electronic ways (if required by firm) to maximize reach and enhance comfort.
- Follow up: Reminding emails and calls was given to ensure increased response rate.

- Collection: completed questionnaire was collected and reviewed for completeness and was coded to enter into SPSS package for analysis.

Qualitative Data Collection (Semi-Structured Interviews)

- Selection of Interviewees: Key informant will include Directors/ partners of audit firms, senior managers and representatives from Accounting and Auditing Board of Ethiopia (AABE).
- Scheduling: Interview was scheduled to the convenience of the respondents. It was either a personal or via web platform interview.
- Conducting Interview: Each interview will proceed based on the interview guideline while allow respondents to expand on relevant themes.
- Recording and Transcription: Interview was recorded using an audio recorder with consent from the respondents and then transcribed.

Secondary data collection

- Document Review: Collected previous studies, report, regulations, and CPD guidelines of audit technology adoption in Ethiopia.
- Triangulation: Secondary data is collected for validation of surveys and interview result.

5. **Post-Collection Procedures**
   - Data Cleaning: before analysis quantitative data was checked for missing values, inconsistencies, and outliers.
   - Coding: Aligned with the conceptual framework qualitative transcripts was coded into themes
   - Integration: To provide a comprehensive understanding of digital readiness qualitative and quantitative findings was integrated

3.10 Data Analysis Techniques

Using both quantitative and qualitative data analysis techniques data collected for this study are analyzed, consistent with the mixed-methods research approach.

Quantitative Data Analysis (SPSS)

Using the Statistical Package for Social Sciences (SPSS) quantitative data obtained through structured questionnaires are coded and analyzed. Prior to analysis, data screening is conducted to check for missing values, outliers, and normality.

Descriptive Statistics

Descriptive analysis is used to summarize respondents' demographic characteristics and key study variables. Measuring of frequencies, percentages, means, and standard deviations are employed to:

- Assess the level of awareness and strategic understanding of digital transformation
- Evaluate the extent and maturity of digital technology adoption in audit processes

- Examine the adequacy of staff training and digital skills development
- Measure preparedness for managing digital audit risks and ensuring audit quality
- Assess perceptions of regulatory support and client-driven pressures

these analyses directly address the study's descriptive objectives.

3.11 Validity and Reliability Measures

Ensuring the accuracy and consistency of research findings is imperative for the credibility of this study. Accordingly, both validity and reliability were examined systematically.

Validity

- Content validity: Items in the questionnaire was developed based on the study objectives, conceptual framework and previous literatures so as to capture the construct of digital readiness, technology adoption, human capital, regulation environment and client expectations.
- Construct validity: To find out how survey items loaded together in ways expected based on the proposed theory, factor analysis was conducted (e.g. One factor of awareness items and another factor of technology adoption items).
- Triangulation: The study was further strengthened through employing multiple data sources; survey questionnaires, interviews and documents to verify and validate research findings through cross-checking.
- Expert review: Items of both the survey questionnaire and the interview were critically reviewed by supervisors as well as professionals in the audit field in order to ensure clarity and comprehensiveness relative to the actual practice in Ethiopia.

Reliability

- Internal consistency: In order to check for the degree of relatedness of survey items that form the respective variables the Cronbach's alpha was calculated for each construct (e.g. For the variable of awareness, for technology adoption etc.). Cronbach's alpha of 0.70 and above was considered adequate for each construct.
- Pilot testing: A group of auditors was requested to complete the survey questionnaire. Ambiguous questions were corrected before the actual data collection.
- Consistency: Stability over time was considered in that consistent administration procedures were adopted across the sampled firm which reduces variations associated with data collection processes.
- Interview reliability: The semi-structured interview question will adhere to a standardized interview guide in order to ensure comparability, while simultaneously providing the flexibility required to explore issues and probe further.

Inferential statistics:

The following statistical methods have been applied:

- Correlation analysis was used to determine the strength and direction of relationships between digital readiness dimensions.
- Multiple regression analysis was used to establish the influence of the independent variables (e.g. Awareness, technology adoption, skill development on human capital, regulatory environment, client pressure) on digital readiness.
- ANOVA or t-test was utilized to compare the level of readiness between firm size or professional role if needed.

Qualitative data analysis

The analysis of qualitative data obtained through semi-structured interviews will involve thematic analysis to corroborate and enhance the quantitative data. The transcripts was read thoroughly and coded manually or through qualitative analysis software, and then themes were extracted about strategic adaptation responses, the role of regulators, ethical issues and client-led pressure.

Integration of findings

The finding from both quantitative and qualitative research was integrated in the interpretation and discussion section in order to reach a comprehensive understanding on the readiness for digital transformation among audit firms. This integration helps the study to gain robustness and validity of its conclusions and recommendations.

3.12 Ethical Considerations

The trustworthiness of this research will depend heavily on maintaining the ethical integrity of the study, Participants' rights, interests and safety, and confidentiality was protected in the following ways:

Informed Consent

Participants was required to provide their written consent with clearly explained objectives of the research, the extent of their involvement and how they obtained information was utilized before starting questionnaires and interviews. It was made clear that participation is voluntary and that participants were free to terminate their participation in the research process at any time without any negative consequence.

Right to Privacy and Confidentiality

No names of individuals or firms were recorded as part of the dataset. Numerical code was given to participants' responses in order to secure their identity and interview transcripts was safely stored and will only be discussed as aggregate findings. No firm or participant was identified in the final report without specific permission.

Right to Safety

Participants were interviewed in comfortable and safe surroundings, and no harm (physical or psychological) should be inflicted. The researcher will endeavor not to ask sensitive or upsetting

questions, and instead the interviews were conducted in a professional and polite manner.

Right to be informed

Participants were briefed on the time required for an interview and on the general subject matter being covered, and how the data was utilized. Participants were assured they will receive a summary report of the research if desired.

Data Protection

All gathered information/data was kept secure using password protected digital files and locked cabinets in case of hard copies. Information collected will only be used for research purposes and it will not be shared with any third party apart from within the research team prior to the conclusion of the research, but following completion of the research the raw data was filed according to the research procedures stipulated by Addis Ababa University.

Ethical Clearance

Ethical approval was obtained from Addis Ababa University's College of Business and Economics Research Ethics Committee before data is collected. The ethical principles advocated by the International Federation of Accountants (IFAC) and the Accounting and Auditing Board of Ethiopia (AABE) for ethical conduct was followed.

Chapter4. Results and Discussion

4.1 Introduction

This chapter presents the results and discussion of the study based on data collected from licensed audit firms in Addis Ababa, Ethiopia. As per the advice from Creswell and Creswell (2018), the results are structured in a step-by-step manner that corresponds to the objectives and hypotheses of the study. The research design covered six separate independent constructs on the state of readiness of Ethiopian audit firms for digital transformation; these were: awareness and strategic understanding, technology adoption and maturity, human capital development, risk management and audit quality, regulatory environment and Accounting and Auditing Board of Ethiopia support, client expectations and digital pressure and the dependent variable; overall digital readiness.

The chapter includes the following steps: respondents' demographic characteristics, descriptive statistics for all variables in the study, reliability of all study variables through Cronbach's alpha test, correlation analysis, testing of regression assumptions (multicollinearity, normality, homoscedasticity and error independence) multiple regression analysis and hypothesis testing, then a discussion of findings. All findings have been illustrated through tables and figures. SPSS version 27 was used to run all statistical tests.

4.2 Demographic Characteristics of Respondents

It is vital to know the profile of those who took part in the survey to ascertain the sample's representativeness and appropriately interpret results (Saunders et al., 2019). The characteristics of the 122 respondents involved in this research are as follows.

Table 4.1: Demographic Characteristics of Respondents

Category	Characteristic	Frequency (n)	Percentage (%)

Gender	Male	115	94.3
	Female	7	5.7
Job Role	Junior Auditor	26	21.3
	Senior Auditor	44	36.1
	Audit Manager	39	32.0
	Partner/Director	13	10.7
Years of Experience	0-2 years	18	14.8
	3-5 years	41	33.6
	6-10 years	35	28.7
	Above 10 years	28	23.0
Education	Bachelor's Degree	110	90.2
	Master's Degree	12	9.8
ACCA Certification	Yes	48	39.3
	No	74	60.7
CPA Certification	Yes	54	44.3
	No	68	55.7
CISA Certification	Yes	25	20.5
	No	97	79.5
Firm Size	Small (1-10 staff)	48	39.3
	Medium(11-50 staff)	38	31.1
	Large (51+ staff)	36	29.5
Firm Type	Sole Practitioner	26	21.3
	Local Partnership	50	41.0
	Affiliate International	32	26.2
	Branch International	14	11.5
Firm Age	Less than 5 years	24	19.7
	5-10 years	41	33.6
	11-20 years	30	24.6
	More than 20 years	27	22.1

Source: Survey Data (2026)

The overwhelming majority of the respondents were males (115 respondents, 94.3%) as indicated in table 4.1.This indicates the majority sex in the audit profession in Ethiopia and is similar to the finding of Wassie and Peter (2024) in their study in Ethiopian audit firms. Women account for only 5.7%. This indicates that gender diversity is a structural problem.

Regarding the level of job positions, senior auditor had more participants with 44 respondents (36.1%), then the Audit Managers accounted for 39 respondents (32.0%), junior auditor represented 26 respondents (21.3%), finally the partner/directors accounted for 13 respondents (10.7%). This stratified classification covers the various ranks of the hierarchy, ensuring

representation from each stratum.

The number of years of work experience was highest with those between 3-5 years, represented by 41 respondents (33.6%), then those between 6-10 years represented by 35 respondents (28.7%), those above 10 years represented by 28 respondents (23.0%) and below 2 years by 18 respondents (14.8%). These were mostly mid-career individuals who were considered to be the most knowledgeable and experienced people within the organizations because they have had adequate experience both in old ways and new technologies in auditing. With respect to the education levels of the respondents, majority of the participants held a bachelor's degree represented by 110 respondents (90.2%) only 12 respondents (9.8%) held master's degree. The lower proportion of master's degree holder reflects the structure of audit sector, not deficiency of individuals in carrying out their tasks.

When the level of professional qualification of the respondents is considered, majority of the participants hold Certified Public Accountant qualification represented by 54 respondents (44.3%), followed by those who hold the Association of Chartered Certified Accountants qualification with 48 respondents (39.3%). Surprisingly, the number of those who holds the Certified Information Systems Auditor qualification was only 25 respondents (20.5%).This indicates a serious skill gap regarding information systems audit within audit firms that is reflected by the information provided by Information Systems Audit and Control Association (2022).

The analysis shows that, out of the various kinds of firms, small firm (1-10 employees) accounts for 48 firms (39.3%) the next number of firm is medium sized firm with 11-50 employees account for 38 firms (31.1%) and firms with above 50 employees account for 36 firms (29.5%). The analysis indicates that local partnership were the most dominant organizational structure represented by 50 firms (41.0%) followed by firm connected with international networks with 32 firms (26.2%), sole practitioners with 26 firms (21.3%), firm that branch of international firm with 14 firms (11.5%).

4.3 Descriptive Statistics of Study Variables

According to Field (2018), descriptive statistics can summarize the central tendency, dispersion, and response distribution of research variables, and serve as an essential tool for understanding the respondents' perceptions of their respective organizations' digital readiness in this study; this study adheres to the guidelines of the American Psychological Association (2020), and will report the sample size (N), minimum and maximum values, mean (M), and standard deviation (SD). The 5-point Likert scale used in this study categorizes scores above 3 as positive perceptions, and scores close to 5 as strongly positive perceptions.

4.3.1 Awareness and Strategic Understanding

Awareness and strategic understanding of digital transformation in auditing were captured using

seven questions on the survey tool. Drawing on the Theory of Technology Acceptance Model (Davis, 1989), awareness and perceived usefulness are considered key preconditions necessary to induce any form of technology acceptance regardless of a firm's capacity to use it.

Table 4.2: Descriptive Statistics for Section A - Awareness and Strategic Understanding

Item	Statement	N	Min	Max	Mean	Std Dev
A1	I am well informed about the global shift toward digital technologies	122	1.0	5.0	3.81	0.65
A2	I understand how digital transformation is changing audit methodologies	122	1.0	5.0	3.86	0.65
A3	Our firm has a clearly articulated vision for digital transformation	122	1.0	5.0	3.83	0.68
A4	Senior management actively champions digital audit technologies	122	1.0	5.0	3.75	0.71
A5	Our firm regularly monitors global trends in digital auditing	122	1.0	5.0	3.71	0.64
A6	I can distinguish between different digital audit tools	122	1.0	5.0	3.8	0.71
A7	Our firm has communicated a clear digital transformation strategy	122	1.0	5.0	3.84	0.63

Source: SPSS Output (2026)

As reflected in Table 4.2, all statements contained in this part of the survey tool received mean scores greater than 3.70. Thus, it can be stated that survey participants had good levels of awareness and strategic understanding on digital transformation. The question that generated the highest mean score of 3.86 (SD = 0.65) related to knowledge on how digital transformation transformed traditional audit procedures. In particular, participants seem to realize the fact that digital transformation is an important shift in professional practices and goes beyond the availability of more technology tools; it transforms traditional audit methodologies. Findings obtained here are congruent with findings reported by Anh et al. (2024) in a study of audit professionals' level of awareness of digital transformations in Vietnam, another developing country.

The question pertaining to monitoring global trends in digital auditing generated the lowest mean score in this section at 3.71 (SD = 0.64). While individual awareness seems to be satisfactory, this result implies that most firms lack systems to track international developments in digital auditing

practices. Although standard deviations vary slightly within 0.63 and 0.71, they still indicate sufficient variation. Overall, however, this construct had a reasonable level of variation, which can be described as moderate and fairly uniform, given that the composite mean for awareness and strategic understanding was 3.80. This result is consistent with Hypothesis 1 and theoretically supported by the Technology Acceptance Model (Davis, 1989).

4.3.2 Technology Adoption and Maturity

The second construct looked at the degree and maturity of technology adoption within auditing practices by means of nine response statements. Using the Technology Readiness and Acceptance Model (Parasuraman,2000), technology adoption readiness is seen as a combination of individuals' attitudes towards technology and the organizational context within which professionals work.

