

## Disruptive Technologies and Financial Reporting Process: A review of literature

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### Abstract

This study investigates how disruptive technologies specifically blockchain and artificial intelligence (AI) are transforming the Financial reporting process (financial reporting and auditing). The research adopted a descriptive and qualitative approach, relying on an extensive review of recent theoretical and empirical literature from reputable journals and institutional reports. The study was anchored on three theoretical frameworks: the Technology Acceptance Model (TAM), Technology Organization Environment (TOE) framework, and Resource Dependence Theory (RDT), which collectively explain the behavioural, organizational, and strategic factors influencing the adoption of blockchain and AI in financial reporting.

The findings reveal that blockchain enhances transparency, data integrity, and trustworthiness through its immutable ledger, while AI improves efficiency, accuracy, and fraud detection through automation and predictive analytics. The integration of these technologies redefines the roles of accountants and auditors, shifting focus from routine data entry to strategic analysis and decision-making. However, the study identifies key challenges such as regulatory uncertainty, high implementation costs, ethical concerns, data privacy issues, and limited digital competence, particularly among small and medium-sized enterprises.

Based on these findings, the study recommends that regulators establish clear frameworks and standards for technology integration, accounting professionals engage in continuous

digital training, and organizations invest in technological infrastructure and ethical governance. It further calls for empirical research to measure the quantitative impact of blockchain and AI on financial reporting quality, transparency, and performance outcomes.

**Keywords: AI, Block Chain, Financial reporting quality**

## 1.0 Introduction

The convergence of blockchain's immutable ledger capabilities with AI-driven analytics is poised to enhance reporting accuracy, streamline audit trails, and lower compliance costs, thereby reshaping the accounting ecosystem (Danach et al., 2024; Kanaparathi, 2024; Artene et al., 2024). Specifically, blockchain's decentralized ledger is expected to mitigate inefficiencies and fraud risks while enhancing transparency and data integrity in financial statements (Fahdil et al., 2024). Moreover, emerging research highlights that the synergistic deployment of blockchain and AI can simultaneously curtail accounting costs and elevate the precision of real-time financial disclosures, while AI-enabled analytics further accelerate data processing and insight extraction (Kanaparathi, 2024). Furthermore, blockchain's immutable audit trail combined with AI-powered automation of repetitive accounting tasks promises to free professionals for higher-value analysis, thereby strengthening both regulatory compliance and strategic decision-making (Fahdil et al., 2024; Bin-Nashwan et al., 2024; Antwi et al., 2024). Empirical evidence indicates that blockchain adoption improves the trustworthiness and transparency of financial information, and its integration with AI further boosts data precision and processing efficiency (Fahdil et al., 2024) (Atadoga et al., 2024).

Despite these opportunities, the integration of blockchain and AI into Nigeria's accounting ecosystem is still in its infancy, facing barriers such as poor technological infrastructure, regulatory uncertainty, and skill gaps among accounting professionals (Akinbowale, Klingelhofer & Zerihun, 2020). Moreover, the disruptive nature of these technologies raises concerns about auditor independence, professional judgment, and ethical responsibility (Awad et al., 2025; Bin-Nashwan et al., 2024). It is also crucial to acknowledge that the advent of this disruptive technology that have brought about dynamism and volatility of the corporate environment in the 21st century are also influenced by a variety of recent global developments that are both within and beyond the accounting profession (Jeremiah & Daferighe, 2019). In light of this study examines the impact of blockchain and artificial intelligence integration on the future of auditing and financial reporting in Nigeria, focusing on both the opportunities and challenges they present. It aims to contribute to the emerging discourse on how disruptive technologies are reshaping accounting practices in developing economies, while also offering practical insights for policy-makers, regulators, and practitioners navigating this digital transformation.

## 2.0 Disruptive Technology

Disruptive technologies are innovations that significantly alter or even replace traditional methods of performing tasks within an industry, often leading to new business models, efficiencies, and ways of creating value (Christensen, 1997). Bower & Christenson (1995) asserted that disruptive technology alters the performance indicators that organisations use to

compete. Going by the work of Bower and Christenson (1995) this paper is of the opinion that disruptive technology also has an impact on how organisations and industries operate. Christensen (2013) defines disruptive technology as a process of innovation that replaces preceding technologies. Thus disruptive technology could refer to an innovation that significantly changes the way industries, businesses, or consumers operate.

