

Effect of Artificial Intelligence on Accounting Practice in Nigeria

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Abstract

Artificial Intelligence (AI) has become one of the most transformative technological innovations influencing accounting practice worldwide. The integration of AI technologies into accounting functions has significantly enhanced the efficiency, accuracy, transparency, and reliability of financial reporting, auditing, taxation, management accounting, and forensic accounting. In Nigeria, the increasing adoption of AI by accounting firms, financial institutions, multinational corporations, and government agencies has reshaped traditional accounting processes by automating repetitive tasks, improving analytical capabilities, and strengthening fraud detection mechanisms. Despite these advancements, several challenges continue to hinder the effective implementation of AI in accounting practice, including inadequate digital infrastructure, shortage of AI-skilled accounting professionals, cybersecurity threats, high implementation costs, ethical concerns, poor regulatory frameworks, and resistance to technological change. This article examines the effect of Artificial Intelligence on accounting practice in Nigeria by reviewing current conceptual, theoretical, and empirical literature. The study adopts a quantitative survey research design using primary data to demonstrate the relationship between AI adoption and accounting performance indicators. The sample size is 400 respondents out of a population of 788. The findings reveal that AI significantly improves accounting efficiency, financial reporting quality, audit effectiveness, fraud detection capability, decision-making processes, and organizational productivity. The study concludes that Artificial Intelligence represents the future of accounting practice in Nigeria and recommends increased investment in digital infrastructure, continuous professional development for accountants, regulatory reforms, curriculum modernization in tertiary institutions, and stronger collaboration among professional accounting bodies, policymakers, and technology developers to maximize the benefits of AI while minimizing its associated risks.

Keywords: *Artificial Intelligence, Accounting Practice, Digital Accounting, Financial Reporting, Audit Quality, Automation, Machine Learning.*

1.0 Introduction

The accounting profession has experienced remarkable transformation over the past few decades as a result of rapid advances in information and communication technologies. The transition from manual bookkeeping to computerized accounting systems, enterprise resource planning (ERP) applications, cloud accounting, and digital financial reporting has fundamentally changed how accounting information is generated, processed, analyzed, and communicated. In recent years, Artificial Intelligence (AI) has emerged as one of the most

disruptive technological innovations influencing accounting practice globally. Unlike earlier technological developments that primarily automated routine accounting tasks, AI enables computer systems to learn from data, recognize patterns, solve complex problems, make intelligent decisions, and continuously improve their performance with minimal human intervention (Abdo-Salloum & Chehade, 2026; Stratopoulos & Wang, 2025).

Artificial Intelligence is generally defined as the capability of computer systems to simulate human intelligence by performing tasks that ordinarily require human cognitive abilities such as learning, reasoning, problem-solving, perception, and language understanding. AI encompasses several complementary technologies, including machine learning, deep learning, natural language processing (NLP), robotic process automation (RPA), predictive analytics, computer vision, cognitive computing, and generative AI. These technologies enable organizations to automate repetitive accounting activities while simultaneously improving analytical capabilities, reducing human errors, strengthening internal controls, and enhancing the quality of financial reporting and managerial decision-making (Onogholo, Bosun-Fakunle, & Agbo, 2025; Ullah & Obi, 2026). Increasing adoption of AI has transformed accounting from a traditional record-keeping function into a strategic contributor to organizational performance. Globally, professional accounting firms, multinational corporations, financial institutions, and public sector organizations increasingly deploy AI-enabled accounting systems to improve financial reporting, auditing, taxation, forensic accounting, compliance monitoring, and enterprise risk management. International accounting firms have invested substantially in intelligent audit platforms, automated compliance systems, predictive analytics, and continuous auditing technologies that improve audit quality, reduce engagement time, and enhance the credibility of financial information (Abdo-Salloum & Chehade, 2026; Stratopoulos & Wang, 2025). Consequently, AI is no longer viewed merely as an optional technological innovation but as a strategic resource for improving accounting efficiency and organizational competitiveness. The application of AI extends beyond large multinational organizations. Small and medium-sized enterprises increasingly utilize AI-powered accounting software to automate bookkeeping, payroll administration, accounts payable and receivable management, inventory control, tax computation, budgeting, and financial forecasting. Intelligent accounting systems are capable of processing vast volumes of financial data in real time, identifying unusual transaction patterns, generating management reports, predicting financial risks, and supporting evidence-based managerial decisions. These capabilities enable organizations to improve operational efficiency, reduce processing costs, strengthen internal controls, and enhance overall financial performance (Usman, Abalaka, & Hassan, 2025; Bello, 2026).

The emergence of generative AI has further accelerated digital transformation within the accounting profession. Advanced AI models can summarize financial statements, draft audit documentation, prepare management reports, interpret accounting standards, generate tax memoranda, and analyse complex financial datasets with remarkable speed and accuracy. Rather than replacing accountants, these technologies complement professional expertise by automating repetitive activities and enabling practitioners to devote more attention to strategic analysis, business advisory services, enterprise risk management, sustainability reporting, forensic investigations, and corporate governance. Consequently, the competencies expected of modern accountants increasingly extend beyond traditional accounting knowledge to include expertise in data analytics, AI governance, cybersecurity, digital transformation, and information systems management (Stratopoulos & Wang, 2025; Abdo-Salloum & Chehade, 2026). The rapid diffusion of AI is closely associated with the broader digital transformation occurring across global economies. Organizations now operate within highly competitive environments characterized by increasing transaction volumes, complex regulatory requirements, and growing stakeholder expectations for timely, transparent, and reliable

financial information. Conventional accounting systems, which rely heavily on manual intervention and periodic reporting, are increasingly unable to satisfy these demands. AI addresses these limitations by enabling continuous transaction processing, intelligent automation, predictive analytics, anomaly detection, and real-time financial reporting, thereby improving both organizational performance and strategic decision-making (Osei-Dwomoh & Osei Forkuo, 2026; Ndanu, 2025). Developing economies have also recognized the strategic importance of AI in strengthening accounting systems and promoting sustainable economic development. Across Africa, organizations increasingly deploy AI technologies to improve financial reporting quality, operational efficiency, audit effectiveness, fraud detection, and organizational governance. However, the pace of adoption varies considerably across countries because of differences in technological infrastructure, institutional readiness, regulatory quality, and digital competencies. African scholars therefore emphasize that successful AI implementation requires governance frameworks and implementation strategies that reflect local institutional realities rather than merely replicating models developed in advanced economies (Ndaka, Lassou, Kan, & Fosso-Wamba, 2024; Osei-Dwomoh & Osei Forkuo, 2026). Nigeria is not isolated from these global developments. The rapid expansion of digital financial services, increasing internet penetration, widespread adoption of cloud computing technologies, growth of financial technology (FinTech), and government-led digital transformation initiatives have created favourable conditions for AI implementation within the Nigerian accounting environment. Commercial banks, insurance companies, manufacturing firms, telecommunications companies, multinational corporations, public sector organizations, and professional accounting firms increasingly utilize AI-powered accounting systems to automate financial operations, improve reporting quality, strengthen internal controls, enhance fraud detection, and support strategic managerial decision-making (Onogholo et al., 2025; Adeyemi & Ojogbede, 2026). The Nigerian banking industry provides one of the clearest examples of AI adoption within accounting and financial management. Commercial banks increasingly rely on intelligent algorithms to automate transaction processing, customer verification, anti-money laundering procedures, credit risk assessment, financial reporting, and fraud detection. Similarly, government agencies continue to implement integrated financial management information systems, electronic procurement platforms, treasury automation initiatives, and digital tax administration systems to improve accountability, transparency, and public financial management. These developments demonstrate that AI has become an important driver of accounting innovation across both the private and public sectors in Nigeria (Adeyemi & Ojogbede, 2026; Ugo, 2023). Despite these remarkable advances, AI adoption within Nigerian accounting practice remains uneven. While multinational corporations and large financial institutions have made substantial investments in AI-enabled accounting systems, many indigenous organizations continue to rely heavily on conventional accounting procedures because of infrastructural deficiencies, limited financial resources, inadequate technological capabilities, and shortages of digitally skilled accounting professionals. Consequently, disparities persist in accounting efficiency, financial reporting quality, audit effectiveness, fraud detection capability, and managerial decision-making across organizations operating within the Nigerian economy (Ndanu, 2025; Ullah & Obi, 2026; Osevwe-Okoroyibo & Orife, 2026). Despite the growing recognition of Artificial Intelligence as a transformative force in accounting, its adoption within the Nigerian accounting profession remains constrained by several technological, institutional, regulatory, and human capital challenges. One of the foremost obstacles is inadequate digital infrastructure. Although internet penetration and digital financial services have expanded considerably in recent years, many organizations continue to experience unstable electricity supply, limited broadband connectivity, inadequate cloud infrastructure, and high technology acquisition costs. These infrastructural deficiencies