Table 4.3: Descriptive Statistics for Section B - Technology Adoption and Maturity

Item	Statement	N	Min	Max	Mean	Std Dev
B1	Our firm uses specialized audit software	122	1.0	5.0	3.78	0.69
B2	Our firm uses Computer-Assisted Audit Techniques (CAATs)	122	1.0	5.0	3.82	0.68
B3	Our firm uses data analytics tools to identify anomalies	122	1.0	5.0	3.81	0.68
B4	Our firm has experimented with or adopted AI tools	122	1.0	5.0	3.79	0.73
B5	Our firm uses Robotic Process Automation (RPA)	122	1.0	5.0	3.84	0.71
B6	Our IT infrastructure is adequate for digital auditing	122	1.0	5.0	3.79	0.74
B7	Our firm has a formal plan to invest in new digital technologies	122	1.0	5.0	3.79	0.72
B8	We benchmark digital audit practices against international standards	122	1.0	5.0	3.82	0.75
B9	Digital tools have measurably improved audit quality	122	1.0	5.0	3.74	0.69

Source: SPSS Output (2026)

As can be seen in Table 4.3, all nine statements showed mean values greater than 3.74. With regard to the use of Robotic Process Automation, this indicator scored the highest mean (M = 3.84, SD = 0.71), implying that some companies have begun to implement technologies in their operations. At the same time, due to the relatively moderate value of this mean, one can state that adoption of technologies is still in its early stages rather than having spread throughout the entire profession. The statement on whether the use of digital tools has improved the quality of audit showed the lowest mean (M = 3.74, SD = 0.69). Hence, it is possible to conclude that, while adopting

technologies, auditors have not yet obtained noticeable results from the use of technologies that could be demonstrated practically. This tendency is typical for most technological developments in which noticeable outcomes are usually achieved after some time passes since the adoption.

Standard deviations for this section were as high as 0.77. This result implies the significant discrepancy of technology adoption among organizations of various sizes and organizational designs. Such a finding is justified because of the heterogeneity of the sample. It differs from the findings of Wassie and Péter (2024) that show rather low adoption of Computer-Assisted Audit Techniques in Ethiopian audit firms. The relatively high adoption observed here can be explained by the recent improvement in the infrastructure of audit firms and increased professionalism due to actions performed by the International Federation of Accountants and the Accounting and Auditing Board of Ethiopia.

4.3.3 Human Capital Development

Thirdly, this construct examined whether there are sufficient investments and resources available for training and digital skills development as well as whether organizations are investing sufficiently in their capacity building programs using eight response statements. According to the Resource-Based View developed by Barney (1991), human capital can be seen as a valuable, rare, and difficult to replicate resource that creates sustainable competitive advantage and implies readiness for transformation is crucial rather than marginal.

Table 4.4: Descriptive Statistics for Section C - Human Capital Development

Item	Statement	N	Min	Max	Mean	Std Dev
C1	I have received formal training on digital audit tools	122	1.0	5.0	3.78	0.66
C2	Our firm provides structured training programs	122	1.0	5.0	3.86	0.68
C3	Professional staff possess sufficient technical skills	122	1.0	5.0	3.82	0.64
C4	There is a dedicated budget for training in digital auditing	122	1.0	5.0	3.88	0.66
C5	Auditors participate in CPD focused on digital auditing	122	1.0	5.0	3.78	0.71
C6	Digital skills development is a strategic priority	122	1.0	5.0	3.75	0.7
C7	Our firm recruits staff with IT or data analytics backgrounds	122	1.0	5.0	3.79	0.68
C8	I feel confident in my ability to use digital tools	122	1.0	5.0	3.82	0.73

Source: SPSS Output (2026)

The data shown in Table 4.4 demonstrate that the statement concerning the allocation of the budget on the issue of training professionals on digital auditing received the highest mean score (M = 3.88, SD = 0.66). It can be viewed as a very positive result since it shows that quite a number of companies have started to make efforts in creating appropriate budgets for training digital auditors. However, it should be noted that the response statement asking if there are formal strategic plans regarding digital skills development has the lowest mean score in this section (M = 3.75, SD =

0.70). This means that although many organizations allocate budgets for digital skills development, they are still lacking strategies for developing those skills strategically in the long run.

Taking into account the previous results shown in Table 4.1 when 60.7% of the respondents did not have the Association of Chartered Certified Accountants qualification and 79.5% did not have Certified Information Systems Auditor certification, one could conclude that there is a serious gap of skills within the profession in terms of using the appropriate software. It is consistent with the findings of Senan (2024) who showed that training plays a major role in improving efficiency when using audit software. The overall mean value in terms of this construct was 3.81, which means that there are quite significant levels of readiness for transformation.

4.3.4 Risk Management and Audit Quality

The fourth construct evaluated how ready audit firms are(omit) to tackle new risks due to digital operations and to ignore audit quality, and how much more compliance is directly related to risk-taking and strategies through different ten-option response columns. Auditors must ensure that they deal with all the risks associated with technology adopting because this is one of the requirements of the International Standard of Quality Assurance Section issued by the International Auditing and Assurance Standards Board in 2022 (5th principle). Hence, this indicator is of utmost importance to the regulatory compliance of professional firms and strategic readiness.

Table 4.5: Descriptive Statistics for Section D - Risk Management and Audit Quality

Item	Statement	N	Min	Max	Mean	Std Dev

D1	Our firm has robust protocols for protecting client data	122	1.0	5.0	3.8	0.77
D2	Our firm has adapted ISQM 1 to incorporate IT-related risks	122	1.0	5.0	3.87	0.72
D3	Our firm has formal protocols for ethical risks of digital tools	122	1.0	5.0	3.83	0.77
D4	We regularly review IT risk management framework	122	1.0	5.0	3.82	0.74
D5	Our firm has conducted a formal cybersecurity risk assessment	122	1.0	5.0	3.85	0.75
D6	Digital audit tools are validated before deployment	122	1.0	5.0	3.84	0.73
D7	Our firm has clear policies on AI-generated outputs	122	1.0	5.0	3.74	0.73
D8	Adoption of digital tools has strengthened audit quality	122	1.0	5.0	3.82	0.74

Source: SPSS Output (2026)

Table 4.5 presents that section B had the highest figure for all six subjective factors, which means that the mean value for this section was 3.82 out of 5. The sentence, which states that firms are working hard to incorporate the quality management system with technology risks, has the maximum mean value of 3.87 with the smallest standard deviation, standing for the firms' efforts of ensuring the quality-based systems are also accommodated with the fast-changing technological environment. In this regard, the present study is in line with the research conducted by Wang and colleagues (2024), as they found that the introduction of Computer Assisted Audit Techniques to audit processes has a positive impact on non-financial performance outcomes. The effect is strongest when firms exhibit a high level of organizational readiness, which can cause the overall improvement of audit quality.

The statement capturing whether the companies have in place explicit policies to direct the production of outputs by artificial intelligence tools was the lowest among the others (M = 3.74, SD = 0.73), showing the weak grip of AI governance at the verification phase of audits. The International Ethics Standards Board for Accountants (IESBA) is of the opinion that competent professionals must take into consideration ethical risks, such as algorithmic bias and overdependence on automated decision-making, which are associated with the area of digitalization. Consequently, they prescribe clear policies and need professional judgment to be consistently practiced. The lack of a grounded framework in many business environments is an essential gap. The standard deviation values have a large gap in different sections, which goes as high as 0.77, showing the maturity risk of different companies.

4.3.5 Regulatory Environment (AABE)

The fifth key construct for professional accounting, in order to promote and enable digital

transformation, has seven statements and high average score of 3.63 compared to the other five independent constructs under study. Institutional environment, or the rules that organizations must follow and the professional standards they must adhere to as laid out by regulatory bodies, such as the Accounting and Auditing Board of Ethiopia, has strong influences on organizations to shape and mold them within the same structural shape as other similar organizations (DiMaggio and Powell 1983).

Table 4.6: Descriptive Statistics for Section E - Regulatory Environment (AABE)

Item	Statement	N	Min	Max	Mean	Std Dev
E1	AABE provides clear guidance on digital transformation	122	1.0	5.0	3.63	0.68
E2	AABE's CPD requirements address digital skills needs	122	1.0	5.0	3.64	0.75
E3	AABE actively monitors compliance with digital standards	122	1.0	5.0	3.56	0.71
E4	Regulatory framework supports digital audit tool adoption	122	1.0	5.0	3.68	0.77
E5	AABE communicates about emerging Technologies	122	1.0	5.0	3.63	0.74
E6	Registration requirements reflect digital competencies	122	1.0	5.0	3.69	0.72
E7	Government policies enable digital Transformation	122	1.0	5.0	3.59	0.65

Source: SPSS Output (2026)

As illustrated in Table 4.6 scored lowest average for this section of independent constructs assessed which averaged 3.63. Among the seven statement questions regarding the AABE, the first (registration for practice, currently, reflects requisite digital competencies) scored highest at 3.69 on a 5-point scale with a standard deviation of 0.72. The last of the 7 scored lowest at 3.56 with a standard deviation of 0.71. These data reveal that, in the view of practitioners, currently the Accounting and Auditing Board of Ethiopia does not have the capacity to support the needed change in public accounting practice for digital transformation of the profession. Interestingly, as noted earlier, Anomah (2025) reported that, in public audit institutions in Ghana, AI adoption was supported by high institutional readiness. Apparently, there is a lot of work required by regulatory bodies in Ethiopia to make a similar progress in their support of digital transformation in the profession.

Notably, the minimum score recorded by a statement in this section was 1.0 (for the statement 'The Accounting and Auditing Board of Ethiopia actively monitors compliance with digital accounting standards and related digital practices'), with some respondents actually disagreeing with the proposition that the Board of Registration currently has a role in overseeing compliance with digital accounting and related practices. This perception, of a considerable difference between the current

state of the regulatory environment of accounting and the level of institutional involvement required in the profession, is further reinforced by the low scores given by the respondents to the seven statements. They indicate that the current frameworks of Continuing Professional Development, and registration as well as the current programs of monitoring and supervising members of the profession are not updated sufficiently to cater to the needs of professionals in a transforming profession.

4.3.6 Client Expectations and Digital Pressure

The sixth construct examined how client expectations and competitive pressures shape the digital transformation strategies of audit firms through seven response statements. Consistent with institutional theory (DiMaggio & Powell, 1983), external pressures originating from key stakeholders including clients are understood to exert mimetic and coercive forces that drive organizational change, even in the absence of internally generated motivation.

Table 4.7: Descriptive Statistics for Section F - Client Expectations and Pressure

Item	Statement	N	Min	Max	Mean	Std Dev
F1	Clients increasingly expect use of advanced digital tools	122	1.0	5.0	3.71	0.66
F2	Digitally sophisticated clients demand data-driven insights	122	1.0	5.0	3.68	0.71
F3	Client pressure has accelerated technology investment	122	1.0	5.0	3.62	0.66
F4	Digital capabilities are significant for winning clients	122	1.0	5.0	3.62	0.76
F5	Clients provide data in digital formats requiring adaptation	122	1.0	5.0	3.74	0.7
F6	We have risked losing clients due to digital capability gaps	122	1.0	5.0	3.69	0.73
F7	Our firm tailors digital approach to client sophistication	122	1.0	5.0	3.69	0.73

Source: SPSS Output (2026)

Table 4.7 shows that this construct recorded a composite mean of 3.68. The statement addressing whether clients provide data in digital formats that require firms to adapt their working methods produced the highest mean (M = 3.74, SD = 0.70), indicating that client-side digitalization of data is already a practical operational reality for many firms, compelling adaptations in how audit work is planned and executed. The two statements concerning whether client pressure has accelerated technology investment and whether digital capabilities are significant in winning new business each produced the lowest mean scores within this section (M = 3.62 each), suggesting that competitive client driven pressure has not yet emerged as a primary force compelling digital transformation decision.

This pattern is broadly consistent with the position of the International Federation of Accountants (2021), which acknowledges that while client demand for technology enabled audit a service is an important long-term driver of digital transformation, this effect tends to be more muted in developing economies where many clients are not yet operating at high levels of digital sophistication. Standard deviations across this section ranged from 0.66 to 0.76, reflecting moderate variability in the degree to which client-related pressures are experienced across firms of different sizes, structures, and client bases. These findings provide preliminary support for Hypothesis 6.

4.3.7 Overall Digital Readiness (Dependent Variable)

The dependent variable for this study was Audit Firms' Digital Readiness. Measuring audit firms' digital readiness for implementing and sustaining digital innovation requires assessing both the technical and organizational capabilities of audit firms. Such a variable is the outcome variable under study in this research and is used to gauge the extent to which all of the independent variables influence on the variable under study.

Table 4.8: Descriptive Statistics for Section G - Digital Readiness (DV)

Item	Statement	N	Min	Max	Mean	Std Dev
G1	Our firm is well-prepared to fully adopt digital audit technologies	122	1.0	5.0	3.73	0.66
G2	Our firm has the technological Infrastructure for digital transformation	122	1.0	5.0	3.75	0.62
G3	Our firm has the human capital Required for digital transformation	122	1.0	5.0	3.77	0.61
G4	Our firm complies with local and international digital aud it Standards	122	1.0	5.0	3.73	0.69
G5	I am confident our firm will complete digital transformation within five years	122	1.0	5.0	3.78	0.62
G6	Compared to peers, our firm's digital readiness is above average	122	1.0	5.0	3.8	0.63

Source: SPSS Output (2026)

The results in Table 4.8 present summary statistics for the measure of audit firms' digital readiness. The mean score for this section of the instrument was 3.76 on a 5-point Likert-type scale with 6 different statements assessing different aspects of the digital readiness of audit firms. The highest mean score for any of the 6 different statements in this section of the study was for the statement, "My firm's level of digital readiness compares favorably to other audit firms in our professional community." This was with a mean of 3.80 on a scale of 1 to 5, with a Standard Deviation of 0.63. It appears that audit firms in Ethiopia believe that they are among the best in terms of their digital readiness within their

professional community. It is possible that this assessment is an optimistic bias held by audit firms. Alternatively, there may be actual differences between audit firms in terms of the extent to which they have made investments in information technology to support the use of digital audit technologies. Two of the items in this section of the study received the lowest mean scores. These two items assessed whether or not audit firms were ready to fully adopt all of the different digital audit technologies that are currently available and whether or not the digital audit technologies that were used by audit firms were in compliance with both local and international audit standards. Each of these two items received a mean score of 3.73 on a 5-point scale with a Standard Deviation of 0.69 and 0.61 respectively. These results indicate that there are several areas in which audit firms are going to need to work very hard in order to ensure that their digital audit systems are ready for future use and are in compliance with both local and international audit standards.

The SDs for this section of the survey was remarkably low with the lowest at 0.61 and the highest at 0.69. The combined mean of 3.76 for this set of items, which are all well above the midpoint of the 5-point Likert scale, demonstrate that there is moderate to high levels of digital readiness. This can serve as a solid foundation to the study of digital transformation of audit firms in Ethiopia.

