Evaluating the Readiness of the Accounting Profession in Zambia for Artificial Intelligence Integration: A Systematic Literature Review

Ruth Tembo[1]

[1]Student, Master of Business Administration in Finance and Accounting (MBA-FA),
Institute of Distance Education (IDE), University of Zambia, Lusaka, Zambia

Abstract: The rapid advancement of artificial intelligence (AI) is transforming the accounting profession globally, reshaping traditional practices in financial reporting, auditing, taxation, and management accounting [1–3]. While developed economies have made significant progress in integrating AI-driven technologies, accounting professions in developing countries face unique preparedness challenges linked to regulation, governance, skills, and institutional capacity [4–6]. This study presents a systematic literature review examining the preparedness of the accounting profession in Zambia for the integration of AI, with specific emphasis on regulatory frameworks, professional governance, and implications for financial performance. Guided by Institutional Theory [7], the Technology Acceptance Model (TAM) [8], and Contingency Theory [9], the review synthesizes global, African, and Zambian scholarly literature published between 2015 and 2024.

The findings reveal that although AI adoption in accounting promises efficiency gains, enhanced audit quality, and improved financial decision-making [1,2], Zambia's accounting profession remains constrained by regulatory inertia, skills gaps, limited technological infrastructure, and weak professional enforcement mechanisms. The study contributes to the emerging literature on AI and accounting in developing economies by consolidating fragmented evidence into a coherent analytical framework and offering policy-relevant insights for regulators, professional bodies, and accounting firms. The review concludes that strengthening governance structures, revising professional standards, and investing in AI-focused capacity building are critical to improving financial performance and sustaining professional relevance in Zambia.

Keywords: *Artificial Intelligence; Accounting Profession; Regulation; Governance; Financial Performance; Zambia.*

I. INTRODUCTION

The accounting profession is undergoing a profound transformation driven by advances in artificial intelligence (AI), machine learning, robotic process automation, and data analytics. Globally, AI technologies are increasingly applied in audit planning, fraud detection, financial forecasting, tax compliance, and real-time reporting, fundamentally altering the role of professional accountants [1,3]. These developments have prompted professional bodies and regulators to reconsider competency frameworks, ethical standards, and governance mechanisms to ensure that accountants remain relevant and effective in technology-driven environments [2].

In developing economies such as Zambia, the integration of AI into accounting practice presents both opportunities and challenges. On the one hand, AI offers the potential to enhance efficiency, improve financial transparency, and strengthen corporate governance. On the other hand, limited digital infrastructure, regulatory lag, and skills deficits raise concerns regarding the profession's readiness to adopt and govern such technologies effectively [4–6]. Despite growing global literature on AI in accounting, empirical and review-based studies focusing on Zambia remain scarce and fragmented.

This study addresses this gap by conducting a systematic literature review on the preparedness of the accounting profession in Zambia for AI integration, with particular focus on regulation, governance, and financial performance implications. The objectives of the review are threefold: first, to examine how regulatory and professional frameworks influence AI adoption in accounting; second, to assess governance and ethical challenges associated with AI integration; and third, to synthesize evidence on the implications of AI readiness for financial performance and professional sustainability.

II. METHODOLOGY: SYSTEMATIC LITERATURE REVIEW APPROACH

This study adopted a systematic literature review (SLR) methodology to ensure methodological rigor, transparency, and replicability, following established SLR protocols [10].

➤ *Data Sources and Search Strategy*

Peer-reviewed journal articles, professional reports, policy documents, and scholarly books were sourced from databases including Google Scholar, Scopus, Web of Science, ScienceDirect, and African Journals Online (AJOL). Search terms included *artificial intelligence in accounting*, *AI adoption*, *accounting regulation*, *professional governance*, *financial performance*, *developing countries*, *Africa*, and *Zambia*.

➤ *Inclusion and Exclusion Criteria*

Studies were included if they:
- examined AI or advanced digital technologies in accounting or auditing;
- discussed regulatory, governance, or performance implications;
- focused on global, African, or developing economy contexts; and
- were published between 2015 and 2024.

Studies focusing solely on technical computer science applications without accounting relevance were excluded.

➤ *Data Analysis and Synthesis*

Selected studies were analysed thematically, allowing patterns and dominant themes to emerge across regulatory preparedness, professional governance, skills development, and financial performance outcomes. Evidence was synthesised across global, regional, and local dimensions to facilitate comparative interpretation.

III. THEORETICAL FOUNDATIONS OF AI PREPAREDNESS IN ACCOUNTING

➤ *Institutional Theory*

Institutional Theory explains how organisational practices are shaped by regulatory, normative, and cognitive pressures [7]. In the context of AI adoption, accounting firms and professionals respond to regulations, professional standards, and societal expectations. Weak institutional enforcement in developing economies may slow AI integration despite technological availability.

➤ *Technology Acceptance Model (TAM)*

The Technology Acceptance Model posits that perceived usefulness and ease of use influence technology adoption [8]. For accountants, acceptance of AI depends on perceived impacts on job security, professional judgment, and performance quality. Skills deficits and limited exposure reduce perceived usefulness in the Zambian context.

➤ *Contingency Theory*

Contingency Theory suggests that accounting systems and technologies must align with environmental conditions [9]. In Zambia, macroeconomic instability, regulatory uncertainty, and infrastructural constraints shape the pace and form of AI integration in accounting practice.

IV. EMPIRICAL EVIDENCE ON AI AND ACCOUNTING

➤ *Global Perspectives*

Globally, studies show that AI enhances audit efficiency, fraud detection, and financial forecasting while redefining accountants' roles toward strategic advisory functions [1,3]. However, concerns persist regarding algorithmic bias, data security, and ethical accountability [2].

➤ *African Context*

AI adoption in accounting across Africa remains uneven. Research highlights infrastructural limitations, regulatory gaps, and limited professional training as major constraints [2,5]. Professional bodies often lag in issuing AI-specific guidance.

➤ *Evidence from Zambia*

Zambian studies indicate low digital maturity within accounting firms, limited AI exposure in professional training, and absence of explicit regulatory guidance from professional bodies such as ZICA. These factors constrain the profession's ability to leverage AI for improved financial reporting and governance.

V. REGULATION, GOVERNANCE, AND FINANCIAL PERFORMANCE IMPLICATIONS

The review establishes that regulatory preparedness and professional governance significantly influence the financial performance benefits of AI adoption. Where standards, ethics, and oversight are weak, AI may increase operational risks rather than enhance value. Conversely, effective governance frameworks enable AI to improve efficiency, reduce costs, and strengthen financial decision-making.

VI. RESEARCH GAPS IDENTIFIED

The literature reveals a lack of integrative studies focusing on AI preparedness within Zambia's accounting profession. Existing research rarely links regulation, governance, and financial performance in a single analytical framework, limiting policy relevance.

VII. CONCLUSION AND IMPLICATIONS

This systematic literature review demonstrates that while AI presents transformative opportunities for the accounting profession, Zambia's preparedness remains limited by regulatory inertia, governance weaknesses, and skills gaps. Strengthening professional regulation, updating competency frameworks, and investing in AI-focused capacity building are essential for improving financial performance and sustaining professional relevance. The study provides a foundation for future empirical research and policy reform aimed at aligning Zambia's accounting profession with global technological developments.

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