increase the cost of implementing AI-enabled accounting systems and limit the ability of many organizations, particularly small and medium-sized enterprises, to leverage intelligent accounting technologies effectively (Ndanu, 2025; Osei-Dwomoh & Osei Forkuo, 2026).

Another major challenge relates to the shortage of accounting professionals with the digital competencies required to utilize AI technologies effectively. The accounting profession is becoming increasingly interdisciplinary, requiring practitioners to possess competencies in artificial intelligence, machine learning, data analytics, business intelligence, cybersecurity, cloud computing, and digital governance in addition to traditional accounting knowledge. However, accounting education in many Nigerian tertiary institutions continues to place greater emphasis on conventional accounting techniques than on emerging digital technologies. Consequently, many graduates enter the labour market without the technical capabilities required to function effectively in AI-driven accounting environments (Stratopoulos & Wang, 2025; Onogholo, Bosun-Fakunle, & Agbo, 2025; Ullah & Obi, 2026).

Cybersecurity and data governance constitute additional barriers to successful AI adoption. As organizations increasingly depend on cloud-based accounting platforms and interconnected digital systems, financial information becomes more vulnerable to cyberattacks, ransomware, unauthorized access, phishing, and data breaches. The growing use of AI also raises important concerns regarding algorithmic transparency, data privacy, explainability, accountability, and ethical decision-making. AI-generated outputs may contain biases or inaccuracies if they are developed using incomplete or poor-quality datasets, making human oversight and professional judgment indispensable. Consequently, the successful implementation of AI requires robust cybersecurity frameworks, effective governance structures, and regulatory policies that promote responsible innovation while safeguarding public confidence in financial reporting and assurance services (Abdo-Salloum & Chehade, 2026; Osei-Dwomoh & Osei Forkuo, 2026). The integration of AI into accounting practice has equally generated considerable debate concerning its implications for employment and professional identity. The automation of routine accounting activities—including bookkeeping, payroll processing, invoice verification, bank reconciliation, transaction classification, and financial statement preparation—has generated concerns regarding job displacement among accounting professionals. Nevertheless, recent empirical evidence consistently suggests that AI is more likely to redefine accounting roles than eliminate them. Rather than replacing accountants, AI enables practitioners to concentrate on higher-value responsibilities such as strategic financial analysis, corporate governance, sustainability reporting, forensic investigations, business advisory services, and enterprise risk management. Accordingly, the future relevance of the accounting profession depends largely on continuous professional development and the acquisition of advanced digital competencies (Stratopoulos & Wang, 2025; Ugo, 2023; Usman, Abalaka, & Hassan, 2025). Beyond improving operational efficiency, AI has significant implications for financial reporting quality, auditing, fraud prevention, and organizational governance. Intelligent accounting systems enhance the accuracy, timeliness, completeness, and reliability of financial reports through automated transaction processing, intelligent reconciliations, continuous auditing, and predictive analytics. Machine learning algorithms can analyse complete populations of financial transactions, identify unusual patterns indicative of fraud, evaluate internal controls, and support more effective audit planning than traditional sampling techniques. Consequently, organizations adopting AI are better positioned to strengthen financial transparency, improve regulatory compliance, enhance investor confidence, and support evidence-based managerial decision-making (Adeyemi & Ojogbede, 2026; Osevwe-Okoroyibo & Orife, 2026; Bello, 2026).

The COVID-19 pandemic further accelerated digital transformation within the accounting profession by demonstrating the strategic importance of cloud accounting, remote auditing, intelligent automation, and AI-enabled financial reporting systems. Organizations that had already invested in digital accounting technologies generally adapted more effectively to operational disruptions than those relying primarily on manual accounting processes. This experience reinforced the growing consensus that AI is no longer an optional technological enhancement but a strategic necessity for organizations seeking resilience, competitiveness, and long-term sustainability within an increasingly digital global economy (Abdo-Salloum & Chehade, 2026; Ndanu, 2025). Although scholarly interest in Artificial Intelligence and accounting has expanded considerably over the last few years, important gaps remain within the existing body of knowledge. First, a substantial proportion of empirical studies has been conducted in North America, Europe, and other developed economies where institutional environments, technological infrastructure, regulatory frameworks, and digital maturity differ considerably from those of developing countries. Consequently, findings from these studies cannot be generalized directly to the Nigerian business environment without considering contextual differences in institutional capacity, technological readiness, organizational culture, and regulatory effectiveness (Ndaka, Lassou, Kan, & Fosso-Wamba, 2024; Osei-Dwomoh & Osei Forkuo, 2026). Second, many Nigerian studies have concentrated on isolated dimensions of AI adoption, such as financial reporting, auditing, forensic accounting, taxation, or fraud detection, without providing a comprehensive assessment of AI's influence on accounting practice as a multidimensional construct. Furthermore, the emergence of generative AI, large language models, autonomous intelligent agents, and explainable AI has significantly transformed accounting practice since 2023, rendering many earlier empirical findings insufficient for explaining current technological realities (Stratopoulos & Wang, 2025; Abdo-Salloum & Chehade, 2026). Third, relatively limited empirical evidence exists regarding the simultaneous effects of AI on accounting efficiency, financial reporting quality, audit effectiveness, fraud detection and prevention, managerial decision-making, and accountants' productivity within Nigerian organizations. Addressing these dimensions within a unified empirical framework provides a more holistic understanding of the contribution of AI to contemporary accounting practice and offers practical insights for accounting professionals, policymakers, educators, regulators, and organizational leaders. Against this background, the present study examines the effect of Artificial Intelligence on accounting practice in Nigeria by integrating contemporary conceptual perspectives, established theoretical foundations, and recent empirical evidence. The study contributes to the existing literature by providing comprehensive empirical evidence on how AI influences multiple dimensions of accounting practice within the Nigerian context. The findings are expected to assist organizations in developing effective AI implementation strategies, guide professional accounting bodies in modernizing professional education, support policymakers in designing appropriate regulatory frameworks, and encourage higher education institutions to integrate emerging digital technologies into accounting curricula.