In accounting, disruptive technologies are redefining the production, assurance, and use of financial information by challenging long-standing practices and replacing them with technology-driven processes (Obiora,2025). These technologies include blockchain, artificial intelligence (AI), robotic process automation (RPA), big data analytics, and cloud computing. Among them, blockchain and AI have emerged as particularly influential in shaping the future of financial reporting and auditing (Deloitte, 2020).

The accounting profession has historically relied on standardized, manual, and labor-intensive processes such as ledger recording, reconciliations, and sampling in audits (Jena,2024). These methods, while effective in traditional business environments, are increasingly inadequate in handling the complexity, speed, and volume of financial transactions in the digital economy (Moll & Yigitbasioglu, 2019). Disruptive technologies address these limitations by offering solutions that enhance efficiency, transparency, accuracy, and timeliness.

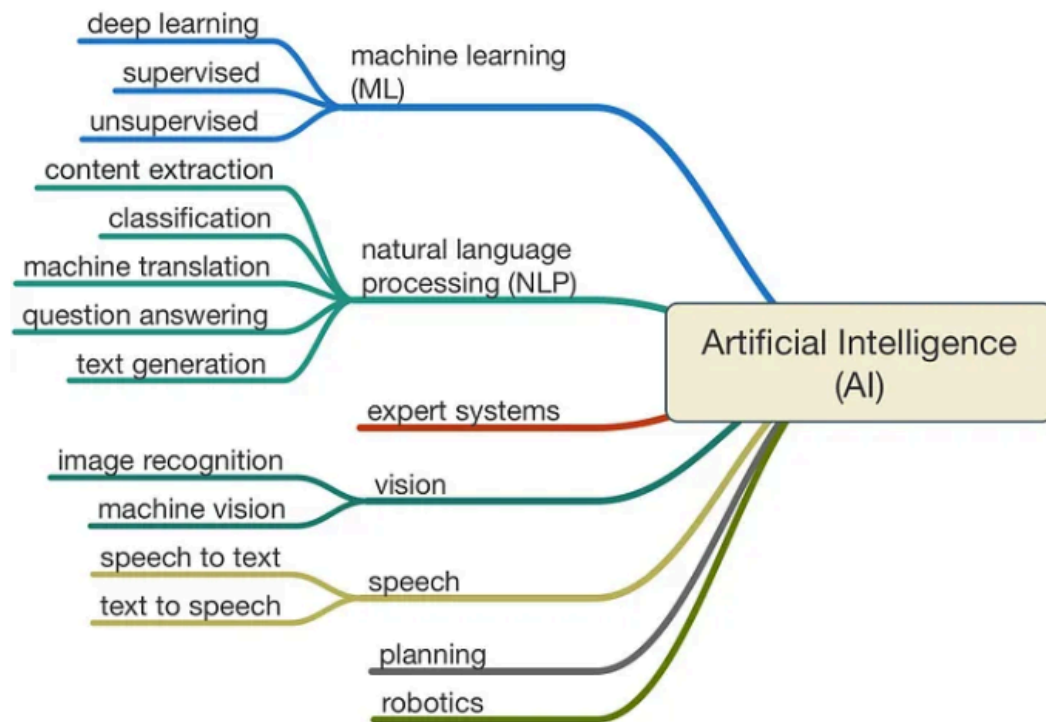
One of the most significant disruptive technologies in accounting is artificial intelligence (AI). AI-powered systems can perform tasks such as data entry, invoice processing, reconciliation, and even auditing with high speed and accuracy. For example, AI can analyze large financial datasets to detect errors, predict trends, and identify fraud patterns that might be overlooked by humans. This automation reduces the time accountants spend on repetitive work, allowing them to focus on higher-level functions such as financial analysis, risk management, and strategic planning (Kokina & Davenport, 2017).