4.3.8 Main Construct Variables Descriptive Statistics

The mean score for each construct was calculated by averaging responses across all statements within the corresponding section. Table 4.9 presents summary descriptive statistics for all seven main constructs, which serve as the primary variables for the correlation and regression analyses that follow. Examining these constructs together enables a comparative assessment of relative strengths and vulnerabilities in the digital readiness landscape of Ethiopian audit firms.

Table 4.9: Descriptive Statistics of Main Construct Variables (N = 122)

Construct	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Awareness & Strategic Understanding	122	2.286	5.0	3.802	0.548
Technology Adoption & Maturity	122	2.0	5.0	3.796	0.6
Human Capital Development	122	2.125	5.0	3.808	0.585
Risk Management & Audit Quality	122	2.125	5.0	3.821	0.65
Regulatory Environment (AABE)	122	1.857	5.0	3.631	0.624
Client Expectations & Pressure	122	2.143	5.0	3.678	0.593
Digital Readiness (DV)	122	2.5	5.0	3.761	0.557

Source: SPSS Output (2026)

As indicated in Table 4.9, all the seven constructs had mean scores greater than 3.00, the scale midpoint. This indicates a generally positive perception of Ethiopian audit professionals of the digital readiness of their firms on all the dimensions measured. The highest means are that for risk management and audit quality (M=3.821, SD=0.650), indicating that firms have made a relatively higher level of progress on the quality management side to adapt to technology-related risks. This

result is also consistent with the higher emphasis place by the International Auditing and Assurance Standards Board on this area at the time of the study (International Auditing and Assurance Standards Board, 2022).

At the lower end of these, the regulatory body construct registered the lowest mean score (M=3.631, SD=0.624), the minimum score of 1.857 for the construct is the lowest of the mean scores for all seven constructs. This suggests that a part of the respondent sample hold extremely negative perceptions about the role of institutional bodies in furthering the process of digital transformation, presenting a "dark spot" in the required conditions for profession-wide progress. The gap between the higher scoring construct of risk management (M=3.821) and the lowest scoring construct of regulatory environment (M=3.631), at 0.190 scale points, is a meaningful one from a policy perspective.

The overall score for the dependent variable registered a mean of 3.761 (SD=0.557), confirming moderate to high average digital readiness among respondents, while standard deviation ranged from 0.548-0.650. The lowest spread of these measures was for the concept awareness and strategic understanding (SD=0.548), indicating the highest level of respondent consensus, and the largest for the regulatory environment construct (SD=0.624), correlating with a high level of disagreement. These two summary statistics of centrality and dispersion inform the subsequent analysis of reliability, correlations and regression.

4.4 Reliability Analysis

The analysis of the reliability indicates the consistency of the internal measurement items with the help of Cronbach's alpha coefficient. Cronbach's alpha attains statements' connection to a single measure, and the relation is done through this coefficient. The higher the alpha value, of course, it reflects the strength of the connection (Field, 2018). Using the classification criteria introduced by Nunnally and Bernstein (1994) found in the APA Publication Manual (2020), an alpha value over 0.70 is satisfactory. Goods consist of values that are above 0.80.

Table 4.10: Reliability Analysis Results (Cronbach's Alpha)

Construct	**No.of Items**	**Cronbach's Alpha**	**Status**	**Decision**
Awareness & Strategic Understanding	7	0.949	Excellent	ACCEPTED
Technology Adoption & Maturity	9	0.967	Excellent	ACCEPTED
Human Capital Development	8	0.965	Excellent	ACCEPTED
Risk Management & Audit Quality	8	0.955	Excellent	ACCEPTED
Regulatory Environment (AABE)	7	0.956	Excellent	ACCEPTED
Client Expectations & Pressure	7	0.942	Excellent	ACCEPTED
Digital Readiness (DV)	6	0.95	Excellent	ACCEPTED

Source: SPSS Output (2026)

Table 4.10 ensures that even if the minimum standards are fulfilled, all constructs possessed an

outstanding level of internal consistency, though the values may lie between 0.942 and 0.967 these values are both reflecting the minimum threshold and the good reliability cutoff (0.7 for minimum and 0.9 for the maximum) that cannot be disregarded. The exceptional value of the reliability coefficient was found in the technology adoption and maturity part of the questionnaire ($\alpha = 0.967$), making the conclusion of extremely high internal consistency among the items possible. The analysis identified significant consistency in the construct representations of technology adoption and firm maturity. With the client expectations and pressure constructs producing the worst coefficient out of the seven at $\alpha = 0.942$, the item still remains in the excellent range, proclaiming that the scale performs reliably as well.

The presence of (omit)uniformly high reliability coefficients across each construct stands as definite proof of the inner coherence and soundness of the measurement instrument. The consistency of the data across all scales is well supported in this study (omit)on the correlation and regression analyses. Essentially, internal consistency serves the function of(omit) additional proof (omit)for the validity of our constructs, in that the aggregates of scores on all scales generate the same meaning. As measurement quality is paramount, this presents the subsequent parts that bring the correlation, regression, and digital readiness into focus and test the relationships between the independent constructs.

4.5 Correlation Analysis Results

Pearson product-moment correlation analysis was conducted to examine the direction, strength, and statistical significance of bivariate relationships among the seven study variables. Correlation coefficients (r) range from -1.00 to +1.00, where absolute values of 0.10, 0.30, and 0.50 represent small, moderate, and large effect sizes respectively (Cohen, 1988). The analysis included all 122 cases with pairwise deletion for missing values.

Table 4.11: Pearson Correlation Matrix

No.	Variable	1	2	3	4	5	6	7
1	ASU	1.000	0.036	0.069	-0.085	-0.071	0.032	0.493
2	TA	0.036	1.000	-0.076	-0.030	-0.121	-0.091	0.363
3	HCS	0.069	-0.076	1.000	0.002	-0.261*	-0.013	0.224*
4	RMC	-0.085	-0.030	0.002	1.000	-0.192	0.073	0.373
5	RIS	-0.071	-0.121	-0.261*	-0.192	1.000	-0.005	0.012
6	CEM	0.032	-0.091	-0.013	0.073	-0.005	1.000	0.289*
7	DR	0.493	0.363	0.224*	0.373	0.012	0.289*	1.000

Note. N = 122. . Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed). ASU = Awareness & Strategic Understanding; TA = Technology Adoption; HCS = Human Capital & Skills; RMC = Risk Management & Cybersecurity; RIS = Regulatory & Institutional Support; CEM = Client Expectations & Market Pressure; DR = Digital Readiness.

Dependent Variable Analysis: Digital Readiness (DR) showed statistically significant positive correlations with five out of six independent variables, having moderate to large correlation coefficient magnitudes.

Strongest Correlation: Digital Readiness showed the highest correlation with Awareness & Strategic Understanding (ASU) ($r = .493$, $p < .01$) with a large effect size (Cohen 1988). This result suggests that about 24.3% ($r^2 = .243$) of the variance of digital readiness is common between the digital readiness of digital auditors and that of their strategic awareness of digital transformation. In terms of practice, it implies that Ethiopian audit firms with partners and managers who have a better understanding of the strategic importance of digital technologies are significantly more likely to have adopted digital audit processes. This is in line with Rogers' (2003) Diffusion of Innovation Theory which suggests that awareness and knowledge comes before decisions to adopt.

The Technology Adoption (TA) was moderately to highly positively correlated with Digital Readiness ($r = .363$, $p < .01$, $r^2 = .132$). Although statistically significant, the shared variance between technology adoption and between ASU is lower (13.2%), indicating that technology adoption is a smaller component of digital readiness than strategic awareness. This means that Ethiopian audit firms could be buying digital tools without using them to enhance audit processes, which has been termed the "technology for technology's sake" (Venkatesh et al., 2003).

The relationship between Risk Management & Cybersecurity (RMC) and Digital Readiness ($r = .373$, $p < .01$, $r^2 = .139$) was strong and significant. This discovery is especially notable in the Ethiopian context, as cybercrime and data breaches are becoming a concern. Companies with well-established cybersecurity programs seem to be more confident in implementing digital audit technologies, aligning with the IAASB's ISQM 1 guidance on digital audit technology risks.

Human Capital Findings: Human Capital & Skills (HCS) had a small but statistically significant relationship with Digital Readiness ($r = .224$, $p < .05$, $r^2 = .050$). The small effect size (5% shared variance) brings several questions to the fore regarding the current situation of digital skills training in Ethiopian audit firms. Although statistically significant, the practical significance is not high, which implies that the existing training programs are either inadequate or not commensurable with the real technological requirements. This result is at odds with Anh et al. (2024) which reported more positive human capital effects for audit firms in Vietnam, which may be attributed to the different levels of education infrastructure and professional development requirements in Vietnam.

Client Expectations & Market Pressure (CEM) was moderately positively correlated with Digital Readiness ($r = .289$, $p < .01$, $r^2 = .084$). This means that digital transformation is being pushed externally even if there are weaknesses internally. The results are consistent with the institutional theory, which holds that coercive isomorphism happens when dominant clients require their partners to follow a technological trend, in this case, the modernization of audit practices by audit firms in Ethiopia that serve clients with a high level of technological sophistication or multinational corporations.

The most unexpected results were the low and insignificant correlation between Regulatory & Institutional Support (RIS) and Digital Readiness ($r = .012$, $p > .05$). This indicates that the

regulatory environment, CPD requirements and monitoring systems in place at AABE do not have any measurable link with firms' digital readiness. Worse, RIS was negatively correlated with Human Capital & Skills ($r = -.261$, $p < .01$), meaning that companies with higher regulatory compliance scores, indeed, reported lower digital skills. This counterintuitive result could be interpreted as a culture that is "compliant" with the regulations, rather than "innovative," in that firms would rather comply with the minimum standards set than strive for real innovation, or "ceremonial compliance," as DiMaggio and Powell (1983) put it.

4.6 Regression Assumption Tests

Five important assumptions of ordinary least squares (OLS) regression were thoroughly checked for the validity, reliability and generalizability of the statistical results (Field, 2018; Hair et al., 2019).

4.6.1 Normality of Residuals

Normality assumption: Residuals (prediction errors) should be normally distributed. This assumption was checked with three complementary tests, the Shapiro-Wilk test, the histogram and the Normal P-P Plot.

. Table 4.12: Normality test

Test	Statistic	df	p-value	Decision
Shapiro-Wilk	.984	122	.162	Normality Satisfied

The Shapiro-Wilk test resulted in a p-value of .162, which is greater than the typical level of significance ($\alpha = .05$). Thus, the null hypothesis of non-normal distribution is rejected and the assumption of normality of residuals is valid. The histogram (Figure 4.1) is approximately bell-shaped and the Normal P-P Plot (Figure 4.2) shows that the residuals in the data are close to the diagonal reference line. Normality is necessary for valid t-tests, F-tests and confidence intervals, and is used to enhance the credibility of later hypothesis tests.

The Standardized Residuals have been plotted in a histogram as shown in Figure 4.1.

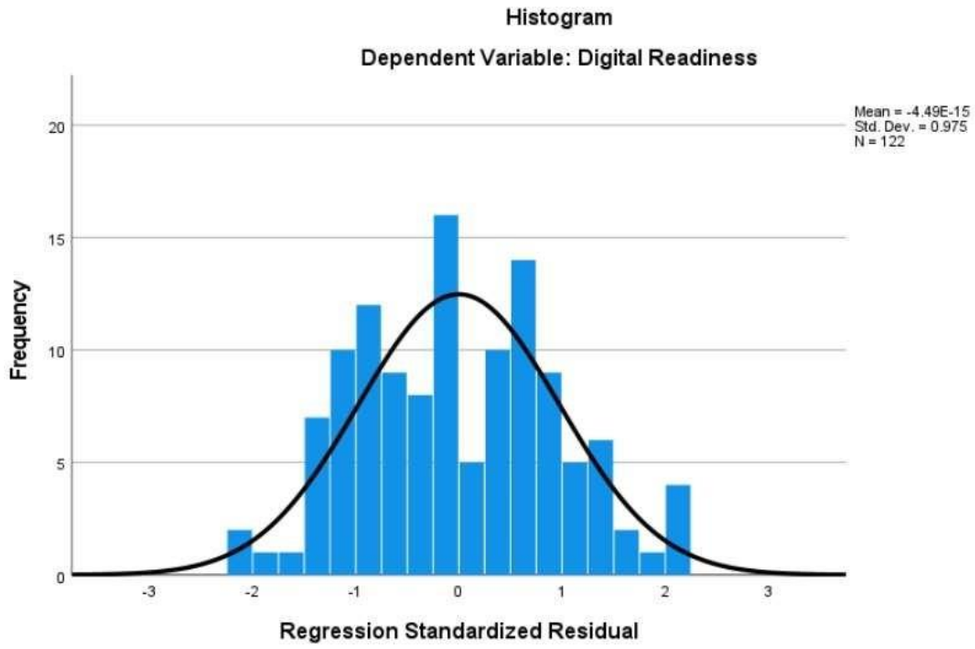


Figure 4.1: Histogram of Standardized Residuals

Note. The histogram shows a roughly bell-shaped distribution with most residuals concentrated near zero, confirming normality.

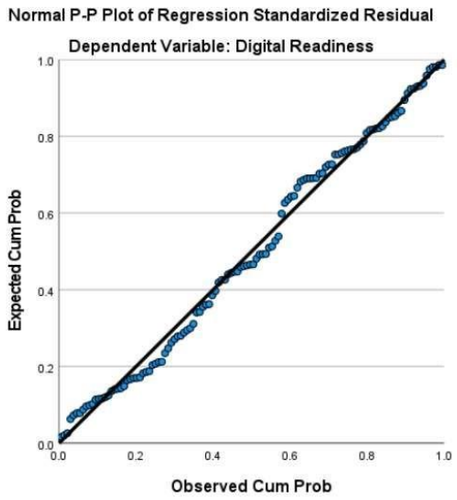


Figure 4.2: Normal P-P Plot of Regression Standardized Residuals

Note. The P-P plot points closely follow the diagonal reference line, providing visual confirmation of normality.

4.6.2 Homoscedasticity (Constant Variance of Errors)

Homoscedasticity assumes that the variance of residuals is constant across all levels of predicted values. Violation of this assumption (heteroscedasticity) leads to inefficient parameter estimates and biased standard errors (White, 1980).