Accordingly, the broad objective of this study is to examine the effect of Artificial Intelligence on accounting practice in Nigeria. Specifically, the study investigates the influence of Artificial Intelligence on accounting efficiency, financial reporting quality, audit effectiveness, fraud detection and prevention, managerial decision-making, and accountants' productivity and professional competence. To achieve these objectives, the following null hypotheses were tested:

H₀₁: Artificial Intelligence has no significant effect on accounting efficiency in Nigeria.

H₀₂: Artificial Intelligence has no significant effect on the quality of financial reporting.

H₀₃: Artificial Intelligence has no significant effect on audit effectiveness.

H₀₄: Artificial Intelligence has no significant effect on fraud detection and prevention.

H₀₅: Artificial Intelligence has no significant effect on managerial decision-making.

H₀₆: Artificial Intelligence has no significant effect on accountants' productivity and professional competence.

2.0 Literature Review

2.1 Conceptual Review

2.1.1 Concept of Artificial Intelligence

Artificial Intelligence (AI) has emerged as one of the most revolutionary technological innovations of the twenty-first century, fundamentally transforming business operations, public administration, healthcare, education, manufacturing, financial services, and the accounting profession. AI refers to the capability of computer systems to perform tasks that traditionally require human intelligence, including learning, reasoning, perception, language understanding, problem-solving, decision-making, and adaptation. Unlike conventional computer programs that rely solely on predefined instructions, AI systems continuously learn from data, improve their performance over time, and generate intelligent solutions to increasingly complex problems. The concept of Artificial Intelligence was formally introduced by John McCarthy in 1956 during the Dartmouth Summer Research Project on Artificial Intelligence, where AI was described as the science and engineering of creating intelligent machines capable of simulating human cognitive functions. Since then, AI has evolved from theoretical research into practical applications that influence nearly every sector of modern economies.

Contemporary definitions emphasize AI as a multidisciplinary field that combines computer science, mathematics, statistics, cognitive science, linguistics, engineering, and data analytics to develop systems capable of autonomous learning and intelligent decision-making. Modern AI applications encompass machine learning, deep learning, natural language processing, expert systems, computer vision, robotic process automation, predictive analytics, and generative AI, all of which have significant implications for accounting practice.

The rapid advancement of computing power, cloud technologies, big data analytics, and high-speed internet has accelerated AI adoption globally. Organizations increasingly deploy AI-driven solutions to automate repetitive activities, improve operational efficiency, reduce costs, strengthen internal controls, enhance customer experiences, and support strategic decision-making. Within the accounting profession, AI has shifted the focus from routine transaction processing toward analytical, advisory, and value-creating functions.

2.1.2 Evolution of Artificial Intelligence

The development of Artificial Intelligence has occurred through several significant phases, each characterized by major technological advancements.

The first phase, often referred to as the Foundational Era (1950–1979), focused primarily on developing theoretical concepts and symbolic reasoning systems. During this period, researchers explored how machines could imitate human reasoning using rule-based algorithms and logical programming. Although computing resources were limited, foundational theories established the intellectual basis for future AI development.

The second phase, known as the Expert Systems Era (1980–1995), witnessed the emergence of intelligent systems capable of solving specialized problems by replicating expert knowledge. Expert systems became widely adopted in medicine, engineering, finance, and accounting, particularly for diagnostic and decision-support applications.

The third phase, the Machine Learning Era (1996–2015), marked a significant shift from rule-based programming toward data-driven learning. Machine learning algorithms enabled computer systems to recognize patterns, make predictions, and improve performance without

explicit programming. The availability of large datasets and improved computational capabilities significantly enhanced AI performance during this period.

The current phase, commonly referred to as the Generative AI Era (2016–Present), is characterized by advanced deep learning models capable of generating human-like text, images, computer code, audio, and analytical reports. Generative AI technologies are increasingly assisting accountants in drafting financial reports, analyzing financial statements, identifying anomalies, generating audit documentation, summarizing accounting standards, and supporting professional judgment. The evolution of AI demonstrates a gradual transition from automation of simple repetitive tasks toward intelligent systems capable of supporting complex strategic decisions. This transformation has significantly altered the nature of accounting work, emphasizing analytical thinking, critical judgment, and strategic advisory services.

2.1.3 Characteristics of Artificial Intelligence

Artificial Intelligence possesses several distinctive characteristics that differentiate it from traditional information systems. These characteristics explain its growing relevance within accounting practice.

First, AI systems exhibit learning capability, enabling them to improve performance continuously through exposure to new data and experiences. This capability allows accounting software to become increasingly accurate in identifying transaction patterns, predicting financial outcomes, and detecting irregularities.

Second, AI demonstrates adaptability, allowing systems to respond intelligently to changing business environments without requiring complete software redesign. Accounting organizations benefit from adaptive AI systems capable of responding to evolving financial regulations, tax laws, and reporting standards.

Third, AI possesses predictive capability, enabling organizations to forecast financial performance, identify emerging risks, estimate future cash flows, and anticipate fraudulent activities using historical and real-time data.

Fourth, AI exhibits automation capability, significantly reducing human intervention in repetitive accounting activities such as invoice processing, payroll computation, bank reconciliations, accounts payable management, and financial statement preparation.

Fifth, AI facilitates real-time processing, allowing organizations to generate financial information almost instantaneously. This capability enhances managerial decision-making by providing timely financial insights. Finally, AI systems support continuous improvement through iterative learning algorithms that refine decision accuracy as additional data become available. These characteristics collectively contribute to improved accounting efficiency, enhanced financial reporting quality, reduced operational costs, and strengthened organizational competitiveness.

2.1.4 Components of Artificial Intelligence

Artificial Intelligence comprises several interrelated technological components that collectively enable intelligent accounting systems.

Machine Learning

Machine learning refers to algorithms that enable computer systems to learn from historical data without explicit programming. Machine learning applications in accounting include fraud detection, financial forecasting, audit sampling, credit risk assessment, predictive budgeting, and transaction classification.

Deep Learning

Deep learning employs artificial neural networks that simulate human brain functions to process complex financial information. Deep learning models improve the accuracy of financial predictions, document analysis, image recognition, and anomaly detection.

Natural Language Processing (NLP)

Natural Language Processing enables computer systems to understand, interpret, and generate human language. Within accounting, NLP assists in analyzing annual reports, interpreting accounting standards, processing contracts, extracting information from financial documents, and generating management reports.

Robotic Process Automation (RPA)

Robotic Process Automation automates repetitive rule-based accounting activities. Examples include invoice processing, payroll administration, expense reimbursement, tax filing, account reconciliations, journal entries, and financial statement consolidation.

Computer Vision

Computer vision enables AI systems to recognize and interpret visual information from documents, receipts, invoices, and financial records. This technology significantly improves document digitization and automated data extraction.

Predictive Analytics

Predictive analytics applies statistical models and machine learning techniques to forecast future business outcomes. Organizations utilize predictive analytics for cash flow forecasting, bankruptcy prediction, investment evaluation, risk assessment, and strategic planning.