Blockchain technology is another major disruptor in the accounting profession. It provides a secure, transparent, and tamper-proof ledger system where transactions are recorded in real time. These features allow accountants and auditors to move away from repetitive work toward higher-value activities like strategic analysis and decision-making. Thus, these innovations challenges the conventional reliance on intermediaries and reconciliations, thereby streamlining financial processes and improving stakeholder trust (Dai & Vasarhelyi, 2017). This in turn enhances the reliability and integrity of financial records, reducing the need for third-party verification (Rozario & Thomas, 2019). In auditing, blockchain could enable continuous auditing, where financial information is verified instantly, improving transparency and efficiency (Appelbaum et al., 2020). However, it also challenges traditional auditing models and demands new skills from accountants to understand and audit blockchain-based systems (Rozario & Thomas, 2019).

No doubt the impact of disruptive technologies on the accounting profession is both positive and challenging. On the positive side, they enhance efficiency, reduce errors, and provide new opportunities for innovation. Accountants can now offer more value-added services,

such as business advisory, sustainability reporting, and risk analysis. On the other hand, these technologies demand new competencies, including digital literacy, cybersecurity awareness, and data analytics skills. Accountants who fail to adapt risk becoming obsolete in a rapidly changing digital environment.

## 2.1 Artificial Intelligence



Artificial intelligence (AI) is the process of developing computer systems and computers capable of doing activities that require human-like intellect, such as problem solving, learning, decision-making, and sensing (Akpan,2023). AI uses enormous volumes of data to discover patterns and make predictions, allowing it to handle complicated issues and automate processes without requiring explicit programming for each case. This area combines different fields, including computer science, data analytics, and neurology, to create intelligent software and systems that can interact with their environment and achieve specified goals (Awan,2021).

## 2.2 Aspect of Artificial Intelligence

**Machine Learning (ML):** It is a method where the target(goal) is defined and the steps to reach that target is learned by the machine itself by training(gaining experience).For example to identify a simple object such as an apple or orange (Erazo-Castillo,2023). The target is achieved not by explicitly specifying the details about it and coding it but it is just as we teach a child by showing multiple different pictures of it and therefore allowing the machine to define the steps to identify it like an apple or an orange.

**Natural Language Processing (NLP):** Natural Language Processing is broadly defined as the automatic manipulation of natural language, like speech and text, by software. One of the

well-known examples of this is email spam detection as we can see how it has improved in our mail system (Kannan,2023).

**Vision:** It can be said as a field which enables the machines to see. Machine vision captures and analyses visual information using a camera, analogue-to-digital conversion, and digital signal processing (Adusei, 2022). It can be compared to human eyesight but it is not bound by the human limitation which can enable it to see through walls(now that would be interesting if we can have implants that can make us see through the wall). It is usually achieved through machine learning to get the best possible results so we could say that these two fields are interlinked (Nkrumah, D., & Larbi,2022).

**Robotics:** It is a field of engineering focused on the design and manufacturing of robots. Robots are often used to perform tasks that are difficult for humans to perform or perform consistently (Wusu, & Antwi, 2021). Examples include car assembly lines, in hospitals, office cleaner, serving foods, and preparing foods in hotels, patrolling farm areas and even as police officers. Recently machine learning has been used to achieve certain good results in building robots that interact socially (Sophia).

Narrowing down to financial reporting (accounting and auditing), Artificial Intelligence (AI) involves using machine learning, automation, and intelligent technologies to transform financial processes by automating routine tasks, enhancing fraud detection, streamlining financial reporting, and improving strategic decision-making (Tetteh, & Amankwah, 2021). AI enables accountants to handle large volumes of data more efficiently, minimize human errors, identify anomalies in financial data, and focus on higher-value strategic tasks, thereby increasing overall efficiency and accuracy within accounting departments (Adusei, 2022).

Artificial Intelligence (AI) has become a transformative force in financial reporting, reshaping how organizations capture, process, analyze, and present financial data. AI refers to computer systems designed to simulate human intelligence processes such as learning, reasoning, and decision-making (Russell & Norvig, 2021). Within financial reporting, AI applications are increasingly being deployed to enhance accuracy, efficiency, and decision relevance.

One of the most significant contributions of AI is its ability to automate repetitive accounting tasks. Traditionally, processes such as invoice matching, transaction classification, and reconciliations were time-consuming and prone to human error. With AI-powered systems, these functions can be executed with minimal supervision, thereby improving reporting speed and reducing costs (Kokina & Davenport, 2017). This automation enables accountants to focus more on strategic analysis and decision support rather than routine data entry.