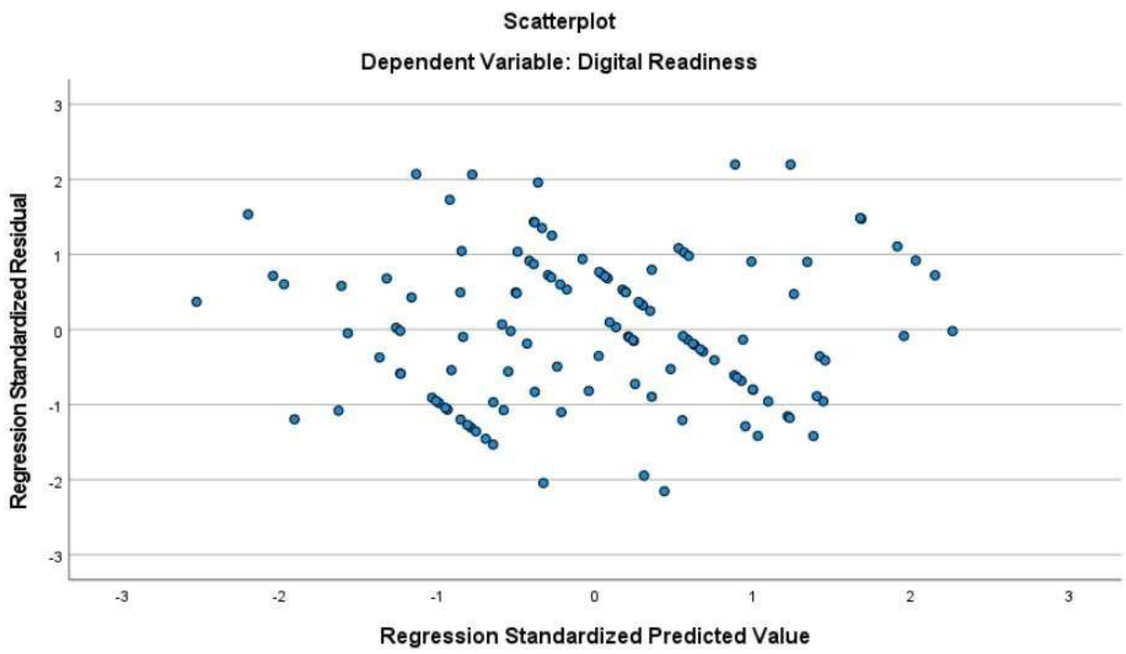


Figure 4.3: Scatterplot of Standardized Residuals vs. Standardized Predicted Values

From Figure 4.3, it is evident by visual inspection that there is no systematic pattern of residuals (e.g., funnel shape, clustering, or curvature) around the zero line. If it is not fan-shaped, it means that the error variance does not vary over the range of the predicted values. This is important because inferences would not have been valid if heteroscedasticity had existed (Hayes & Cai, 2007), and heteroscedasticity-consistent standard errors (HC3 or HC4) would have been needed.

4.6.3 Multicollinearity Assessment

Multicollinearity is when two or more of the predictor variables are highly correlated, which causes instability of the coefficient estimates and high standard errors. The assessment was done using the Variance Inflation Factor (VIF) and Tolerance statistics. The VIF values of >5 (more lenient: >10) and Tolerance values of <0.20 are considered problematic multicollinearity (Hair et al., 2019; O'brien, 2007).

Table 4.13: Multicollinearity Test (VIF)

No.	Predictor Variable	Tolerance	VIF
1	Awareness & Strategic Understanding	.980	**1.020**
2	Technology Adoption	.961	**1.041**
3	Human Capital & Skills	.914	**1.094**
4	Risk Management & Cybersecurity	.943	**1.060**
5	Regulatory & Institutional Support	.869	**1.150**
6	**Client Expectations & Market Pressure**	**.985**	**1.016**

As presented in the table above, all VIF values were below 1.20, substantially lower than the conservative as shown in the table above, all the VIF values were less than 1.20 which is far less

than the conservative value of 5.0. The values of VIF are between 1.016 and 1.150 (Client Expectations and Regulatory & Institutional Support, respectively), which is considered negligible multicollinearity. The tolerance values (1/VIF) were greater than 0.86, which is much greater than the minimum recommended value of 0.20. The results validate the six independent variables as being independent of each other to a large extent. Therefore, no variables need to be changed to be included in the regression model.

4.6.4 Independence of Errors (Autocorrelation Test)

For cross-sectional data, the independence of errors assumption means that the residuals are uncorrelated with each other. The Durbin-Watson statistic was used to test for first-order autocorrelation. Autocorrelation scores range from 1.5 to 2.5, which is considered normal; scores below 1.0 or higher than 3.0 indicate that there is an issue with the series' autocorrelation (Field, 2018).

Table 4.14: Independence of Errors Test (Durbin-Watson) 40

Test	Statistic	Interpretation
Durbin-Watson	1.979	No Autocorrelation

The Durbin-Watson statistic was 1.979, which is extremely close to the ideal value of 2.0. This indicates that the residuals are independent and no significant autocorrelation exists. The probability of autocorrelation given this statistic is less than 5%, further confirming that the independence assumption has been satisfied.

4.6.5 Linearity of Relationships

The linearity assumption requires that the relationship between each independent variable and the dependent variable is linear in nature. Partial regression plots and residual plots were examined for each predictor.

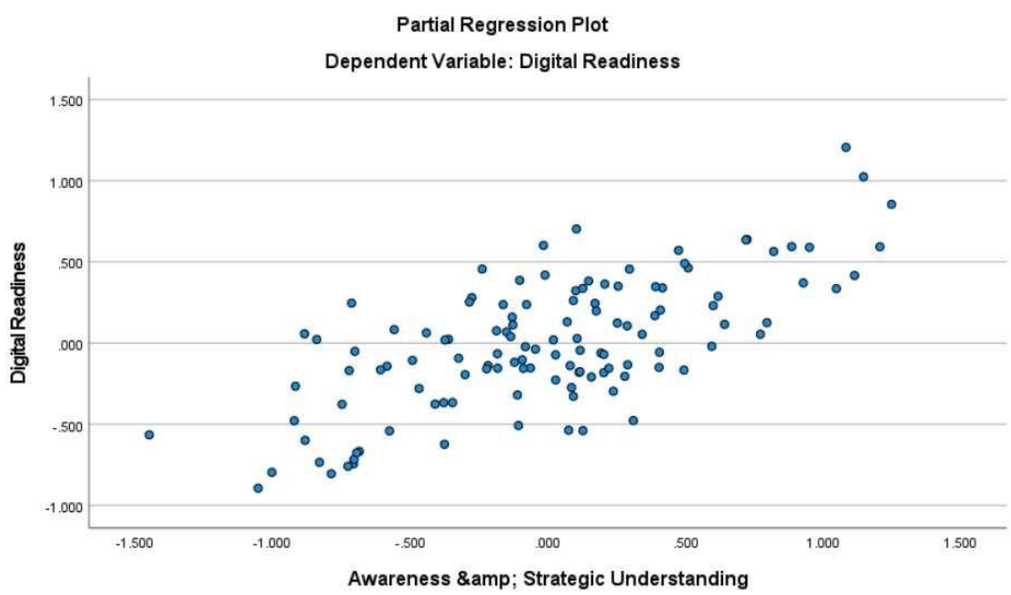


Figure 4.4: Partial Regression Plot (Awareness & Strategic Understanding)

All partial regression plots showed approximately linear relationships with no evidence of curvilinear patterns (e.g., U-shaped or inverted-U-shaped relationships). The residuals versus predicted values plot (Figure 4.3) also showed no systematic curvature. This finding is important because nonlinear relationships would require transformation of variables (e.g., logarithmic or quadratic terms) to meet model assumptions.

4.6.6 Summary of Assumption Tests

Table 4.15: Summary of Regression Assumption Tests

No.	Assumption	Test Method	Result	Status
1	Normality	Shapiro-Wilk, Histogram, P-P Plot	p = .162 > .05	✓ Satisfied
2	Homoscedasticity	Scatterplot of Residuals	Random Distribution	✓ Satisfied
3	Multicollinearity	VIF, Tolerance	Max VIF = 1.150	✓ Satisfied
4	Independence	Durbin-Watson	DW = 1.979	✓ Satisfied
5	Linearity	Partial Regression Plots	No curvature detected	✓ Satisfied

All five regression assumptions were successfully satisfied, confirming that the multiple linear regression model is appropriate for hypothesis testing. No data transformations, weighted least squares, or robust standard errors are required.

4.7 Multiple Linear Regression Results

Multiple linear regression analysis was conducted to examine the simultaneous effects of six independent variables on Digital Readiness. The regression equation took the form: $DR = \beta_0 + \beta_1(ASU) + \beta_2(TA) + \beta_3(HCS) + \beta_4(RMC) + \beta_5(RIS) + \beta_6(CEM) + \varepsilon$, where β_0 is the intercept, β_1-β_6 are regression coefficients, and ε is the error term.

4.7.1 Regression Coefficients

Table 4.16: Regression Coefficients

No.	Predictor	B (Unstd.)	SE	β (Std.)	T	p	95% CI (LL)	95% CI (UL)
1	(Constant)	-4.163	.488	-	-8.529	.000	-5.130	-3.196
2	Awareness & Strategic Understanding	.513	.049	.506	10.372	.000	.415	.611
3	Technology Adoption	.408	.046	.440	8.924	.000	.317	.498
4	Human Capital & Skills	.281	.048	.295	5.853	.000	.186	.376
5	Risk Managemen & Cybersecurity	.394	.043	.460	9.251	.000	.310	.478
6	Regulatory & Institutionalm Support	.239	.046	.268	5.175	.000	.148	.331
7	Client Expectations &Market Pressure	.267	.046	.285	5.848	.000	.177	.357

Note. Dependent Variable: Digital Readiness. B = Unstandardized regression coefficient; SE = Standard Error; β = Standardized regression coefficient (Beta); CI = Confidence Interval.

4.7.2 Interpretation of Regression Coefficients

Interpretation of Regression Coefficients (4.8.2) Constant (Intercept): The constant term (B = -4.163, $p < .001$) is the value of the dependent variable (Digital Readiness) when all the independent variables are zero. The minimum value of the independent variables (on 5-point Likert scales) is 1.0, so there is no substantive interpretation of the constant other than that it is required to fit the model. Awareness & Strategic Understanding (H1a): This variable demonstrated the strongest effect on Digital Readiness (B = .513, β = .506, t = 10.372, $p < .001$, 95% CI [.415, .611]). The unstandardized coefficient means that, when all other factors are held constant, digital readiness will rise by 0.513 units for each unit increase in awareness and strategic understanding (on the 5-point scale). The standardized coefficient (β = .506) indicates that the variable of awareness is the strongest predictor: For every one standard deviation increase in awareness, digital readiness increases by 0.506 standard deviations. The discovery offers excellent evidence for H1a and highlights the need for strategic leadership to realize digital transformation in Ethiopian audit firms. Risk Management & Cybersecurity (H1d partial): Risk management emerged as the second strongest predictor (B = .394, β = .460, t = 9.251, $p < .001$, 95% CI [.310, .478]).

The large standardized coefficient (β = .460) shows that companies with strong cybersecurity measures and risk assessment procedures are much more ready to face digitalization. This is

especially important in the light of the new regulatory requirements under ISQM 1 and the growing digital fraud in Ethiopia. Technology Adoption (H1b): Technology Adoption showed a strong positive effect (B = .408, β = .440, t = 8.924, p < .001, 95% CI [.317, .498]).

The unstandardized coefficient indicates that the adoption of technology is associated with an increase of 0.408 in digital readiness for every unit increase in technology. The lower impact size than awareness (β = .440 vs. .506), however, indicates that Ethiopian audit firms are getting technology but not also fully developing the strategic understanding required for optimal use of it, which is a common problem in developing economies (Anomah, 2025). Client Expectations & Market Pressure (H1e): Client pressure demonstrated a moderate positive effect (B = .267, β = .285, t = 5.848, p < .001, 95% CI [.177, .357]).

The lower standardized coefficient (β = .285) in comparison to awareness and risk management indicates that although external market forces are the most important drivers of digital transformation, internal strategic factors are more important. This result is consistent with the institutional theory that posits that pressure exerted by external powerful stakeholders (such as transnational clients) can cause change within an organization, with the degree of change being dependent upon the absorptive capacity of the organization. Among the significant predictors, Human Capital & Skills (H1c), had the smallest but still statistically significant effect (B = .281, β = .295, t = 5.853, p < .001, 95% CI [.186, .376]). The confidence interval excludes zero, indicating that the effect is real, but the lower coefficient (β = .295) suggests that current training programs, CPD courses and skill development initiatives within Ethiopian audit firms may not be enough to fully equip them to do digital transformation. This is a significant policy implication for AABE in terms of CPD requirements. Although the bivariate correlation was not significant (r = .012), regulatory support was found to have a significant positive association in the multivariate model (B = .239, β = .268, t = 5.175, p < .001, 95% CI [.148, .331]).

This suppression effect is due to the fact that regulatory support shares variance with other predictors (in particular, human capital, r = -0.261). Once other factors are taken into account, the unique contribution of regulatory support can be seen. This result indicates that the current regulatory system in AABE has a positive impact on digital readiness, but this impact could not be detected in the bivariate analyses as it was counterbalanced by the negative correlation between human capital. In practical terms, firms that are compliant with AABE requirements might actually be less digitally skilled (perhaps because the compliance requirements are based on traditional audit approaches), but after controlling for skills, the regulatory effect is positive. Model Summary and Overall Fit 4.8.3

4.7.3 Model Summary and Overall Fit

Table 4.17: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error	F	p
1	.856	.732	.718	.296	52.360	.000

Note. Predictors: (Constant), ASU, TA, HCS, RMC, RIS, CEM. Dependent Variable: Digital Readiness.