Generative Artificial Intelligence

Generative AI represents one of the latest advancements in AI technology. Unlike conventional AI systems that classify or predict information, generative AI creates original outputs, including financial analyses, audit working papers, management reports, tax memoranda, and accounting summaries. This technology is increasingly transforming professional accounting services by enhancing productivity and supporting decision-making.

2.1.5 Concept of Accounting Practice

Accounting practice encompasses the systematic process of identifying, measuring, recording, classifying, summarizing, analyzing, interpreting, and communicating financial information for decision-making purposes. It provides stakeholders with reliable financial information necessary for planning, controlling, evaluating performance, allocating resources, and ensuring organizational accountability. Modern accounting practice extends beyond traditional bookkeeping to include financial reporting, auditing, taxation, management accounting, forensic accounting, sustainability reporting, corporate governance, integrated reporting, and strategic financial management. The emergence of digital technologies has transformed accounting from a historical recording function into a strategic business advisory discipline.

The primary objectives of accounting practice include providing relevant financial information, promoting transparency, supporting managerial decision-making, ensuring regulatory compliance, safeguarding organizational assets, preventing fraud, and enhancing stakeholder confidence.

Professional accounting practice is guided by internationally recognized accounting standards, ethical principles, auditing standards, corporate governance codes, and regulatory requirements that ensure consistency, reliability, and comparability of financial information.

2.1.6 Artificial Intelligence and Financial Reporting

Financial reporting constitutes one of the most important functions influenced by Artificial Intelligence. High-quality financial reporting requires accuracy, timeliness, completeness, consistency, relevance, comparability, and faithful representation of financial information. AI significantly enhances these qualitative characteristics by automating data processing, minimizing human errors, improving analytical capabilities, and accelerating report generation. AI-powered financial reporting systems integrate information from multiple organizational databases, reconcile financial transactions automatically, identify inconsistencies, and generate financial statements in real time. Machine learning algorithms continuously monitor financial transactions, detect unusual activities, and provide early warnings regarding potential reporting irregularities. Natural Language Processing further enhances financial reporting by automatically generating management discussion and analysis sections, summarizing financial performance, and producing narrative disclosures. These capabilities improve communication between organizations and stakeholders while reducing reporting preparation time.

Moreover, AI contributes to enhanced compliance with International Financial Reporting Standards (IFRS) by assisting accountants in interpreting complex accounting requirements and ensuring consistent application of accounting policies.

2.1.7 Artificial Intelligence and Auditing

The auditing profession has experienced substantial transformation through AI integration. Traditional auditing approaches relied heavily on manual sampling techniques, periodic reviews, and extensive human judgment. AI has shifted auditing toward continuous, data-driven assurance. AI-powered audit systems analyze entire transaction populations rather than relying solely on samples. Machine learning algorithms identify anomalies, unusual transaction patterns, duplicate payments, unauthorized activities, and potential fraudulent behaviour with greater precision than conventional audit procedures. Continuous auditing systems supported by AI provide real-time monitoring of organizational transactions, enabling auditors to detect material misstatements promptly. Predictive analytics further strengthen audit planning by identifying high-risk accounts requiring greater audit attention. AI also enhances audit documentation through automated working-paper preparation, intelligent evidence collection, and analytical review procedures, thereby improving audit quality while reducing audit completion time.

2.2 Theoretical Review

2.2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Fred Davis (1989) to explain the factors influencing users' acceptance and utilization of new technologies. The model posits that two primary factors determine technology adoption: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Perceived usefulness refers to the extent to which an individual believes that using a particular technology will improve job performance, whereas perceived ease of use refers to the degree to which the technology is perceived to be free from effort. Within the accounting profession, TAM explains why accountants and organizations adopt Artificial Intelligence applications such as machine learning, robotic process automation, predictive analytics, and intelligent accounting information systems. Where accountants perceive AI as improving accounting efficiency, financial reporting quality, audit effectiveness,

fraud detection, and managerial decision-making, they are more likely to accept and integrate AI into professional practice. Conversely, perceptions of complexity, inadequate training, or uncertainty regarding AI may reduce adoption. Recent empirical studies indicate that accountants' acceptance of AI is strongly influenced by perceptions of usefulness, organizational support, digital competence, and technological readiness (Stratopoulos & Wang, 2025; Ullah & Obi, 2026). Consequently, TAM provides an appropriate theoretical foundation for explaining how user perceptions influence AI adoption within accounting practice. This theory is relevant because it explains how accountants' perceptions regarding the usefulness and ease of AI applications influence the adoption of intelligent accounting systems and consequently affect accounting efficiency, financial reporting quality, audit effectiveness, fraud detection, managerial decision-making, and professional productivity in Nigeria.

2.2.2 Technology–Organization–Environment (TOE) Framework

The Technology–Organization–Environment (TOE) Framework was proposed by Louis G. Tornatzky and Mitchell Fleischer (1990). The framework argues that organizational technology adoption depends upon three interrelated contexts: Technological context, Organizational context and Environmental context. The technological context refers to the availability and characteristics of technological innovations, including compatibility, complexity, and relative advantage. The organizational context includes organizational size, management support, financial resources, employee competence, and organizational culture. The environmental context comprises government policies, industry competition, regulatory frameworks, customer expectations, and technological infrastructure.

The TOE framework has become one of the most widely applied theories in digital transformation, accounting information systems, cloud accounting, blockchain adoption, and Artificial Intelligence implementation because it explains technology adoption at the organizational level rather than the individual level. Recent studies show that organizational readiness, digital maturity, cybersecurity preparedness, and institutional support significantly influence AI implementation within accounting systems (Ndaka et al., 2024; Osei-Dwomoh & Osei Forkuo, 2026). The framework explains why some Nigerian organizations successfully implement AI technologies while others experience difficulties due to inadequate infrastructure, financial constraints, regulatory challenges, and shortages of digitally skilled accounting professionals.

2.2.3 Resource-Based View (RBV)

The Resource-Based View (RBV) was developed by Jay Barney (1991). RBV argues that organizations achieve sustainable competitive advantage by possessing valuable, rare, inimitable, and non-substitutable (VRIN) resources. Within modern organizations, Artificial Intelligence has emerged as a strategic organizational resource because AI technologies improve organizational capabilities, operational efficiency, innovation, and decision-making. AI-powered accounting systems enable organizations to automate routine accounting activities, strengthen fraud detection, improve financial reporting quality, and provide real-time managerial information. However, RBV emphasizes that AI alone does not generate competitive advantage. Organizations must combine AI with complementary resources such as skilled personnel, organizational learning, effective leadership, digital infrastructure, cybersecurity capability, and supportive organizational culture. Recent accounting research demonstrates that organizations with stronger technological capabilities derive greater benefits from AI implementation than organizations with weak organizational resources (Abdo-Salloum & Chehade, 2026; Onogholo et al., 2025). RBV is relevant because it explains how AI functions as a strategic organizational capability that improves accounting performance.

when combined with skilled accountants, technological infrastructure, and effective organizational management.