Beyond automation, AI offers predictive and analytical capabilities that improve the quality of financial information. Through techniques such as machine learning, AI can identify patterns in large datasets, forecast future financial outcomes, and detect anomalies that may signal fraud or misstatements (Appelbaum et al., 2020). This capacity enhances the reliability of reports and supports proactive risk management. For example, AI-based anomaly detection

systems can flag unusual transactions in real time, allowing organizations to respond promptly to potential irregularities.

Furthermore, AI is revolutionizing auditing practices. Audit firms increasingly employ AI tools to analyze full populations of financial data rather than relying on sample testing, thereby improving audit assurance (Issa et al., 2016). This shift from traditional sampling methods to comprehensive data analysis enhances transparency and reduces the likelihood of material misstatements escaping detection.

However, the integration of AI into financial reporting is not without challenges. Issues of algorithmic transparency, data privacy, and ethical considerations remain prominent. Stakeholders must be able to understand and trust AI-generated outcomes to ensure accountability. Additionally, the adoption of AI requires substantial investments in infrastructure and specialized expertise, which may not be feasible for all firms (Moll & Yigitbasioglu, 2019).

Overall, AI has the potential to redefine financial reporting by increasing efficiency, accuracy, and strategic value. As regulatory frameworks evolve and professional competencies expand, AI is likely to become a core component of financial reporting systems in the future.

### **2.3 Block Chain Technology**

Blockchain technology has emerged as one of the most disruptive innovations influencing the future of financial reporting. A blockchain is a decentralized, distributed ledger that records transactions across a network in a secure, transparent, and immutable manner (Tapscott & Tapscott, 2016). Its unique characteristics, including consensus validation, cryptographic security, and immutability of records, make it particularly relevant to the accounting and auditing professions.

One of the most significant contributions of blockchain to financial reporting is the enhancement of transparency and reliability. Since blockchain records cannot be altered retroactively without consensus, financial data stored on the ledger is less prone to manipulation or fraudulent alterations (Dai & Vasarhelyi, 2017). This feature ensures that stakeholders have access to a verifiable and tamper-proof record of financial transactions, thereby increasing trust in financial statements.

Blockchain also has the potential to reduce transaction and reconciliation costs. In traditional financial systems, multiple parties often maintain separate records of the same transaction, which necessitates time-consuming reconciliations. A shared blockchain ledger can eliminate these redundancies, enabling real-time verification and streamlined financial reporting (Schmitz & Leoni, 2019). This efficiency could accelerate the reporting cycle and provide stakeholders with more timely financial information.

Furthermore, blockchain technology is transforming the audit function. Continuous auditing, in which transactions are validated and recorded instantaneously, becomes feasible through blockchain integration (Rozario & Thomas, 2019). This reduces auditors' reliance on

sample-based testing and enables full-population verification, thereby enhancing audit assurance and reducing the risk of undetected errors or fraud.

Despite its advantages, blockchain adoption faces challenges. Issues such as scalability, interoperability of different blockchain platforms, regulatory uncertainty, and the high costs of implementation hinder widespread usage (Pimentel & Boulianne, 2020). Additionally, while blockchain ensures data integrity, it does not guarantee the accuracy of the information initially entered into the system, creating a “garbage in, garbage out” risk (ICAEW, 2018). Blockchain has the potential to fundamentally reshape financial reporting by enhancing trust, reducing costs, and enabling real-time assurance. However, its successful integration depends on regulatory frameworks, technological standardization, and the readiness of accounting professionals to adapt to this paradigm shift.

### **3.0 Theoretical Review**

AI technology is not widely adopted due to worries about its impact on financial reporting accuracy, auditing efficiency, and knowledge asymmetry between accounting and auditing firms (AAFs) and stakeholders (Baio & Hussain, 2024). Therefore, providing a thorough understanding of these dynamics is crucial for assessing the overall value and implications of AI in the financial and auditing landscape in light of these, a model that integrates three key aspects of technology adoption: technology-organization-environment (TOE), technology acceptance model (TAM), and resource dependence theory (RDT), originally developed by Tornatzky and Fleischer (1990), Davis (1989), and Pfeffer and Salancik (1978) was examined. This research focusses on executive professionals and utilises Davis's (1989) TAM to measure individual adoption of information technology. We used the Tornatzky and Fleischer (1990) TOE paradigm to investigate AI as a developing technology in an organisational environment. Finally, we used the Pfeffer and Salancik (1978) RDT to build an AI adoption model based on the belief that AI will have a substantial impact on the survival of financial and professional organisations, including AAFs. Each of these models is reviewed below