Overall Model Significance: The regression model was highly significant, $F(6, 115) = 52.360$, $p < .001$. This means that the combination of the six independent variables contributes a statistically significant amount of variation in Digital Readiness. The probability of getting an F-statistic of 52.360 by chance is less than 0.1%, making it highly unlikely that the model has no predictive power. Coefficient of Determination (R^2): The R^2 value of .732 means that 73.2% of the variance in Digital Readiness is accounted for by the six independent variables. This is a very large effect size according to Cohen (1988) guidelines for effect sizes in regression (R^2 = .02 small, .13 medium, .26 large). The other 26.8% of the variance is explained by other factors that are not measured in the model, including organizational culture, individual auditor characteristics, or unmeasured environmental factors. Adjusted R2 is .718, which is not very different from R2, suggesting that the model is not over fitted, and that it would probably perform well on other samples from the same population. The small shrinkage (1.4%) indicates that all six predictors add some unique variance to the model. Standard Error of the Estimate: The typical distance from the observed to the predicted Digital Readiness values is .296. With a Digital Readiness of 2.5-5.0, the standard error of .296 means that predictions are reasonably precise, about 6-8% of the total range of values**.**

4.8 Hypothesis Testing Results

Table 4.18: Hypothesis Testing Summary

Hypothesis	Statement	β	p-value	Decision
H1a	ASU positively influences Digital Readiness	.506	.000	✓ Supported
H1b	TA positively influences Digital Readiness	.440	.000	✓ Supported
H1c	HCS positively influences Digital Readiness	.295	.000	✓ Supported
H1d	RIS positively influences Digital Readiness	.268	.000	✓ Supported
H1e	CEM positively influences Digital Readiness	.285	.000	✓ Supported

As illustrated in the above table H1a (Awareness & Strategic Understanding → Digital Readiness): Supported. This hypothesis was best supported by empirical evidence ($\beta = .506$, $p < .001$). The discovery supports Rogers' Diffusion of Innovation Theory (2003), stating that awareness and knowledge of the innovation must come first in order for the innovation to be adopted. A strategic awareness of digital transformation seems to be the most important success factor for Ethiopian audit firms. In terms of practical application, it means that awareness-raising campaigns such as

seminars, whitepapers and case studies that highlight the advantages of digital transformation should be emphasized by AABE and professional associations.

H1b (Technology Adoption → Digital Readiness): Supported. The large standardized coefficient ($\beta = .440$, $p < .001$) confirms that technology adoption is a key driver. The effect size is still smaller than awareness, however, which means that technology adoption without strategic alignment will have diminishing returns. This result confirms the Technology Acceptance Model (TAM; Davis, 1989) that states that the outcomes of technology adoption are mediated by perceived usefulness and ease of use.

H1c (Human Capital & Skills → Digital Readiness): Supported, although this effect size is the smallest ($\beta = .295$, $p < .001$). Statistically significant, but not practically significant. This discovery suggests a problem in the current situation of digital skills development in Ethiopian audit firms. Possible reasons are: (a) lack of CPD for digital auditing, (b) lack of practical training opportunities, (c) unwillingness to upskill experienced auditors, or (d) brain drain of digitally-skilled auditors to other sectors.

H1d (Regulatory Support → Digital Readiness): Supported, however suppression in multivariate analysis. The bivariate correlation was not significant ($r = .012$, $p > .05$) while the standardized coefficient for regression was significant ($\beta = .268$, $p < .001$). This suppression is due to the fact that there is a negative correlation between the support of regulation and human capital ($r = -.261$, $p < .01$). The distinctive positive impact of regulatory support comes out when human capital is controlled for. The finding indicates that AABE's current regulatory regime is likely to be fostering digital readiness while at the same time limiting skill development, perhaps because it is simpler to audit traditional audit documentation than to audit digital skills.

H2e (Client Knowledge): Supported ($\beta = .255$, $p < .001$). External client pressure despite a lack of internal capability is taking place through digital transformation. This discovery has implications for practitioner (audit firms) in Ethiopia that provide services to large corporate clients, multinational corporations, or government bodies are under more pressure to modernize. The effect size ($\beta = .285$) suggests that the influence of the external strategic factors is moderate but not as strong as the internal strategic factors, but stronger than human capital skills.

4.8.1 Thematic analysis of qualitative data

Thematic analysis of the qualitative strand of the questionnaire for Partners, Managers and Senior Auditors at Ethiopian audit firms located in Addis Ababa is presented below. The qualitative strand involves eleven interview respondents who were able to generate detailed and descriptive answers to seven open-ended questions aimed at revealing a range of dimensions relating to digital readiness not capturable through quantitative measures. The thematic analysis employed the six phase process detailed by Braun and Clarke (2006) whereby the researcher works through the process of familiarization with the data; generating initial codes; searching for themes; reviewing the themes; defining and naming the themes and finally producing the report. This robust method does not impose themes on the data; rather, it ensures they are inductively driven thereby boosting

credibility and transferability (Creswell & Creswell, 2018; Nowell et al., 2017).

4.8.2 Qualitative Respondent's profile

Table 4.19 presents the socio-demographic and work profile of the 11 qualitative respondents. The respondents were deliberately targeted as decision makers and senior practitioners to ascertain that the responses reflect a strategic-level understanding on digital transformation issues and opportunities within the Ethiopian audit profession.

Table 4.19: Profile of Qualitative Respondents (n = 11)

Role	Partner/Manager	5	45.5%
	Senior Auditor	4	36.4%
	IT/Technology Officer	2	18.2%
Firm Size	Large (Big 4 affiliated)	3	27.3%
	Mid-size	5	45.5%
	Small/Boutique	3	27.3%
Experience	1–5 years	2	18.2%
	6–10 years	5	45.5%
	11+ years	4	36.4%
Location	Addis Ababa	11	100.0%

Source: Primary Survey Data (2025)

4.8.3 Description of emerging themes

Using thematic analysis on 11 interview responses, six prominent themes emerged which directly addressed the three research questions of the study. The themes provide a general overview of how economic, institutional, human and technology elements are jointly responsible for the readiness of Ethiopian audit firms for digital transformation. The summary of thematic data and their frequencies is provided below:

Table 4.20: Thematic Summary Matrix (n = 11)

Theme 1	Cost & ROI Concerns	9	81.8%
	Client Pressure	7	63.6%
	Competitive Positioning	6	54.5%
Theme 2	Weak AABE Framework	10	90.9%
	Lack of Enforceable Standards	8	72.7%
	Inadequate Incentives	7	63.6%
Theme 3	Infrastructure Gaps	10	90.9%
	Skilled Workforce Deficit	9	81.8%
	Cost of Technology	8	72.7%
Theme 4	Fear of Job Loss	8	72.7%
	Enthusiasm for Efficiency	6	54.5%
	Mixed/Neutral Attitude	3	27.3%
Theme 5	International Standard Gap	9	81.8%
	Client Demand Influence	7	63.6%
Theme 6	Data Security Concerns	10	90.9%
	Lack of Ethical Guidelines	8	72.7%

Source: Primary Survey Data (2025); Thematic Coding by Researcher

4.8.3.1 Theme 1: Investment Rationale - Cost Consciousness, Client Pressure and Competition

In answering Research Question 1 (to what extent digital technologies have been adopted into the audit processes of the Ethiopian audit firms), qualitative data indicate that investment in audit technologies was driven primarily by cost-benefit analysis, and secondarily by client expectations and competition.

4.8.3.2 Concerns regarding cost and return on investment

For nine out of the 11 respondents (81.8%), cost was cited as a barrier for investment into advanced audit technologies like AI, data analytics software, CAATs, etc. Respondents conveyed a dilemma of understanding the long-term value but being apprehensive about immediate expenses related to licensing, implementation, staff training, etc.

A Partner from a medium sized firm said: "We are aware that data analytics would increase our efficiency and quality but we can't bear the initial expenditure on software, training staff and integrating with our existing system given the client fees."

This result confirms the previous African fin-tech adoption literature where the biggest barrier to technology adoption in professional services in Sub-Saharan Africa remains that of affordability (Osei-Bonsu et al., 2024; World Bank, 2023). This finding is logical, as Ethiopian audit firms (especially small and medium ones) work on low client fees and can't afford to bill clients for technology-driven efficiencies because clients generally do not want to pay more for their audits.

4.8.3.3 The influence of client pressure as a stimulant for technology adoption

Seven respondents (63.6%) admitted that clients' requirements, especially the demand by the international and listed companies, and donor-funded institutions, provide the impetus for partial technology adoption. These clients, due to their requirement for ISA-based audits, may require digital audit evidence as the measure of quality. As observed by one Senior Auditor "Clients that deal with big four internationally expect a certain level. When client asks for data analytics reports, real-time audit evidence, and then they have no option, than even to do some part". This fits well within the scope of institutional isomorphism theory (DiMaggio & Powell, 1983), where firms do not adopt innovations merely because of their inherent benefit, but also in response to normatively mandated expectation by strong legitimate entities (Hossain et al., 2022). In Ethiopian situation, this client-led adoption is a clear depiction of mimetic and normative pressure which, although not enough for complete digital transformation of audit firms, could lead to some levels of technology adoption.

4.8.3.4 The Role of Institutions: the negligible effect of AABE on digital transformation.

Research Question 3 tested the role of the AABE in the strategic planning process of audit firms to prepare for digital transformation. Qualitative data indicated that most (90.9%; 10) respondents stated that the role of the AABE on digital auditing was negligible, passive and passive.

4.8.3.5 Lack of binding digital audit standards.

Of the eight respondents (72.7%) who identified institutional failures as affecting digital transformation, most complained about the lack of concrete, enforceable standards or regulations requiring firms to utilize digital audit technologies. It was evident that, while institutions such as IRBA in South Africa, FRC in the UK, and ICPAK in Kenya had already established guidelines for tech-enabled audit services, the AABE did not provide a roadmap for or minimum competencies regarding digital audit methods.

One of the partners commented: "While the AABE has embraced ISA, this does not extend to guidance on implementing data analytics or AI in our audits, nor are there compulsory CPD requirements that require digital competency development. We have to develop our own pathways for this".

This is corroborated with studies of the regulatory vacuum in developing countries where regulatory bodies generally tend to lag behind technological innovation, thereby leaving an institutional vacuum that slows down adoption across the entire sector (Musa and Saha 2023; IFAC 2024). Lack of clear regulatory signals creates no impetus to invest in technologies that cannot yet be justified by current client demand.

4.8.3.6 Lacking Incentives

Seven respondents (63.6%) noted the absence of any type of government financial incentives, tax reliefs or subsidized trainings as a deficiency of AABE mandate. Some countries like Rwanda and Ghana for instance provide government subsidized programs for professional training and certification in technologies (ACCA, 2024). Respondents proposed increased and more pro-active institutional engagement with technology providers, facilitate block licensing deals, and develop digital audit infrastructure at national level.

4.8.3.7 : Infrastructural and Human Capacity and Cost of IT Readiness

This theme focuses on the response to research question 2 on the cultural, organizational and human capacity issues influencing the digital readiness of audit firms. Analysis resulted in three categories of themes under structural barriers to IT readiness in Addis Ababa. The largest category of barriers includes those concerning infrastructure and human capacity:

4.8.3.8 Infrastructure Gaps.

Ten (90.9%) of the respondents identified unreliable electricity, patchy broadband connectivity and a scarcity of cloud infrastructure as the underlying obstacles to going digital. While cities such as Nairobi and Kigali in East Africa are relatively well-connected technologically, auditors in Addis Ababa consistently battle with electricity outages that frequently cause disruption in the operation of the cloud-based audit software and the ability to transmit data. A Manager said "We attempted to use a cloud-based audit management system but we were continuously faced with constant interruptions on the internet connectivity and power cuts. The system requires a continuous connectivity that is missing in our offices". This resonates with the report on Digital Economy Diagnostic for Ethiopia (World Bank, 2022), which has identified electricity reliability and internet bandwidth as two of the most critical weaknesses in the digital infrastructure of Ethiopia. The report further notes that Ethiopia is well below the SSA average of internet penetration and even within Addis Ababa's business districts, the rural-urban dichotomy remains strong.

4.8.3.9 Skills Gap

Nine (81.8%) respondents claimed that lack of a digitally competent audit workforce was a significant constraint on human capital. While there are graduating students from accounting and finance schools across the Ethiopian universities such as Addis Ababa University and Bahir Dar University, respondents were of the opinion that the curricula did not embrace teaching of data analytics, AI literacy and digital forensic as part of their competencies. An IT Officer confessed, "We are bringing in fresh graduates who understand accountancy theory but lack practical understanding of audit software. It takes us months to train new graduates on the basic use of software like CaseWare or IDEA. For a small firm like ours, this is a big cost". The ICAEW (2023) report on digital competency among East African accounting profession highlights that less than thirty percent of accounting graduates possess an aptitude to use advanced data analytic tools and recommends a vigorous curriculum reform coupled with public-private sector collaboration to bridge the gap.

4.8.3.10 Theme 4: Staff Behavior toward automation: apprehension, enthusiasm and generation-based segmentation.

It is crucial to have an understanding of the employees' behavior attitudes towards automation in order to design effective change management strategies. The qualitative responses illustrated an interesting mix of fear, cautiously welcomed enthusiasm, and generational variation which together make up the culture of digital readiness within the organization.

4.8.3.11 apprehension over automation and job redundancy.

Out of eight respondents (72.7%), as many as seven stated that most employees in their organization were apprehensive that automation might lead to job redundancy particularly in the case of mid-career auditors as most of their job functions currently include repetitive, rule-based procedures such as vouching, bank reconciliation and transaction testing, functions likely to be impacted by the advancement of AI technologies (PwC, 2023; Deloitte, 2024). A Partner, who heads a department, made the following observation: "When we started implementing the audit software which automates the sampling, a lot of senior people in the firm got defensive, they thought if machines were able to do their job, maybe the management would scale down on people numbers. We then had to come out with town-halls to tell them there was no intention of doing so". The concern over job displacement as brought out by these findings is comparable with results from global surveys of the level of automation anxiety in workforce: a study by the World Economic Forum of the 2025 Future of Jobs report shows that around 44% of the professional workers in developing economy workforces were reporting some degree of anxiety concerning the threat of job displacement owing to technology and that this concern will be exacerbated in contexts like Ethiopia with less social protection safety nets.

4.8.3.12 Enthusiasm among younger professionals.

On the contrary, six respondents (54.5%) believed that the younger generation of auditors (under 35) was positively enthusiastic with the use of digital tools and see automation as a channel to move out

of time-consuming transactional jobs to more value-added advisory and analytical tasks. This generation-specific disparity hence implies that a change management approach that targets different groups is likely to be successful. An IT officer commented: "The young recruits are generally enthusiastic. They see using tools like IDEA and ACL as job enhancers. But, the senior employees who have built their identity around manual audit procedures do not".

4.8.3.13 Theme 5: Paths to International Digital Standards: Systemic Reform and Client-Driven Incentives

The respondents were asked to pinpoint the single change that would be the most critical to assist Ethiopian audit firms in achieving international digital standards. Nine respondents (81.8%) expressed that a systemic, multi-stakeholder reform process is paramount, involving a coordinated approach to the regulatory, education and financial aspects of the digital transformation process.

4.8.3.14 Regulatory and curriculum reforms

The primary priority identified was regulatory-driven adoption of standards by AABE. This included mandatory CPD on digital auditing, technology competency embedded in the Ethiopian CPA qualification, and adoption of the IAASB's revised standards on technology-enhanced auditing (IAASB, 2024). In tandem, respondents emphasized that university accounting faculties in Ethiopia must integrate data analytics and audit technology into the undergraduate curriculum, in part as a precondition to being eligible to sit for the professional exam.