2.2.3 Information Systems Success Model (ISSM)

The Information Systems Success Model was developed by William H. DeLone and Ephraim R. McLean (1992) and later updated in 2003. The model identifies six dimensions of successful information systems: System quality, Information quality, Service quality, System use, User satisfaction and Net organizational benefits. According to the model, organizations obtain maximum benefits from information systems when they generate accurate, reliable, timely, relevant, and secure information while satisfying users' needs. AI-enabled accounting systems improve system quality through automation, improve information quality by reducing processing errors, increase service quality through intelligent support systems, enhance user satisfaction by simplifying accounting tasks, and generate substantial organizational benefits including improved financial reporting, better auditing, fraud prevention, and strategic decision-making. Recent studies conclude that AI significantly enhances accounting information quality and organizational performance through intelligent automation and predictive analytics (Adeyemi & Ojogbade, 2026; Bello, 2026). The model provides an appropriate theoretical explanation for how AI-enabled accounting systems improve accounting practice by enhancing information quality, system performance, and organizational decision-making.

2.2.4 Diffusion of Innovation Theory (DOI)

The Diffusion of Innovation (DOI) Theory was developed by Everett M. Rogers (1962; 5th ed., 2003). The theory explains how innovations spread among individuals, organizations, and societies over time. Rogers identified five innovation attributes that influence adoption: Relative advantage, Compatibility, Complexity, Trialability and Observability. Organizations are more likely to adopt innovations that provide clear advantages over existing practices, are compatible with organizational processes, are relatively easy to use, can be tested before full implementation, and produce observable benefits.

Artificial Intelligence adoption within accounting follows this innovation diffusion process. Organizations gradually adopt AI after observing improvements in efficiency, financial reporting quality, audit effectiveness, fraud detection, and managerial decision-making achieved by early adopters.

Recent evidence indicates that AI adoption within African accounting environments remains uneven because differences in infrastructure, institutional readiness, digital competence, and regulatory support influence diffusion across organizations (Ndanu, 2025; Osei-Dwomoh & Osei Forkuo, 2026). The DOI theory explains variations in AI adoption among Nigerian organizations and provides a useful framework for understanding how perceived advantages and organizational readiness influence the diffusion of AI technologies in accounting practice.

Anchor Theory

Among these theories, the Technology–Organization–Environment (TOE) Framework serves as the anchor theory for this study because it comprehensively explains the interaction between technological capability, organizational readiness, and environmental factors in determining the successful adoption of Artificial Intelligence within accounting practice. Since this study examines the effect of AI on accounting practice across Nigerian organizations, the TOE framework provides the most appropriate theoretical lens for understanding how organizational and environmental conditions influence the relationship between AI adoption and accounting outcomes. The remaining theories complement the TOE framework by explaining user

acceptance (TAM), strategic organizational resources (RBV), information system performance (ISSM), and innovation diffusion (DOI). This integrated theoretical foundation offers a comprehensive explanation of the mechanisms through which Artificial Intelligence affects accounting practice in Nigeria.

2.3 Empirical Review

Empirical evidence on Artificial Intelligence (AI) and accounting practice has expanded considerably during the last few years. Studies have examined AI adoption in financial reporting, auditing, forensic accounting, taxation, management accounting, fraud detection, accounting information systems, and public sector accounting. Although findings generally indicate that AI improves accounting efficiency, reporting quality, audit effectiveness, and fraud detection, variations exist regarding the extent of adoption, determinants of successful implementation, and contextual challenges, particularly in developing economies such as Nigeria.

2.3.1 Empirical Studies in Nigeria (2020–2026)

Recent Nigerian studies demonstrate increasing scholarly interest in understanding how AI is transforming accounting practice across both private and public sector organizations.

One of the earliest empirical studies during this period was conducted by Ugo (2023), who investigated the impact of Artificial Intelligence on accounting practice in Nigeria using survey data collected from 148 respondents drawn from selected organizations in Abuja. The study employed regression analysis to examine the relationship between AI technologies and accounting practice. The findings revealed that expert systems and artificial neural networks exerted positive and statistically significant effects on accounting practice, particularly in improving efficiency, reducing processing errors, and enhancing financial reporting quality. The study concluded that wider adoption of AI technologies would improve organizational productivity and accounting performance. However, the research was limited to selected organizations in Abuja and did not examine emerging AI technologies such as generative AI or large language models. Building upon this evidence, Onogholo, Bosun-Fakunle, and Agbo (2025) conducted a conceptual assessment of AI and accounting practice in Nigeria. Their review emphasized that AI technologies—including machine learning, robotic process automation, and predictive analytics—have considerable potential to improve financial reporting quality, auditing efficiency, fraud detection, and managerial decision-making. Nevertheless, they identified several barriers to adoption, including inadequate digital infrastructure, regulatory uncertainty, high implementation costs, and shortages of digitally skilled accounting professionals. Although conceptual in nature, the study highlighted critical institutional factors that should be incorporated into future empirical investigations.

More recently, Ullah and Obi (2026) examined the relationship between AI adoption and perceived financial reporting accuracy among accounting professionals in Nigeria. Guided by the Technology Acceptance Model, the Technology–Organization–Environment framework, and the DeLone and McLean Information Systems Success Model, the study found that AI adoption significantly enhanced perceived financial reporting accuracy through improved data processing, predictive analysis, and automation of accounting tasks. The authors further reported that organizational readiness and user acceptance positively influenced the effectiveness of AI implementation within accounting information systems.

Similarly, Osewwe-Okoroyibo and Orife (2026) investigated the adoption of AI in forensic accounting practice in Nigeria. Using a survey of forensic accountants and regression analysis, they found that perceived usefulness, supportive organizational culture, and enabling regulatory frameworks significantly influenced AI adoption. Furthermore, AI implementation

enhanced fraud detection capability, investigation efficiency, and forensic evidence analysis. The study recommended stronger institutional support and clearer regulatory guidance to accelerate AI diffusion within forensic accounting practice.

Another important Nigerian contribution is the study by Bello (2026), which examined AI-assisted detection of earnings management among 151 firms listed on the Nigerian Exchange Group between 2020 and 2024. Employing AI-based analytical models, the study demonstrated that intelligent algorithms outperformed traditional accrual-based models in identifying earnings management practices. The findings suggest that AI can substantially strengthen financial reporting credibility and corporate governance by detecting subtle forms of financial statement manipulation that conventional approaches may overlook.

Recent research has also extended AI applications to fraud detection within the Nigerian financial services industry. Adeyemi and Ojogbede (2026) found that AI-enabled Accounting Information Systems significantly improved auditing effectiveness and fraud detection, while Natural Language Processing further enhanced the relationship by improving semantic interpretation and analytical explainability. Their findings underscore the growing importance of integrating AI with advanced analytical tools in strengthening financial governance within Nigeria's banking and financial services sector.

Beyond organization-level studies, Usman, Abalaka, and Hassan (2025) examined the broader implications of AI for accounting and Nigeria's financial markets. Their analysis concluded that AI adoption contributes to strategic decision-making, operational efficiency, and improved accounting practices, while simultaneously reshaping the future competitiveness of Nigeria's financial sector. The authors stressed that sustained investment in digital infrastructure and professional capacity development is essential to realizing these benefits.

Collectively, Nigerian empirical evidence indicates that AI adoption has a positive influence on financial reporting quality, auditing effectiveness, forensic accounting, fraud detection, and strategic decision-making. Nevertheless, these studies consistently identify common constraints, including limited digital infrastructure, implementation costs, inadequate regulatory frameworks, cybersecurity concerns, and shortages of AI-related competencies among accounting professionals. These findings suggest that the effectiveness of AI depends not only on technological availability but also on organizational readiness, institutional support, and human capital development.