#### **TAM Model**

Davis' (1989) TAM has been studied extensively for its impact on innovation, e-business, service acceptance, and new technologies. This is the most commonly used hypothesis in research on technology acceptability among individuals. According to Davis's (1989) paradigm, consumers adopt new technologies based on their perceived usefulness and simplicity of use. According to Davis (1989), perceived usefulness refers to an individual's belief that adopting a specific method would improve their work performance. He applied many theories, including self-efficacy, innovation, and cost-benefit paradigms, to understand how perceived usefulness influences technology uptake by end-users.

According to Davis (1989), perceived ease of use is the degree to which a person believes that implementing a certain system would be effortless. People's propensity to accept new technology is significantly influenced by these important factors.

### **TOE Model**

The TOE framework was first presented by Tornatzky and Fleischer in 1990. Technological readiness, organisational readiness, and external environmental readiness are the three business structural settings that TOE represents and which influence the acceptance and use of technological innovation. All internal and external technologies relevant to an organisation, including equipment, market technology, and current business practices, are included in technological readiness. The ecological elements influencing a business's operations, such as its industry composition, regulatory environment, and relationships with rivals and governmental bodies, are all included in external environmental preparedness.

The TOE framework was first created to direct the integration and acceptance of business technology breakthroughs. Since then, it has been used as a useful analytical framework for IT and information system adoption research (Tornatzky & Fleischer, 1990). Notably, the TOE framework serves as the foundation for the majority of earlier studies on businesses' IT adoption (Kwak et al., 2023)

### **RDT Model**

According to the RDT proposal, which was initially advanced by Pfeffer and Salancik in 1978, organisations must make the appropriate choices and acquire the necessary resources in order to survive and overcome the unpredictability of their environment. In other words, organisations need to be able to reduce their dependency on natural resources, create a friendly climate within the company, and make decisions that support ecological management. According to Pfeffer and Salancik (2003), the RDT identifies three prerequisites for resource dependency: resource significance, choice over resource allocation and consumption, and resource management concentration. They claimed that the resource's worth is determined by the transaction's criticality and relative size. The relative magnitude is the percentage of the organization's total resources that are used.

The capacity to operate without a resource is known as criticality, and the resource that is used the most is considered significant. An organization's choice on how to allocate and use its resources is what gives it power. The acquisition of power can be attributed to a number of factors, including an organization's direct possession of the resources, their accessibility, their ability to shape their actual use, and its authority to create relevant rules and regulations.

Concentration of resource control, where resources are owned by a few organisations, increases reliance on them. If a small number of companies provide vital resources, other organisations that depend on these resources are forced to rely on a small number of providers. When there are available alternative providers, resource dependency is low; when there are none, resource dependence increases.

An examination of each of this model shows that each of them have their distinct features. However, to offer a thorough framework for comprehending the complex nature of AI adoption in auditing and accounting, TAM, DOI, TOE, and RDT must be integrated. TAM DOI emphasises individual-level acceptance, highlighting the ways in which end users'

decisions to embrace AI technology are influenced by perceived utility, relative benefit, and ease of use. The organisational and environmental settings are captured by TOE, which addresses elements including organisational preparedness, technology infrastructure, and regulatory restrictions that affect AI adoption at the organisational level.

Last but not least, RDT enhances both models by adding the strategic aspect of resource acquisition and emphasising how businesses use AI to lessen their reliance on outside variables, increase productivity, and resolve information asymmetry. Every model complements the others: RDT explains the strategic reasons for adoption decisions, making sure that all pertinent levels are included in the study, TOE offers insights into the organisational environment that either facilitates or inhibits adoption, and TAM and DOI explain individual adoption behaviours.