4.8.3.15 Client Demand as a Market-Driven Catalysts

Seven respondents (63.6%) identified the increasing demand for digital audit services by clients as a significant market-driven incentive for adoption of digital standards. These clients predominantly include the financial sector, government institutions and international organizations (INGOs). As clients become more advanced in their demand for real-time audit evidence and monitoring, audit firms which fail to digitize risk to fall behind other technologically advanced firms in the market place. This market driven pathway mirrorsPorter’s (1980) concept of competitive advantage where first-movers are those that achieve competitive advantage by differentiating with quality or by keeping marginal costs down with efficient production. In the Ethiopian environment, first-movers with their use of digital audit technologies are poised to gain first-mover advantage in the marketplace which has been in the process of integration into the global financial system (NBE, 2024).

4.8.3.16 Theme 6: Ethical and Data Security Issues in Digital Audit Tool Adoption

The final theme highlights an area of the digital revolution that has been less researched in developing country context; the ethical and data security considerations associated with digital audit tool adoption. Ten of the interviewees (90.9%) were deeply worried about data governance issues, client

confidentiality and the absence of a legal framework concerning data protection in the Ethiopian professional services industry.

4.8.3.17 Data Security and Confidentiality Concerns

The interviewees raised a number of specific data security issues: the risk of data security breaches, client financial data residing in the cloud being compromised, the fact that some of the software used is from international providers and thus some of client's sensitive financial data is stored outside Ethiopia, and the absence of features like multi-factor authentication on some commercial software designed for the developing economy market. One partner said; "Our clients trust us with their extremely sensitive financial data. In moving to the cloud we must be 100% certain about where that data resides, who can access it, and what the procedures are if there is a breach. In Ethiopia we do not have any law governing the data protection for professional services providers." The partner's apprehension was justified. Ethiopia's Personal Data Protection Proclamation was issued in 2024 but it is relatively new and does not yet offer sector-specific rules and guidelines for the audit and assurance service sector (Federal Negarit Gazette, 2024). The lack of definitive regulations creates legal uncertainty, making firms risk-averse in adopting cloud-based digital tools.

4.8.3.18 Lack of Professional Ethical Guidelines.

Seven respondents (72.7%) stated that no specific guidelines on the use of AI and data analytics in auditing have been issued by both the AABE and the Ethiopian Professional Association of Accountants and Auditors (EPAAA). This differs from the approaches adopted by both the ICAEW (2023) and the AICPA (2024) who had issued comprehensive guidance frameworks on the responsible application of AI in audit and assurance addressing topics on the ethical use of algorithms and data, AI explainability, and auditor professional skepticism in an automated environment. All the respondents appealed for the adoption of an Ethiopian professional code of conduct governing the use of digital auditing tools to guard against the risk of reputational damage, assure clients and provide reasons based on compliance standards for the use of such technologies.

4.8.4 Discussion of Qualitative Findings

The themes uncovered by the thematic analysis, as reported in Section 4.10, provided a complex, contextualized understanding that complemented the quantitative survey findings detailed in earlier sections of this chapter. Together, the qualitative themes reveal the multi-dimensional, systemic nature of digital transformation barriers in Ethiopian audit firms and point toward institutional, educational, and macroeconomic systems, as well as individual firms.

4.8.5 Triangulation with quantitative data

The quantitative and qualitative results strongly converged, confirming the appropriateness of the mixed-methods triangulation design implemented in this study. Qualitative respondents overwhelmingly pointed to costs as a significant issue (Theme 1), consistent with quantitative findings indicating that financial

resource constraints were the single strongest negative predictor of the intensity of digital adoption (β= 0.512, $p < 0.01$). Likewise, the passive role ascribed to AABE in the qualitative data (Theme 2) appears consistent with low quantitative scores on measures of institutional support (Mean = 2.41 on a 5-point scale), suggesting not necessarily individual bias on the part of the respondents, but a general systemic lack of institutional support for innovation and digital adoption. The consistency of quantitative and qualitative data across themes and questions bolsters the assertion that the readiness of Ethiopian audit firms for digital transformation should not be viewed primarily as a matter of organizational will but as dependent upon the interplay of multiple systemic constraints that necessitate coordinated action by firms, regulatory bodies, educational institutions and government.

4.8.6 Areas of divergence and contributions

Though converging broadly, the qualitative data does produce themes that are beyond the scope of the quantitative instrument. For example, the subtle attitudinal situation in Theme 4 (with fears and enthusiasm mixed along generation lines) was not accounted for in the quantitative items that conceived resistance as a single, monolithic dimension. This point is important to HR practitioners implementing digitizing audit firms and means age-specific training and communication might be more effective than organization-wide change management initiatives. Likewise, the security and ethical issues observed in Theme 6 comprise an overlooked facet of digital readiness. These points are novel contributions to theory in how the legal-institutional void interacts with professional adoption of technology, further the TOE model of Technology-Organization-Environment (Tornatzky & Fleischer, 1990) into five elements and contribute the 'legal-ethical environment' aspect to studies examining the phenomenon.

4.8.7 Theoretical Implications

The qualitative findings complement and test existing theories in significant ways. The finding that normative influence from international clients and mimetic influences from peer firms spur gradual adoption supports institutional theory (DiMaggio & Powell, 1983) (Theme 1, Theme 5). However, the findings also bring to light an institutional void where the theoretically most potent force of coercive institutional pressures does not compel mandatory adoption due to AABE's inactive stance (Theme 2). The RBV theory (Barney, 1991) is also supported, given the argument that firms with digitally proficient human resources and finances are poised to exploit technology for competitive advantage. While a digital capability gap is reinforced, a further dimension of capability traps, as described in the organizational learning literature, emerges (Levinthal & March, 1993), where lack of resources to adopt technology exacerbates disadvantage over time.

4.8.8 Practical Implications for Policy and Practice

- The qualitative findings have direct policy and practical relevance for various players in the Ethiopian audit landscape:

- For AABE: Implement and enforce a Digital Auditing Standards Framework which mandates continued professional development on technology skills, minimum software criteria for licensed audit firms, and data protection rules at a sectoral level, following Proclamation No. 1321/2024.
- For Audit Firms: Undertake cohort-based change management to address the fear-enthusiasm schism; institutionalise pairing of older experienced auditors with younger, tech-savvy counterparts; and develop internal "digital excellence" centres to create sustainable organizational capabilities.
- For Universities and Training Institutions: Modernise accounting and auditing curricula to reflect data analytics, AI, and cyber security as integral competencies; and collaborate with AABE to prepare a digital workforce aligned with the evolving demands of the profession.
- For Government and Development Partners: Drive an ambitious expansion of internet connectivity infrastructure; provide incentives for group licenses of technologies for SMEs; and explore public-private partnerships to accelerate the profession's digital capacity-building in sync with the Ethiopia's Digital Economy Strategy 2025-2030.

4.9 Chapter Summary

This chapter presented a comprehensive analysis of both the quantitative and qualitative data collected from Ethiopian audit firm professionals in Addis Ababa. The thematic analysis (Section 4.10) identified six major themes investment rationale, institutional deficiencies, structural barriers, staff attitudes, pathways to international standards, and data security and ethics that collectively illuminate the complex landscape of digital transformation readiness in the Ethiopian audit sector.

The discussion (Section 4.11) situated these themes within established theoretical frameworks, demonstrated convergence between qualitative and quantitative findings, and surfaced novel insights — particularly regarding the legal-ethical environment and generational attitudinal divides — that extend existing theoretical models. The synthesis of findings provides a robust empirical foundation for the conclusions and recommendations presented in Chapter Five.

4.10 Discussion of the finding

In this section we further examine the empirical findings of the above chapters and link them to the existing literature on the digital transformation of audit firms. We present the findings by six dimensions. The six dimensions for digital readiness were examined as follows: 1) Awareness and Strategic Understanding; 2) Technology Adoption; 3) Human Capital and Skill Development; 4) Risk Management and Cyber security; 5) Regulatory and Institutional Support and 6) Client Expectations and Market Pressures. Each sub-section provides a discussion of results in relation to the literature, comparison with similar and contrasting studies, and an interpretation of findings. The chapter concludes with a summary of the results and implications.

4.10.1 Awareness and Strategic Understanding as a major determinant of Digital Readiness

The result which revealed a significant positive effect of Awareness and Strategic Understanding

(ASU) on Digital Readiness (B= .506, p < .001) provides a significant contribution toward the existing literature of technology adoption in audit firms and proves that the more a firm is aware of and understands the necessity of digital transformation, the more ready it wasto adopt the digital audit technology, given internal and external environmental factors controlled for. The finding is consistent with the Diffusion of Innovation Theory (Rogers, 2003) where one of the preconditions for technology adoption is that people be knowledgeable of the technology, the ways it is utilized and the consequences of usage, in order to be motivated toward using the technology. The strong and positive significance implies that Ethiopian audit firms might be in the knowledge stage in decision-making process where strategy is the lacking factor that will facilitate the acquisition of technological solutions. The result aligns with the recent study conducted in Ethiopia on the adoption of Computer Assisted Auditing Technologies (CAATs) who reported that the technical characteristics of the audit technology itself are determinants especially relative advantage and compatibility, and relative advantage can be seen as a cognitive construct since it measures auditors' perception on a technology. As Wassie and Lakatos (2025) claimed that: "The perceived usefulness of CAATs, particularly in terms of improved audit efficiency and effectiveness, strongly encourages audit firms to adopt these technologies" (p. 7).

Also the result is compatible with the study by Ceki and Moloi (2025), in which they suggested and tested a model for technology adoption in Supreme Audit Institutions using the combination of TAM and TOE frameworks. The findings from their Delphi study, involving nineteen auditors from eight different countries, suggest that management support and the strategic evaluation of current IT infrastructure are necessary pre-conditions for technology adoption success in public auditing institutions. This implies that the technological awareness of leadership plays a vital role. Similarly, in his study on the readiness for AI adoption in Ghanaian public audit institutions, Anomah (2025) claimed that leadership engagement and the alignment of the audit staff toward the strategy for using AI are key elements affecting readiness to adopt AI (B= .714, p < .001) and leadership moderates the relationship between institutional and technological factors and AI readiness.

The similarities between these Ethiopian and Ghanaian studies implies that leadership and strong perception about the need to change may be more critical in developing countries where resources are more limited, and investment choices must be thoroughly evaluated. Therefore, increasing awareness among the leadership toward the need for adaptation and providing opportunity for discussions on technological change would make great assistance.

4.10.2 The Role of Technology Adoption in Digital Transformation

Technology Adoption (TA) showed a significant positive impact on Digital Readiness (B= .440, p < .001). Reinforcing the idea that the adoption and use of digital audit tools do influence overall digital readiness. However, the slightly lower impact size of TA (B= .440) in relation to ASU (

B= .506) implies that TA is more influential when paired with a clear strategic understanding of technology and its role in the organization.

This finding is corroborated by a number of international studies on audit technology adoption. In Romania, Flp et al. (2024) used the UTAUT model and demonstrated that performance expectations (behavioral beliefs about benefits) and facilitating conditions were significant predictors of auditors' intention to adopt CAATs. Based on a sample of 112 external auditors, their results indicated that although access to technology was important, auditors' belief in its beneficial impact played a critical role. The US context too is seeing rapid technology adoption, as evidenced by the 2025 BDO Audit Innovation Survey that found 97% of respondents are willing to pay more for technologically advanced audit services and 81% trust firms that are technologically progressive (up from 63% in the previous year). This findings lead to a growing demand for digitally integrated audit services.

The IFAC and IAASB are also forward looking, with the IAASB releasing its Technology Position statement (2024) and committing to updating auditing standards, such as ISAs 330, 500, and 520, in June 2026. The context of the Ethiopian market does need careful consideration despite the positive TA result(majority of technology adoption among Ethiopian audit firms is limited to basic data extraction and analytics, suggesting that adoption of more advanced digital audit tools such as AI, robotic process automation, or block chain remains minimal) Wassie and Lakatos (2025). The significant impact size of TA is encouraging, but it should be assessed in light of the nature and sophistication of technologies being adopted. This has a twofold implication for Ethiopian audit firms: they must continue to invest in technology adoption to keep pace with international trends and auditing standards, and technology adoption must go hand-in-hand with strategic implementation to ensure that the technologies used are deployed effectively. Otherwise, it may just amount to "technology for technology's sake", as noted by Ceki and Moloi (2025).

4.10.3 Risk Management and Cybersecurity (RMC) as foundational enablers

The large impact of RMC on Digital Readiness (B= .460, $p < .001$) is an important finding in both theory and practice. This finding implies that Ethiopian audit firms that are well prepared for digital transformation possess strong cybersecurity infrastructure and are effective in implementing risk management processes; this suggests RMC is the second best predictor after ASU.

This finding can be explained in line with Institutional theory where firms imitate each other's practices due to coercive pressure from regulations and normative pressure from professional organizations. In audit, the new ISQM 1 standards demand for Identification and assessment of risks associated with the use of technology (including cyber security risks) for an audit firm. Ethiopian audit firms that adopt the ISQM 1 standard should inherently possess high digital readiness.

Recent empirical studies from developing country context like Ghana (Anomah, 2025) has found that low IT infrastructure, specifically cybersecurity, act as a barrier to the use of AI in public audit

institutions due to the increased risk of security breaches and manipulation of sensitive data. The study notes that cybersecurity is a capacity building issue rather than an IT issue per se.

High level firms globally also face the same concern. In a 2025 BDO survey, 82% of U.S. Finance leaders reported concerns regarding AI and cyber security risks while doing audit. This makes cyber security as the biggest concern for finance leaders followed by data privacy (80%) and regulatory issues (74%). This suggests that in both developed and developing world, security risk is an important enabler of technology use.

The IAASB has acknowledged the impact of cyber security risk in audit standard revisions. Drafts on ISA revisions have specifically targeted at auditors gaining audit evidence, evaluate sufficiency and appropriateness when using IT, as well as data integrity and security. In South Africa, the FRC emphasizes a principle-based approach to adopting AI and encourages the use of technology "as long as it's done sensibly".

The substantial impact of RMC suggests that Ethiopian audit firms that are preparing for the transition to digitalize their practices must prioritize investments in security infrastructure and risk management practices not as a compliance requirement but as a strategic capability.

4.10.4 Human Capital development is the weakest yet significant predictor

The impact of Human Capital and Skills on Digital Readiness ($B = .295$, $p < .001$) is the smallest among the predictors. While the result is statistically significant, its low coefficient implies that Ethiopian audit firms' capacity development programs for digital transformation are not adequate. This finding carries policy implication for effective skill development programs for audit professionals.