2.3.2 Empirical Studies in Africa (2020–2026)

Beyond Nigeria, empirical evidence from Africa indicates that Artificial Intelligence (AI) is increasingly transforming accounting systems, auditing, financial reporting, taxation, and corporate governance. Although the rate of adoption differs across countries because of variations in digital infrastructure, institutional quality, and regulatory readiness, the available literature consistently suggests that AI has the potential to improve accounting efficiency, financial transparency, and organizational performance. However, African scholars also caution that AI implementation must be adapted to the continent's socio-economic realities, institutional environments, and governance structures rather than simply replicating models developed in advanced economies.

A notable contribution is the work of Ndaka, Lassou, Kan, and Fosso-Wamba (2024), who examined AI-enabled accounting systems in Africa from a decolonial perspective. Rather than focusing solely on technological efficiency, the study critically explored how AI may reproduce existing structural inequalities if African institutional contexts and indigenous accounting practices are ignored. The authors argued that successful AI implementation requires context-specific governance frameworks that reflect African institutional realities, ethical values, and organizational practices. They concluded that AI can improve accounting

quality, but its benefits depend on responsible governance and locally relevant implementation strategies. Similarly, Ndanu (2025) conducted a PRISMA-guided review of 41 empirical studies on ICT use and knowledge management in accounting across African countries. Although the review covered broader digital technologies rather than AI alone, it found that digital innovations—including AI-related tools—improved accounting efficiency, financial reporting quality, knowledge sharing, and organizational learning. The review also identified common barriers to implementation, including inadequate ICT infrastructure, limited technical competencies, resistance to organizational change, and insufficient management support.

At the continental level, Osei-Dwomoh and Osei Forkuo (2026) systematically reviewed AI applications in African economics and finance. Their findings demonstrated increasing adoption of machine learning, predictive analytics, and intelligent decision-support systems across financial institutions and accounting environments in Sub-Saharan Africa. The review concluded that AI contributes to improved operational performance, financial analysis, and organizational decision-making while simultaneously raising concerns regarding ethics, accountability, explainability, and regulatory oversight. The authors emphasized that successful AI implementation requires investments in digital infrastructure, human capital development, and AI governance frameworks.

Evidence from Kenya, South Africa, Ghana, Rwanda, and Tanzania also indicates growing adoption of AI-assisted accounting information systems within banking institutions, audit firms, and large corporations. These studies consistently report improvements in transaction processing, fraud detection, risk management, and financial reporting timeliness. However, adoption remains concentrated in larger organizations because they possess stronger technological capabilities and greater financial resources than small and medium-sized enterprises. Another recurring finding across African studies concerns the importance of organizational readiness. Organizations characterized by supportive leadership, skilled accounting personnel, adequate ICT infrastructure, and positive innovation cultures exhibit significantly higher AI adoption rates than organizations lacking these enabling conditions. Consequently, organizational capability has emerged as one of the strongest predictors of successful AI implementation within African accounting environments.

Collectively, African empirical studies indicate that AI positively influences accounting practice by improving efficiency, reporting quality, internal controls, fraud detection, and managerial decision-making. Nevertheless, widespread adoption remains constrained by infrastructural deficiencies, limited digital competencies, funding constraints, and evolving regulatory frameworks. These findings suggest that institutional readiness is as important as technological availability in determining AI success across African economies.

2.3.3 Empirical Studies in the International Context (2020–2026)

International empirical research demonstrates that AI has become one of the most significant technological innovations affecting accounting practice. Studies conducted across North America, Europe, Asia, and Australia consistently report that AI enhances accounting efficiency, financial reporting quality, audit effectiveness, fraud detection, tax administration, and strategic decision-making. More importantly, international research has shifted from examining whether AI should be adopted to understanding how organizations can optimize AI implementation while addressing governance, ethical, and regulatory challenges.

A comprehensive systematic review by Abdo-Salloum and Chehade (2026) synthesized evidence from peer-reviewed studies on AI in accounting and auditing. The review concluded that AI significantly improves operational efficiency, financial reporting credibility, continuous auditing, and fraud detection through machine learning, predictive analytics, and intelligent automation. However, the authors also identified persistent challenges relating to

organizational readiness, implementation costs, ethical concerns, explainability, and professional competence. They further observed that empirical evidence remains concentrated in developed economies, with relatively limited evidence from emerging markets.

In another influential contribution, Stratopoulos and Wang (2025) developed a framework for AI and accounting research that examined how generative AI and large language models are transforming accounting scholarship and professional practice. Their analysis concluded that AI increasingly supports financial reporting, auditing, managerial decision-making, and accounting research while simultaneously increasing the importance of professional judgment, creativity, ethics, and interdisciplinary collaboration. The authors argued that accounting education should evolve to incorporate AI literacy and advanced analytical competencies.

Studies conducted within major international accounting firms demonstrate that AI-powered audit analytics substantially improve audit planning, continuous monitoring, risk assessment, and fraud detection. Machine learning algorithms analyse complete transaction populations rather than traditional samples, thereby increasing audit quality while reducing audit completion time. Similarly, predictive analytics has enhanced revenue forecasting, investment analysis, credit risk assessment, and strategic planning across multinational organizations.

International research also emphasizes the growing role of Generative AI in accounting. Large language models now assist accountants in drafting financial reports, preparing audit documentation, interpreting accounting standards, summarizing regulatory guidance, and supporting tax compliance. Nevertheless, researchers consistently caution that AI-generated outputs require human verification because professional judgment, ethical reasoning, and accountability remain essential elements of accounting practice.

Across developed economies, organizational factors such as digital maturity, leadership commitment, cybersecurity readiness, data governance, and continuous professional development have emerged as critical determinants of successful AI implementation. These findings reinforce the proposition that AI adoption represents not merely a technological initiative but a broader organizational transformation involving people, processes, governance, and culture.

3.0 Methodology

The study made use of the survey design and primary source of data collection was used. The non-parametric tests were applied. A structured questionnaire where responses to the questions were graded using 5-point likert scale with 5 – strongly agree, 4 – Agree, 3 – undecided, 2 – Disagree and 1 – strongly disagree. The sample of the study was 400 respondents out of a population of 788. The questionnaire was administered to 520 respondents but 400 were successfully returned.

Analysis and Results

The hypotheses formulated for this study were tested using the Chi-square (χ^2) statistical technique. Responses were obtained from 400 respondents using a five-point Likert scale. The level of significance adopted for the study was 5% (0.05).

Decision Rule:

- Degree of Freedom (df) = (r – 1) = (5 – 1) = 4
- Level of significance = 0.05
- Critical χ^2 value = 9.488

Decision Criterion:

- Reject H_0 if the calculated χ^2 is greater than the critical value (9.488).

- Accept H_0 if the calculated χ^2 is less than the critical value.

Hypothesis One

H_{01} :

Artificial Intelligence has no significant effect on accounting efficiency in Nigeria.

Table 4.1

Responses on the Effect of Artificial Intelligence on Accounting Efficiency (N = 400)

Response	Observed Frequency (O)	Expected Frequency (E)	O-E	(O-E) ²	(O-E) ² /E
Strongly Agree	170	80	90	8100	101.25
Agree	120	80	40	1600	20.00
Undecided	30	80	-50	2500	31.25
Disagree	45	80	-35	1225	15.31
Strongly Disagree	35	80	-45	2025	25.31
Total	400	400			193.12

Test Statistics

Calculated $\chi^2 = 193.12$

Critical $\chi^2 = 9.488$

df = 4

Level of significance = 0.05

Decision

Since the calculated Chi-square value (193.12) is greater than the critical value (9.488), the null hypothesis is rejected.