Prior research has extensively used the combination of TAM and TOE, indicating its complimentary nature in comprehending technology adoption (Bouteraa, Chekima, et al., 2024). Gangwar et al. (2015), for example, effectively used both frameworks to examine the adoption of cloud computing, demonstrating the interaction between organizational-environmental variables (TOE) and individual-level views (TAM). In a similar vein, Chatterjee et al. (2021) examined AI adoption by combining TAM and TOE and discovered that individual acceptability and organisational preparedness are important factors in technology uptake. The strategic reasons for technology adoption, especially in resource-dependent industries, have also been explained by RDT (Pfeffer & Salancik, 2003). Narrowing down to Nigeria which is a developing country, combining these three models to form a triangulated framework to examine the effect of disruptive technologies on the Future of Financial Reporting with emphases on accounting and auditing

#### **4.0 Empirical Review**

In extant literature, the issue of disruptive technology and financial reporting has been addressed from three major context which are environmental context, organisational context and technological context.

Empirical studies on disruptive technologies in accounting and financial reporting have gained significant attention in recent years. Much of this research investigates how blockchain and artificial intelligence (AI) are transforming reporting processes, audit practices, and decision-making.

Recent empirical investigations reveal that AI-driven analytics substantially enhance anomaly detection and predictive risk assessment in financial reporting, thereby strengthening corporate governance and decision-making processes (Awad et al., 2025). For instance, Dai and Vasarhelyi (2017) conducted one of the pioneering empirical investigations into blockchain adoption in accounting, showing that distributed ledger systems enhance transparency, reduce reconciliation costs, and enable real-time verification of transactions. Similarly, Rozario and Thomas (2019), in their study on blockchain-based audits, provided evidence that smart contracts can automate compliance testing and reduce audit risk, thereby improving the credibility of financial reporting.

In the context of AI, Kokina and Davenport (2017) empirically demonstrated that AI-powered tools can perform complex analytical procedures traditionally conducted by auditors. Their findings indicate that AI not only increases efficiency but also improves anomaly detection in large financial datasets. Supporting this, Appelbaum et al. (2020) found through survey-based evidence that data analytics and AI integration significantly enhance auditors' ability to conduct predictive and prescriptive analyses, thereby shaping the future of financial reporting.

Furthermore, Pimentel and Boulianne (2020) reviewed blockchain adoption empirically across organizations and concluded that while blockchain offers immense potential for immutable and verifiable records, its large-scale adoption is hindered by regulatory uncertainty and lack of standardization. Similarly, Moll and Yigitbasioglu (2019) examined how internet-based technologies and AI reshape accountants' roles, showing empirically that professionals are moving toward advisory and analytical functions rather than routine bookkeeping.

Bonsu, Roni, and Guo (2023) This study examined the influence of big data analytics on several accounting operations in Nigeria. A study of 151 accountants using multiple regression revealed that using big data significantly improves the quality of work. Financial reporting, performance evaluation, and fraud risk management. Using big data improved audit evidence and fraud detection in Nigerian organisations. The authors conclude that Nigerian accountants have a competitive edge based on big data.

The influence of AI-based analytics on the accuracy of financial reporting was examined by Mbonigaba Celestin and Gidisu (2023), who surveyed Ghanaian accounting professionals on the subject. The authors analysed the data gathered by 68 government auditors using regression, chisq tests, and t-tests. They say that when AI was implemented, the incidence of accounting mistakes decreased by 18% to 8%, fraud detection rates increased by almost 60%, and the time between reporting activities decreased from 15 days to 6 days. According to the paper, the application of AI analytics significantly improved accuracy and transparency while reducing errors and frauds in Ghanaian public sector reporting. Obi and Anaeye (2023) looked at Nigerian accountants and how AI is used in accounting. With the use of a questionnaire and logistic/t-tests, the poll, which featured 20 purposively chosen Nigerian accountants, revealed that while most of them are unaware of AI technologies, those who are already familiar with them claim that they improve efficiency and decision-making. Despite low average knowledge, the impact of the researched AI element on job productivity was discovered and confirmed ( $p < 0.05$ ). The authors suggest favourable regulations and training as ways to close the gap.