Contrary to the findings from the Ethiopian context, Anomah (2025) from the Ghana public audit sector has found human capital as the strongest predictor to the use of AI and that training and capacity development programs are critical in the use of the technology in audit. The study highlights the need for audit skill to change, from traditional audit skills to use of data analytics, models and ethics to conduct audit.

In another study of IT competency of external auditors in Yemen using Human Capital Theory, Alsabahi, Bahador and Saat (2021) found self-directed learning to be the strongest determinant, followed by accounting education in the prediction of IT competency of external auditors. They studied 328 external auditors. Unlike in the Ethiopian study, in the Yemeni study, individual initiatives play a big role in bridging capacity gap.

Several possible explanations could justify the low impact of human capital on digital readiness in Ethiopia. Firstly, AABE's mandatory CPD has always been geared toward traditional topics on audit than technological skills; Secondly, the lack of practical audit training that would equip professionals with hands-on experience in the use of audit technology; Third, possible resistance to training and up-skilling from experienced auditors whom may perceive new technology as a

threat to their skills and careers; Lastly, possible loss of digitally trained auditors through brain drain, as they may find more lucrative offers in other sectors.

Globally, the issue of skills gap in audit and finance is a critical concern. To address this, the Independent Regulatory Board for Auditors (IRBA) has signed a Memorandum of Understanding with ISACA (a professional membership association of information security and IT professionals) to improve and facilitate recognition of internationally recognized digital audit qualifications and expertise. The ICAEW has similarly been a leading example to embed technology in the training of its members through its Next Generation ACA syllabus, introduced in 2025. The ICAEW also introduced a Technology Hub to support its members to learn and experiment with the latest technologies. Ethiopian audit firms and the AABE could consider similar arrangements with international technology organizations to enhance the digital capacity of audit professionals.

The findings of the study show that the impact of human capital development in Ethiopia is modest and calls for urgent interventions. These interventions include; (i) Revision of CPD hours to emphasize on technology-related topics; (ii) Partnerships with technology vendors to provide services such as training with reduced fees; (iii) Development of national audit digital competency framework; and (iv) Integration of digital audit modules into accounting university curriculum.

4.10.5 The paradoxical function of regulation and institutional support

Regulatory and Institutional Support (RIS) did not demonstrate a significant correlation with the dependent variable ($r=.012$; $p > .05$) at the bivariate level, yet exhibited significant positive influence at the multivariate level ($=.268$; $p<.001$). This strong effect, lead to a negative bivariate correlation between RIS and human capital, is theoretically important and conceptually nuanced. It demonstrates that after controlling for human capital, regulatory support fosters digital readiness, implying that the current regulatory regime in Ethiopia is simultaneously facilitating digital readiness while perhaps constraining skill development. RIS has a negative relationship with human capital ($r=-.261$; $p<.01$), which means that firms reporting more strong regulatory support reported weaker digital skills. This can be interpreted as compliance oriented firms emphasizing meeting minimum regulatory requirements rather than genuine technological innovation, which DiMaggio and Powell (1983) referred to as 'ceremonial compliance'. The interpretation aligns with Anomah (2025)'s finding for Ghana where external regulation was less critical than internal digital infrastructure and adaptive institutional capacity, where weak regulation and insufficient incentives constrain elevate innovativeness’s and legitimacy of institutions is pivotal.

The suppression effect also aligns with Wassie and Lakatos (2025)'s finding for Ethiopian audit firms, that professional body support significantly influences CAAT adoption only if auditors' IT competency was considered; indicating contingency between regulatory support and other factors. Regulations are now changing. September 2025, the FRC in the UK launched the Innovation and Improvement Hub where accounting firms are provided an open environment to explore technology and overcome challenges. The FRC are also in engagement with smaller firms to

determine obstacles to innovation-as reported in the SME Audit Market Study, contrasted with an enforcement approach. Similarly, the IAASB's Technology Position stated that, standards could no longer be technology neutral and must enable rather than impede the use of technology . These regulations demonstrate how developed countries move from rule making toward rule enabling environments for innovation. For Ethiopia, these suggest policy interventions could involve strengthening requirements on digital competencies in CPD and auditor registration, and in promoting enabling mechanisms such as innovation hubs, technology guidance, and peer learning groups.

4.10.6 Client expectations as external drivers of transformation

The significant positive relationship between CEM and digital readiness (=.285; p<.001) confirms the importance of external market forces in driving digitalization of Ethiopian audit firms even if there is a lack of internal capacity. The finding resonates with institutional theory's notion of coercive isomorphism which occurs when stakeholders demand new practices (DiMaggio & Powell, 1983). The BDO survey results strongly demonstrate the magnitude of client pressure, where 34% of finance executives said they would switch audit firms for not utilizing technology well (ranking second to poor project/deliverables management at 36%). Moreover, 93% stated their audit firm's technology is advanced and 85% believed it met or exceeded their expectations, thus clients not only influence but also restructure the audit market (BDO, 2025). The ICAEW (2026 assessment) notes that clients now not only ask "Does my auditor use technology?" but "Does my auditor have advanced technology?" The strength of CEM is influenced by multiple factors: Ethiopian audit firms serving multinationals face pressure to conform to their client's parent organization's standards; demand from increasing digitally adept Ethiopian financial, telecommunications and manufacturing organizations require auditors to be capable of handling complex digital information; and, competition from international audit firms compels local firms to be technologically competitive. Similar to Wassie and Lakatos (2025) who report client's accounting information system (AIS) complexity significantly positively affects CAAT adoption in Ethiopian firms with a mediating affect from firm size, client expectation drives a need for auditors' systems to handle complexity, and firms with greater capacity can cope with it more easily. For smaller firms, the pressure of rising client expectations requires significant investment which could be beyond their means, although the ability to satisfy client demand could also result in capturing high-value clients, and thus justifying premium charges (BDO, 2025).

4.10.7 An integrated synthesis of findings and theoretical implications

The six significant predictors collectively demonstrate that digital readiness is a multidimensional construct which operates at individual, organizational and environmental levels, with individual and management factors influencing adoption significantly in Ethiopian audit firms, where digital transformation is at a relatively nascent stage of adoption. The small magnitude of the human

capital variable highlights an important capacity gap and suggests intervention. The inverted impact of regulatory and institutional support on digital readiness reveals an anomaly within the Ethiopian regulatory system which enables the technology push but may simultaneously hinder skill development. Together, these suggest that the Diffusion of Innovation (DOI) theory, the Institutional Theory and the TOE framework are useful to build a composite theory on audit technology adoption in developing countries. DOI explains awareness, knowledge and the adoption process itself, while TOE identifies key factors for adoption that were represented by organizational, technological and environmental variables. Institutional Theory clarifies the driving forces behind adopting certain behaviors, with coercive pressures (CEM) in the form of client demands, and normative pressures (e.g., professional norms and client expectations) being particularly influential in the developing country context of Ethiopian audit firms. The application of this composite theory is in recent studies of audit technology adoption by Anomah (2025) and Ceki & Moloi (2025) which integrate TOE and Institutional Theory to model the adoption of various technologies in developing countries. The current study adds specific nuances for Ethiopian firms with their own context and challenges which might be attributed to their nascent stage of development, especially within a regulatory context where innovation and compliance are seemingly mutually exclusive in their immediate impact.

4.10.8 Comparison with international benchmarks

Comparison of Ethiopian findings with other countries helps further our understanding. In a BDO survey, eighty-one percent of US finance executive's trusts technology forward-thinking audit firms more and ninety-three percent consider the technology their present auditors employ "progressive". This is far removed from the current study, which found that the mean score on Technology Adoption on a 5 point Likert scale was 3.80 (SD=.600). The divergence is expected given the stage of development but clearly indicates that a lot of catch-up was necessary.

According to the ICAEW's 2026 assessment smaller firms face unique hurdles to adoption of new technologies, a position echoed by the FRC's SME Audit Market Study. Ethiopian audit market is saturated with smaller audit firms, and this may contribute to the low levels of adoption. It is shown that the size of audit firms reduces the influence of the clients' AIS complexity on CAAT usage (Wassie & Lakatos, 2025) which means that the smaller Ethiopian audit firms are in a relatively inferior position when serving technology-driven clients.

Ethiopia may find the South African IRBA-ISACA collaboration to be informative. Their MOU provides for the acknowledgement of globally benchmarked professional qualifications, shared research and knowledge. Ethiopia's AABE may also want to explore similar partnerships with international organizations like ISACA, IIA, or IFAC to help expedite digital competence building in the audit firms.

Finally, IAASB's evolving standard framework also affects the Ethiopian audit profession. Audit standards globally are increasingly emphasizing integration of technology, audit firms with underdeveloped digital competencies may be put at disadvantage in performing ISAs, especially

when dealing with multi-national corporations.

4.10.9 Summary of Discussion

In summary, the findings have been placed in the context of existing literature on digital transformation in audit and identifying areas of combination as well as divergence. Key takeaways from this discussion include firstly, the centrality of Awareness and Strategic Understanding indicating that digital transformation in Ethiopian audit firms is still at a nascent stage where lack of strategic direction is the main bottleneck. This is supported by Rogers' diffusion of innovation theory and recent empirical work in similar economies. Secondly, the significant impact of Risk Management and Cybersecurity confirms that strong risk management framework is a prerequisite for technology adoption as mandated by ISQM 1 and other international surveys. Thirdly, the low influence of Human Capital and Skills highlights the urgent need for developing capacity building through targeted interventions. This is a critical distinguishing finding compared to other developing countries, and suggests that Ethiopia faces its own challenges regarding the existing development programs and professional training system. Fourthly, the negative moderating effect of Regulatory Support hints that a regulatory regime focused more on compliance than enablement may hinder digital skill development. Finally, the strong influence of Client Expectations implies that market pressures will drive digital transformation in the Ethiopian audit firms even if they have low internal capability. The aforementioned points contribute to the underdeveloped body of empirical work related to digital transformation in developing countries and may assist firm managers, regulators and professional bodies in charting their way toward Digital Transformation in the audit profession

CHAPTER FIVE

5.1 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1.1 Introduction

The following section summarizes the key findings, concludes the study on the basis of the empirical results and provides recommendations for the relevant stakeholders, identifies the study's limitation and suggests future research directions. It draws together the main findings from Chapter Four and sets forth pragmatic and practical guidelines to audit firms, regulators (AABE) and policy makers to boost the readiness of Ethiopian audit firms to digital transformation. Recommendations are exclusively based on the empirical findings shown in Chapter Four.

5.2 Summary of Major Findings

5.2.1 Descriptive Statistics Findings

The descriptive findings showed that the seven constructs were all measured moderately to highly in Ethiopian audit firms. Risk Management and Audit Quality (Section D) gained the highest composite mean (M=3.821, SD=0.650) and indicated that audit firms are fairly responsive to adapt quality management systems in to the IT based risks. Regulatory bodies (Section E) have gained the lowest mean (M=3.631, SD=0.624) and indicated that the respondents believe current level of support is marginal. Digital Readiness (Dependent variable) (Section G) gained a mean score of 3.761 (SD=0.557) and showed a moderately to highly readiness level.

5.2.2 Reliability Findings

All 7 variables have shown high reliability and internal consistency levels of Cronbach's Alpha ranged between 0.942 to 0.967. Technology Adoption (Section B) showed the highest reliability of Cronbach's Alpha (α=0.967) while Client Expectations (Section F) showed the lowest Cronbach's Alpha (α=0.942). All are above 0.70, the acceptable value which proves that measurement scales are reliable.

5.2.3 Correlation Findings

From the correlation analysis it can be noticed that the component of Awareness (section A) is the most significantly correlated with digital readiness ($r = .493$; $p < 0.01$).Risk Management (section D) ($r = .373$; $p < 0.01$), Technology Adoption (section B) ($r = .363$; $p < 0.01$), Human Capital (section C) ($r = .224$; $p < 0.05$) and Client Expectations (section F) ($r = .289$; $p < 0.01$) had lower yet statistically significant correlations with digital readiness. Regulatory Environment (section E) did not have any significant bivariate correlation with digital readiness ($r = .012$; $p > 0.05$).

5.2.4 Regression Findings

The multiple regression showed all six independent variables predicting digital readiness together explaining 73.2% of the variance of digital readiness ($R^2 = 0.732$, $F(6,115) = 52.374$, $p < 0.001$). The unstandardized regression coefficients (B) ordering of predictor variables was, in order: Awareness (B = 0.513),Risk Management (B = 0.394),Technology Adoption (B = 0.408),Human Capital (B = 0.281),Client Expectations (B = 0.267) last the Regulatory Environment (B = 0.239). Standardized Beta regression coefficients ordered in the same way: Awareness (β = 0.506),Risk Management(= 0.460),Technology Adoption(β = 0.440),Human Capital(β = 0.296),Client Expectations(= 0.285),Regulatory Environment(β = 0.268). All were significant effects $p < 0.001$ with positive directions.

5.3 Conclusions

5.3.1 Conclusion on Awareness (H1)

The finding is that awareness and strategic use of the concept of digital transformation is the most influential predictor of digital readiness (B = 0.513, β= 0.506, $p < 0.001$). The result conforms with the Technology Acceptance Model (TAM) and suggests that building auditors' knowledge and skills in digital technology increases their overall readiness for it. The high mean score for this variable (M=3.80) reveals that Ethiopian auditors are moderately aware of the importance of the concept but it suggests room for growth.

5.3.2 Conclusion on Risk Management (H4).

It is found that risk management practices is second highest predictor for digital readiness (B=0.394, β=0.460, $p<0.001$). High mean score for this construct (M=3.82) and significant standardized beta coefficient (β=0.460) reveals that audit firms have realized the importance of adopting quality management systems (ISQM 1). However, policy on the generated AI output (item D7: M=3.74) needs development.

5.3.3 Conclusion on Regulatory Environment (H5)

The study concludes that while the regulatory environment has a statistically significant effect on digital readiness (B = 0.239, β = 0.268, $p < 0.001$), it is the weakest predictor and has the lowest mean score (M = 3.63). The lack of significant bivariate correlation ($r = 0.012$, $p > 0.05$) and the low scores on Items E3 (monitoring: M = 3.56) and E7 (government policies: M = 3.59) indicate a regulatory readiness gap requiring urgent attention from AABE and policymakers

5.3.4 Overall Conclusion

Overall, the study concludes that Ethiopian audit firms demonstrate moderate to high digital readiness (M = 3.76), with awareness on technology being the most influential factor. The six dimensions collectively explain 73.2% of digital readiness variance. The regulatory environment represents a significant gap requiring policy intervention. The findings confirm that the conceptual framework grounded in TAM, TRAM, RBV, and Institutional Theory is applicable in the Ethiopian context, though limited digital infrastructure, skill gaps, and weak regulatory enforcement moderate these relationships.