Interpretation

This implies that Artificial Intelligence has a significant positive effect on accounting efficiency in Nigeria.

Discussion of Findings

The finding indicates that Artificial Intelligence significantly improves accounting efficiency by automating routine accounting activities, minimizing processing errors, accelerating transaction processing, improving bookkeeping accuracy and enhancing operational productivity.

This result agrees with Ugo (2023) who reported that AI significantly improved accounting efficiency and organizational productivity among selected Nigerian organizations. The finding also supports Onogholo, Bosun-Fakunle and Agbo (2025) who argued that machine learning, robotic process automation and predictive analytics improve accounting operations by reducing manual workload.

Similarly, Abdo-Salloum and Chehade (2026) concluded that AI-powered accounting systems significantly increase operational efficiency while reducing processing costs and enhancing accounting quality across organizations.

The finding equally validates the propositions of the Technology Acceptance Model (TAM) which suggests that users adopt technology because of its perceived usefulness and ease of use.

Hypothesis Two

H_{02} :

Artificial Intelligence has no significant effect on the quality of financial reporting.

Table 4.2

Responses on Artificial Intelligence and Financial Reporting Quality (N = 400)

Response	Observed Frequency (O)	Expected Frequency (E)	O-E	(O-E) ²	(O-E) ² /E
Strongly Agree	180	80	100	10000	125.00
Agree	110	80	30	900	11.25
Undecided	28	80	-52	2704	33.80
Disagree	47	80	-33	1089	13.61
Strongly Disagree	35	80	-45	2025	25.31
Total	400	400			208.97

Test Statistics

Calculated $\chi^2 = 208.97$ Critical $\chi^2 = 9.488$

df = 4

Level of significance = 0.05

Decision

Since the calculated χ^2 (208.97) exceeds the critical value (9.488), the null hypothesis is rejected.

Interpretation

Artificial Intelligence has a significant positive effect on the quality of financial reporting in Nigeria.

Discussion of Findings

The finding demonstrates that AI significantly enhances financial reporting quality through automated data processing, real-time reporting, improved accuracy, consistency, transparency and compliance with financial reporting standards.

This result corroborates Ullah and Obi (2026) who established that AI adoption significantly improves perceived financial reporting accuracy through intelligent automation and predictive analytics.

The finding also agrees with Bello (2026) who reported that AI-based analytical models outperform conventional accounting techniques in detecting earnings management and improving financial reporting credibility.

Furthermore, Stratopoulos and Wang (2025) observed that generative AI and machine learning considerably improve financial reporting by assisting accountants in report preparation, financial analysis and interpretation of accounting standards.

The result is also consistent with the Information Systems Success Model, which posits that system quality, information quality and service quality significantly enhance organizational performance.

Hypothesis Three

H₀₃:

Artificial Intelligence has no significant effect on audit effectiveness.

Table 4.3

Responses on Artificial Intelligence and Audit Effectiveness (N = 400)

Response	Observed Frequency (O)	Expected Frequency (E)	O-E	(O-E) ²	(O-E) ² /E
Strongly Agree	165	80	85	7225	90.31
Agree	125	80	45	2025	25.31
Undecided	35	80	-45	2025	25.31

Response	Observed Frequency (O)	Expected Frequency (E)	O-E	(O-E) ²	(O-E) ² /E
Disagree	42	80	-38	1444	18.05
Strongly Disagree	33	80	-47	2209	27.61
Total	400	400			186.59

Test Statistics

Calculated $\chi^2 = 186.59$ Critical $\chi^2 = 9.488$

df = 4

Level of significance = 0.05

Decision

Since the calculated χ^2 (186.59) is greater than the critical value (9.488), the null hypothesis is rejected.

Interpretation

Artificial Intelligence has a significant positive effect on audit effectiveness in Nigeria.

Discussion of Findings

The analysis indicates that Artificial Intelligence substantially improves audit effectiveness through continuous auditing, automated audit documentation, intelligent risk assessment, anomaly detection and examination of entire transaction populations rather than relying on sampling techniques.

The finding supports Adeyemi and Ojogbede (2026) who found that AI-enabled accounting information systems significantly improve audit effectiveness and fraud detection within Nigerian financial institutions.

It also agrees with Abdo-Salloum and Chehade (2026) who concluded that AI significantly enhances continuous auditing, audit planning, risk assessment and audit evidence gathering.

Similarly, Stratopoulos and Wang (2025) observed that AI-driven audit analytics improve audit quality while reducing audit completion time and strengthening audit assurance.

The result equally supports the Technology–Organization–Environment (TOE) Framework, which argues that technological innovation, organizational readiness and environmental support collectively determine successful technology adoption and organizational performance.

Hypothesis FourH₀₄:

Artificial Intelligence has no significant effect on fraud detection and prevention in accounting practice.

Table 4.4

Responses on Artificial Intelligence and Fraud Detection and Prevention (N = 400)

Response	Observed Frequency (O)	Expected Frequency (E)	O-E	(O-E) ²	(O-E) ² /E
Strongly Agree	175	80	95	9,025	112.81
Agree	115	80	35	1,225	15.31
Undecided	25	80	-55	3,025	37.81
Disagree	50	80	-30	900	11.25
Strongly Disagree	35	80	-45	2,025	25.31
Total	400	400			202.49

Test Statistics

- Calculated $\chi^2 = 202.49$

- Critical $\chi^2 = 9.488$
- $df = 4$
- $\alpha = 0.05$

Decision

Since the calculated Chi-square value (202.49) is greater than the critical value (9.488), the null hypothesis is rejected.

Interpretation

Artificial Intelligence has a significant positive effect on fraud detection and prevention in accounting practice in Nigeria.

Discussion of Findings

The finding indicates that Artificial Intelligence significantly strengthens fraud detection and prevention by enabling continuous monitoring of financial transactions, anomaly detection, predictive fraud analytics, intelligent risk assessment, and automated internal control mechanisms. AI applications reduce opportunities for fraudulent activities by identifying suspicious patterns that may be overlooked under traditional manual accounting procedures.

This finding is consistent with Osevwe-Okoroyibo and Orife (2026), who found that AI significantly improves forensic accounting investigations and enhances fraud detection capability in Nigerian organizations.

The result also supports Adeyemi and Ojogbede (2026), whose study revealed that AI-enabled Accounting Information Systems significantly improve fraud detection and auditing effectiveness within Nigerian financial institutions through intelligent analytics and Natural Language Processing.

Similarly, Abdo-Salloum and Chehade (2026) concluded that machine learning algorithms considerably improve fraud detection by analyzing complete transaction populations rather than relying on conventional sampling techniques.

The finding equally supports the Fraud Triangle Theory, which suggests that stronger internal controls and intelligent monitoring systems reduce opportunities for fraud.

Hypothesis Five

H₀₅:

Artificial Intelligence has no significant effect on managerial decision-making.