Umoren, Ukpeh, and Ewang (2024) assessed how blockchain technology affected accounting procedures. It has been determined that blockchain may improve transparency, security, and efficiency in blockchain accounting in Nigeria based on responses to constructed questionnaires from 86 experts who are accountants and the founders of blockchain, with responses utilising both descriptive and inferential statistics. Respondents claimed that ledgers made possible by blockchain decreased fraud and made audit trails easier. The

authors also draw the conclusion that blockchain technology can greatly enhance the accuracy of financial records kept by Nigerian businesses.

Recent research shows that social media impacts investor decisions, and AI-based analytics improves predictive modelling for stock market behaviours (Awad et al.,2025). AI-driven models help financial analysts and institutional investors comprehend large quantities of unstructured data, resulting in better decision-making.

Masuke et al. (2025) conducted interviews with twenty-four management accountants in Namibia, Zimbabwe, and South Africa. The usage of big data is growing, which is shifting the function of accountants to include strategy and data analysis. According to the responders, big data improved decision-making, real-time data analysis, and budget simplicity; nonetheless, data analytics upskilling is required. In general, it has been noted that the use of big data has improved strategic management accounting in Southern African businesses.

The impact of AI on audit quality was examined by Akpan (2024). To find out how AI affected audit judgements, a survey of 70 registered auditors was conducted using regression analysis. While there was no discernible effect on the amount of time needed to utilise audit judgements, it was found that the application of AI significantly improved audit correctness and dependability ( $\beta=0.417$ ,  $p<0.01$ ). AI-assisted audits were reported to have less auditor control and a higher degree of confidence. Overall, the authors discover that AI enhances the quality of audits in Nigeria's Big Four firms.

According to the study by Aliyu & Iheon (2025), which offers a quantitative analysis of how AI is transforming the financial services sector, the adoption of AI is likely to yield high returns in terms of operational and customer satisfaction aspects because jobs have become automated and customers are happy with the personalised services. This conclusion is based on regressions of the 2015–2024 data of the banks and insurance firms in their sample. The inefficiency of the infrastructure and regulatory ambiguity, however, also impede the broader deployment of AI, according to the authors. To use AI to innovate and embrace inclusivity in Nigerian finance, they recommend training and policymaker support.

Adopting AI may improve financial and HR performance through data-driven insights, as seen in digital transformation programs in education (Awad et al.,2025). Using AI and blockchain in financial security improves reporting integrity, detecting fraud and ensuring compliance (Awad et al.,2024a).

AI-driven financial reporting and automation necessitate continual regulatory scrutiny and corporate governance structures (Lehner et al.,2023). Addressing these concerns is critical for building confidence in AI-driven financial models and maintaining financial integrity and decision-making neutrality.

Taken together, these empirical studies provide strong evidence that disruptive technologies are not only reshaping the technical processes of financial reporting but are also redefining the skill sets and roles of accounting professionals. However, the empirical literature also

emphasizes challenges such as regulatory gaps, high implementation costs, and organizational resistance to change.

## 5.0 Conclusion

This study has examined the transformative role of disruptive technologies particularly blockchain and artificial intelligence (AI) in reshaping the landscape of financial reporting and auditing. The convergence of these technologies is revolutionizing traditional accounting practices by enhancing accuracy, transparency, and efficiency in financial data processing and disclosure. Blockchain's decentralized and immutable ledger promotes trust and auditability, while AI's analytical and predictive capabilities enable real-time insights and improved decision-making across accounting functions. Together, they offer a pathway toward continuous auditing, fraud reduction, and enhanced compliance with regulatory standards.

However, the findings also highlight key challenges, including algorithmic opacity, ethical concerns, data privacy risks, regulatory uncertainty, and high implementation costs especially for small and medium-sized enterprises. Overcoming these barriers will require coordinated efforts among regulators, technology developers, and accounting professionals to establish clear standards, enhance digital competencies, and promote transparency in algorithmic decision-making. In essence, blockchain and AI are not merely tools of efficiency; they represent a paradigm shift that redefines the purpose of financial reporting from retrospective record-keeping to proactive, value-driven insight generation.

It is pertinent to note most of the current literature in this study relied heavily on conceptual discussions, case studies, or exploratory reviews, with limited quantitative evidence on how blockchain and artificial intelligence (AI) concretely influence financial reporting quality, audit efficiency, and decision-making outcomes particularly within developing economies such as Nigeria. Thus, there remains a compelling need for empirical investigation to validate and extend the theoretical assertions presented.

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