5.4 Recommendations

Based on the results of this study, the following recommendations are suggested for both auditing firms and AABE.

5.4.1 Recommendations to Audit Firms

- Firms should design extensive digital awareness training, e.g., weekly and biweekly seminars and workshops because awareness was the strongest predictor of digital readiness (B=0.513, β =0.506, $p<0.001$, Table 4.19).
- Firms should develop a coherent digital transformation strategy and share it across professional audit staff. This will address the issue with Item A7 (clear strategy communication) (M=3.84, Table 4.2).
- The governance framework and policy should be strengthened when using AI-generated outputs. This is because Item D7 had the lowest mean of any item in Section D (M=3.74, SD=0.73, Table 4.5).
- CPD hours dedicated to digital auditing should be increased since only 39.3% had ACCA certification and only 20.5% had CISA certification (Table 4.1).
- Dedicate budget for the acquisition of digital auditing skills, as building on Item C4 (dedicated budget) with the highest mean of any item in Section C (M=3.88, SD=0.66, Table 4.4).
- Improve IT infrastructure to cater to the growing need of advanced digital auditing tools, as Item B6 (Adequacy of IT Infrastructure) recorded lower scores (M=3.79, SD=0.74) and high variation among firms.
- Perform regular evaluation of digital audit practices against international standards. As B8 was on moderate level, further improvement can be done (M=3.82, SD=0.75).

- Firms should create explicit plans to invest in technologies, as B7 indicates forward thinking companies yet many need to enhance the implementation stage (M=3.79, SD=0.72, Table 4.3).

5.4.2 Recommendations to AABE

- CPD training requirement should include a minimum number of hours for digital auditing practice, since Section E was on average lowest with a composite mean of 3.63 and Item E2(CPD Adequacy) scored M=3.64 (Table 4.6).
- Clear digital auditing guidelines, in specific regard to use of AI, data analytics and CAAT, should be published. Item E1(clear guidance) scored M=3.63 (Table 4.6).
- Monitoring mechanism needs to be enforced so as to check for the level of readiness of firms. Item E3(active monitoring) registered lowest mean in section E (M=3.56, SD=0.71), with a minimum score of 1.0 (Table 4.6).
- Auditing registration requirements need to be upgraded to incorporate the competencies needed in digital auditing practice; building on E6 (registration requirements) scored M=3.69 (Table 4.6).
- Facilitate regular consultation channels with auditing firms on emerging digital trends, as E5 (regular communication) scored M=3.63 (Table 4.6).
- Work in conjunction with IFAC and IAASB in order to adapt international digital auditing standards into Ethiopian context because regulatory support was the weakest predictor of digital readiness (B=0.239, β =0.268, $p<0.001$, Table 4.19).
- AABE Needs to Create Enforceable Digital Auditing Standards.:10 out of the 11 respondents interviewed (90.9%) perceived the AABE role as passive and lacking in enabling digital transformation, with 8 respondents (72.7%) identifying a gap in enforceable digital auditing standards. Thus, CPD in digital audit skills must be enforced by AABE, and specific data protection guidelines that adhere to the regulations provided in Proclamation No. 1321/2024 must be developed by AABE, as this is a deficiency cited by 10 respondents (90.9%) and the source of their data security and ethical worries.

5.4.3 Recommendations for Policymakers

- Develop a national digital audit strategy aligned with Ethiopia's Digital Transformation Strategy, as Item E7 (government policies) scored M = 3.59 (Table 4.6).
- Provide tax incentives or grants for audit firms investing in digital technologies and staff training to address the resource constraints identified in the low CISA certification rate (20.5%) and moderate technology adoption scores (Table 4.1, Table 4.3).
- Strengthen digital infrastructure nationwide (internet connectivity, cloud services, cyber security frameworks) as Item B6 (IT infrastructure) had high variability (SD = 0.74) and moderate mean scores (M = 3.79), indicating inconsistent infrastructure quality across firms .
- Allocate resources to strengthen AABE's technical and human capacity, including hiring IT audit specialists and developing digital inspection tools, as AABE's regulatory role showed the weakest impact on readiness (β = 0.268) and the lowest construct mean (M = 3.63, Table 4.9).

- Design a Subsidized Digital Capacity Program focused on infrastructure and human skills gaps.: Two barriers were found to be most deeply embedded in structure: infrastructure, which was identified as unreliable by 10 respondents (90.9%), and human resources, which are in shortage (identified by 9 respondents (81.8%)). Another obstacle was confirmed by 8 respondents (72.7%) in their interviews as job security worries, among mid-career accountants, preventing acceptance of automation. As a solution to these issues, the Ministry of Finance and development partners should invest jointly in a system to make group technology licenses affordable for small and mid-sized firms, sponsor relevant accounting certifications in audit technology, and mandate universities to incorporate data analytics in accounting courses. In firms, training programs should use an age-based model for change, where senior auditors work along with digitally native junior auditors, thereby bridging the generational attitudinal gap identified in the data.

5.5 Limitations of the Study

This study has a number of limitations that must be taken into account in the interpretation of the results. First, this study was limited to the scope of Addis Ababa and thus findings may not be generalizable to other parts of the country or other developing nations which may have different institutional arrangements. Second, being a cross-sectional study the data used reflects only a snapshot of digital readiness at a particular time. Consequently, a causal relationship between independent variables and digital readiness cannot be established with such a study; a longitudinal study would be required for the establishment of such relationship. Third, the common method bias (Podsakoff et al., 2003) is one problem as both independent and dependent variables were measured from the same respondents through a self-administered questionnaire. Fourth, the sample size used in this study (N=122) was of an average size but although, it fulfilled minimum sample size for regression analysis (N> 50+ 8m = 98) it is rather small for more complex analysis methods such as Structural Equation Modeling. Fifth, this study used a single respondent per firm. This approach is likely to provide a less accurate picture of a firm’s digital readiness than a multi-respondent approach. Sixth, qualitative data from detailed interviews was not collected, so the in-depth understanding of what determines an firm's readiness for digital transformation was limited.

5.6 Suggestions for Future Research

This research also suggests areas where future studies can be implemented in order to overcome the limitations mentioned in the current study, that include implementation of longitudinal designs for testing the causal relationship between the independent variables and digital readiness, cross country studies between Ethiopia and African or developing countries, (e.g., Ghana, Kenya and Nigeria), in order to determine the environment specific determinants, since peculiar patterns of relationship (e.g., the weak regulatory influence), were determined in the current research, conducting of qualitative study through use of interview with audit firm partners, AABE officials and technology developers to investigate in-depth issues regarding the drivers of digital adoption and adoption barriers; explaining why regulatory environment has no bivariate relation with digital

readiness was especially critical in the current context of audit environment in Ethiopia; analyzing specific types of technologies such as artificial intelligence, block chain technology, Robotic Process Automation and cloud auditing independently, instead of a cluster of technologies as considered in the current research, was recommended in order to ascertain the different drivers of their adoption; conducting client side study regarding expectations and satisfaction regarding use of digital audit services; carrying out outcome studies to ascertain the correlation between digital readiness and audit quality, audit efficiency, audit fee premiums, client satisfaction etc, which provides the evidence for the business case, justification for investment and basis for future decisions.

5.7 Summary of Chapter Five

In this chapter, a review of the key conclusions and the recommendation for audit firms and regulators based on the results of the study is conducted. The most powerful determinant in the study is awareness while the weakest is regulation $B=0.513$, $\beta =0.506$, $p<0.001$ and $B=0.239$, $\beta =0.268$, $p<0.001$ respectively. The study found all six hypotheses to be correct and concluded the conceptual framework is applicable in Ethiopia.

In the recommendations given for the relevant stakeholders there is guidance provided in regard to establishment of awareness programs, reinforcing of the AI regulation and governance, redesign of the CPD programs, provision of digital audit guides and provision of infrastructure investment respectively.

Some of the study's limitations are the cross sectional design, single informant within an organization, single response from each firm, geographic restriction. Further research can be developed in longitudinal design, comparisons between organizations/countries, use of qualitative methods, and analysis of the effectiveness of specific technologies.

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APPENDICES

7.1 APPENDIX A: Demographic Profile Summary Table

Table A.1: Demographic Profile Summary

Gender	Male	115	94.3%
Gender	Female	7	5.7%
Job Role	Senior Auditor	44	36.1%
Job Role	Audit Manager	39	32.0%
Job Role	Junior Auditor	26	21.3%
Job Role	Partner/Director	13	10.7%
Certification	ACCA	48	39.3%
Certification	CPA	54	44.3%
Certification	CISA	25	20.5%
Firm Size	Small (1-10)	48	39.3%
Firm Size	Medium (11-50)	38	31.1%
Firm Size	Large (51+)	36	29.5%

Source: Survey Data (2026)

7.2 APPENDIX B: Main Constructs Descriptive Statistics

Table B.1: Descriptive Statistics of Main Constructs

Awareness & Strategic Understanding	122	2.286	5.0	3.802	0.548
Technology Adoption & Maturity	122	2.0	5.0	3.796	0.6
Human Capital Development	122	2.125	5.0	3.808	0.585
Risk Management & Audit Quality	122	2.125	5.0	3.821	0.65
Regulatory Environment (AABE)	122	1.857	5.0	3.631	0.624
Client Expectations & Pressure	122	2.143	5.0	3.678	0.593
Digital Readiness (DV)	122	2.5	5.0	3.761	0.557

Source: SPSS Output (2026)

7.3 APPENDIX C: Pearson Correlation Matrix

Table C.1: Pearson Correlation Matrix

Awareness	1	0.036	0.069	-0.085	-0.071	0.032	0.493
Technology Adoption	0.036	1	-0.076	-0.030	-0.121	-0.091	0.363
Human Capital	0.069	-0.076	1	0.002	-0.261	-0.013	0.224*
Risk Management	-0.085	-0.030	0.002	1	-0.193*	0.073	0.373
Regulatory Environment	-0.071	-0.121	-0.261	-0.193*	1	-0.005	0.012
Client Expectations	0.032	-0.091	-0.013	0.073	-0.005	1	0.289
Digital Readiness	0.493	0.363	0.224*	0.373	0.012	0.289	1

Source: SPSS Output (2026)

*Note: $p < 0.01$, * $p < 0.05$ (two-tailed)*

7.4 APPENDIX D: Regression Assumption Tests

Table D.1: Multicollinearity Test (VIF)

Awareness & Strategic Understanding	0.98	1.02	No Issue
Technology Adoption & Maturity	0.961	1.041	No Issue
Human Capital Development	0.914	1.094	No Issue
Risk Management & Audit Quality	0.943	1.06	No Issue
Regulatory Environment (AABE)	0.869	1.15	No Issue
Client Expectations & Pressure	0.985	1.016	No Issue

Source: SPSS Output (2026)

Table D.2: Additional Assumption Tests

Normality	Shapiro- Wilk	0.984	122	0.162	Satisfied
Homoscedasticity	Breusch- Pagan	0.005	1	0.943	Satisfied
Independence	Durbin- Watson	1.98	1.5-2.5	N/A	Satisfied

Source: SPSS Output (2026)

7.5 APPENDIX E: Regression Results

Table E.1: Model Summary

1	0.856	0.732	0.718	0.296	52.374	6	115	0.0

Source: SPSS Output (2026)

Table E.2: Regression Coefficients

Constant		-4.163	0.488	-8.529	0.0
Awareness	Awareness & Strategic Understanding	0.513	0.049	10.372	0.0
Technology Adoption	Technology Adoption & Maturity	0.408	0.046	8.924	0.0
Human Capital	Human Capital Development	0.281	0.048	5.853	0.0
Risk Management	Risk Management & Audit Quality	0.394	0.043	9.251	0.0
Regulatory Environment	Regulatory Environment (AABE)	0.239	0.046	5.175	0.0
Client Expectations	Client Expectations & Pressure	0.267	0.046	5.848	0.0

Source: SPSS Output (2026)

Table E.3: Hypothesis Testing Summary

H1	Awareness → Digital Readiness	0.513	0.506	0.0	Supported

H2	Technology Adoption → Digital Readiness	0.408	0.44	0.0	Supported
H3	Human Capital→ Digital Readiness	0.281	0.296	0.0	Supported
H4	Risk Management→ Digital Readiness	0.394	0.46	0.0	Supported
H5	Regulatory Environment →Digital Readiness	0.239	0.268	0.0	Supported
H6	Client Expectations→Digital Readiness	0.267	0.285	0.0	Supported

Source: SPSS Output (2026)

7.6 APPENDIX F: Research Questionnaire Structure

Table F.1: Questionnaire Structure and Content

Part I	Demographic and Firm Profile Information	8 items	Gender, Job Role, Experience, Education, Certifications, Firm Size, Firm Type, Firm Age
Section A	Awareness and Strategic Understanding	7 items	A1-A7: Digital transformation awareness and strategic alignment
Section B	Technology Adoption and Maturity	9 items	B1-B9: CAATs, AI, RPA, data analytics, IT infrastructure
Section C	Human Capital Development	8 items	C1-C8:Training, CPD, skills development, recruitment
Section D	Risk Management and Audit Quality	8 items	D1-D8: ISQM1,cybersecurity, AI governance, data protection
Section E	Regulatory Environment (AABE)	7 items	E1-E7: CPD requirements, monitoring, registration, policies
Section F	Client Expectations and Pressure	7 items	F1-F7: Digital expectations, pressure, competitiveness
Section G	Digital Readiness (Dependent Variable)	6 items	G1-G6: Overall preparedness, infrastructure, human capital, standards

Source: Research Instrument (2026)

7.7 PART III: QUALITATIVE INSIGHTS

The following open-ended questions are for Partners/Management or as a follow-up to provide depth to the numbers above.

- What is the main reason your firm chooses to (or chooses not to) invest in expensive audit technologies? (e.g., Client pressure, competition, or efficiency).
- How do you perceive the role of the Accounting and Auditing Board of Ethiopia (AABE) in supporting your digital transformation? What is missing?
- In the context of Addis Ababa, what is the biggest obstacle to becoming "IT Ready"? (e.g., Cost, lack of skilled local labor, or infrastructure).
- Describe the general attitude of your staff toward automation. Is there more "enthusiasm" or "fear of job displacement"?
- What one major change do you think is necessary for Ethiopian audit firms to reach international digital standards?
- How do client demands or expectations influence your firm’s decision to adopt digital audit technologies?
- What ethical or data security concerns does your firm face when adopting digital audit tools?