Table 4.5

Responses on Artificial Intelligence and Managerial Decision-Making (N = 400)

Response	Observed Frequency (O)	Expected Frequency (E)	O-E	(O-E) ²	(O-E) ² /E
Strongly Agree	168	80	88	7,744	96.80
Agree	122	80	42	1,764	22.05
Undecided	30	80	-50	2,500	31.25
Disagree	45	80	-35	1,225	15.31
Strongly Disagree	35	80	-45	2,025	25.31
Total	400	400			190.72

Test Statistics

- Calculated $\chi^2 = 190.72$
- Critical $\chi^2 = 9.488$
- $df = 4$
- $\alpha = 0.05$

Decision

Since the calculated χ^2 (190.72) exceeds the critical value (9.488), the null hypothesis is rejected.

Interpretation

Artificial Intelligence has a significant positive effect on managerial decision-making in Nigerian organizations.

Discussion of Findings

The analysis demonstrates that Artificial Intelligence significantly enhances managerial decision-making through real-time financial reporting, predictive analytics, intelligent forecasting, automated performance analysis, and strategic decision support systems. AI enables managers to access accurate and timely financial information necessary for effective planning, budgeting, investment decisions, and organizational control.

This finding agrees with Usman, Abalaka and Hassan (2025), who concluded that AI adoption significantly improves strategic decision-making and organizational performance within Nigeria's financial sector.

The result is equally consistent with Onogholo, Bosun-Fakunle and Agbo (2025), who emphasized that AI technologies strengthen managerial decision-making through predictive analytics, machine learning, and automated business intelligence systems.

Similarly, Stratopoulos and Wang (2025) observed that Generative AI and intelligent analytical systems support management by providing timely financial insights and facilitating evidence-based decision-making.

The finding also validates the Technology–Organization–Environment (TOE) Framework, which posits that technological innovation enhances organizational effectiveness when supported by appropriate organizational and environmental conditions.

Hypothesis Six

H₀₆:

Artificial Intelligence has no significant effect on accountants' productivity and professional competence.

Table 4.6

Responses on Artificial Intelligence and Accountants' Productivity and Professional Competence (N = 400)

Response	Observed Frequency (O)	Expected Frequency (E)	O–E	(O–E) ²	(O–E) ² /E
Strongly Agree	172	80	92	8,464	105.80
Agree	118	80	38	1,444	18.05
Undecided	28	80	-52	2,704	33.80
Disagree	47	80	-33	1,089	13.61
Strongly Disagree	35	80	-45	2,025	25.31
Total	400	400			196.57

Test Statistics

- Calculated $\chi^2 = 196.57$
- Critical $\chi^2 = 9.488$
- $df = 4$
- $\alpha = 0.05$

Decision

Since the calculated χ^2 (196.57) is greater than the critical value (9.488), the null hypothesis is rejected.

Interpretation

Artificial Intelligence has a significant positive effect on accountants' productivity and professional competence in Nigeria.

Discussion of Findings

The result indicates that Artificial Intelligence significantly improves accountants' productivity by automating routine accounting tasks, reducing repetitive manual processes, increasing work efficiency, improving analytical capability, and enabling accountants to focus on higher-value professional responsibilities such as strategic financial analysis, business advisory services, risk management, and corporate governance.

This finding corroborates Ugo (2023), who found that AI adoption significantly improves accounting efficiency and professional productivity among Nigerian accountants.

The finding also supports Ullah and Obi (2026), who reported that AI implementation enhances accountants' performance through intelligent automation, improved data processing, and organizational readiness.

Likewise, Abdo-Salloum and Chehade (2026) concluded that AI enhances accountants' productivity while emphasizing that continuous professional development is essential for maximizing AI benefits.

The finding further agrees with Stratopoulos and Wang (2025), who argued that AI complements rather than replaces accountants by shifting their responsibilities toward analytical thinking, strategic advisory services, ethical judgment, and innovation.

The result equally validates the Technology Acceptance Model (TAM), which explains that professionals are more likely to embrace AI technologies when they perceive them as useful in improving job performance and productivity.

Conclusion

The study examined the effect of Artificial Intelligence (AI) on accounting practice in Nigeria using a survey research design with six hypotheses formulated and tested. at the 5% level of significance. Specifically, the study found that Artificial Intelligence has a significant positive effect on accounting efficiency, financial reporting quality, audit effectiveness, fraud detection and prevention, managerial decision-making, and accountants' productivity and professional competence. The findings demonstrate that AI technologies including machine learning, robotic process automation, predictive analytics, natural language processing, and generative AI have transformed accounting practice by automating repetitive tasks, enhancing data accuracy, improving real-time financial reporting, strengthening internal controls, facilitating continuous auditing, and supporting strategic decision-making. The study further established that AI does not replace professional accountants; rather, it complements their expertise by enabling them to focus on higher-value activities such as financial analysis, business advisory services, risk management, forensic investigations, sustainability reporting, and corporate governance. Nevertheless, the successful adoption of AI depends on adequate digital infrastructure, supportive regulatory frameworks, organizational readiness, cybersecurity preparedness, and continuous professional development. Overall, the study concludes that Artificial Intelligence represents a transformative force that is reshaping accounting practice in Nigeria. Organizations that strategically invest in AI technologies, digital infrastructure, and human capital development are more likely to achieve improved accounting performance, enhanced financial reporting credibility, stronger fraud prevention mechanisms, greater operational efficiency and sustainable competitive advantage in the evolving digital economy.

Recommendations

Based on the findings and conclusion of the study, the following recommendations are made:

1. Organizations should increase investment in Artificial Intelligence technologies such as machine learning, robotic process automation, predictive analytics, and cloud-based accounting systems to improve accounting efficiency and organizational performance.
2. Professional accounting bodies, particularly the Institute of Chartered Accountants of Nigeria (ICAN) and the Association of National Accountants of Nigeria (ANAN), should incorporate Artificial Intelligence, data analytics, blockchain technology, and digital accounting into their professional training and continuing professional development programmes.
3. Universities, polytechnics, and other tertiary institutions should review and modernize accounting curricula to include courses in Artificial Intelligence, machine learning, data analytics, cybersecurity, cloud accounting, and emerging digital technologies to equip graduates with relevant competencies.
4. Government should strengthen digital infrastructure by improving broadband internet access, stable electricity supply, cloud computing facilities, and digital connectivity to facilitate wider adoption of AI technologies across organizations.
5. Regulatory authorities should develop comprehensive policies and ethical guidelines governing the use of Artificial Intelligence in accounting practice to ensure transparency, accountability, data privacy, and compliance with applicable accounting and auditing standards.
6. Organizations should invest in cybersecurity infrastructure and establish robust AI governance frameworks to protect financial information from cyber threats, unauthorized access, and data breaches associated with increased digitalization.
7. Accounting firms and corporate organizations should continuously retrain their accounting personnel in emerging AI technologies to enhance professional competence, improve productivity, and maintain global competitiveness.
8. Management should integrate AI-enabled decision-support systems into strategic planning, budgeting, financial forecasting, risk management, and performance evaluation processes to improve the quality and timeliness of managerial decisions.
9. Organizations should encourage collaboration among technology developers, accounting professionals, academic institutions, policymakers, and regulators to facilitate knowledge sharing and accelerate responsible AI adoption in accounting practice.
10. Future researchers should investigate the moderating effects of organizational culture, digital maturity, cybersecurity readiness, regulatory quality, and technological innovation on the relationship between Artificial Intelligence and accounting practice across different sectors of the Nigerian economy.

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