INFLUENCE OF BLOCKCHAIN TECHNOLOGY ON FINANCIAL TRANSPARENCY IN NIGERIA

Odumusor, Charles Joseph, Ph.D.[1]
(Department of Accountancy, University of Cross River State (UNICROSS), Calabar, Cross River State, Nigeria)
odumusor@gmail.com
charlesodumusor@unicross.edu.ng

Kekong Leo Ekpabi[2]
(Department of Accountancy, University of Cross River State (UNICROSS), Calabar, Cross River State, Nigeria)
kekongleo@yahoo.com

ABSTRACT

Financial transparency has continued to be a challenge in Nigeria's financial environment because of poor disclosure practices, asymmetry of information, and lack of trust among financial stakeholders. However, to address these challenges, blockchain technology has been identified as a digital platform that has the potential to revolutionize the recording, verification, and disclosure of financial information. This study investigates the impact of blockchain technology on financial transparency in Nigeria, with particular focus on the integration of blockchain technology, its distributive or decentralized aspect, and accounting systems based on blockchain technology. Using Agency Theory and Trust Theory as theoretical frameworks, this study is non-empirical and based on a literature review, which synthesizes findings from accounting, finance, and information systems literature, with particular focus on empirical evidence from Nigeria. The literature review shows that blockchain technology improves financial transparency through the creation of immutable, real-time, and verifiable records that are less prone to manipulation, reporting errors, and discretionary control of financial information. Evidence from the banking, telecommunication, manufacturing, and financial services industries in Nigeria shows that the adoption of blockchain technology improves the integrity of financial reporting, auditability, corporate governance, and financial stakeholder trust. However, the study also reveals that blockchain technology does not operate independently in addressing transparency challenges. Rather, its success relies on the extent of its penetration in financial processes. The study reveals that blockchain technology is a revolutionary technology for enhancing financial transparency in Nigeria. Nevertheless, its transparency-enhancing attributes are conditional.

Keywords: Blockchain technology; Financial transparency; Blockchain-based accounting; Distributed ledger; Financial reporting; Nigeria.

Introduction

Financial transparency has been recognized as an important issue in the contemporary financial architecture, especially in the emerging economies where financial disclosure practices are poor, there are information asymmetry problems, and trust is lacking. These are some of the key concerns facing the financial architecture in Nigeria, where financial transactions are opaque, and financial reporting is slow. The emergence of blockchain technology as an immutable digital ledger has the potential to change the way financial transactions are recorded, shared, and verified. The ability to record financial transactions in real-time using the blockchain architecture changes the way financial data are generated and verified. The change is not just incremental but fundamental in the way financial data are generated and verified compared to the conventional financial accounting architecture (Adewale et al, 2022; Varma, 2019). Therefore, the change in financial transparency using the blockchain architecture is not just the digitization of financial transactions but the fundamental change in the way financial transparency is configured by incorporating accountability into the transaction architecture itself (Qin, 2022).

The academic discourse on blockchain technology and financial transparency has developed rapidly over the last decade or so, following from earlier debates on digitalization in finance. The first wave of studies focused on blockchain technology's technical potential for fraud reduction, audit trails, and regulatory compliance (Trivedi, Mehta, & Sharma, 2021; Alkan, 2021). More recent studies have expanded on these findings by showing blockchain technology's potential for improving financial reporting quality, information manipulation reduction, and trust-building between firms, governments, and investors (Fang et al., 2023; Rawashdeh, 2025). Beyond financial reporting, studies on supply chain finance and international trade demonstrate blockchain technology's potential for transaction cost reduction in finance in general (Ko, Lee, & Ryu, 2018; Zheng, Luo, & Zhu, 2025). While this emerging literature on blockchain technology's potential for financial transparency reveals its potential for increasing transparency in financial reporting and transactions, it also recognizes the limitations and constraints on its application in practice (Sedlmeir et al., 2022). Nevertheless, the majority of the existing literature has focused on developed countries or industry-related use cases, creating significant contextual knowledge gaps in the context of emerging markets. The Nigerian financial sector is characterized by regulatory fragmentation, infrastructural challenges, and the unbalanced adoption of digital technology, which makes the transparency-forcing role of blockchain more complex. The existing literature in Nigeria indicates that distributed ledger technology has the ability to minimize errors in financial reporting, improve the integrity of financial reporting, and improve corporate governance, especially in the banking and listed sectors (Sowunmi, Mlanga, & Oriakpono, 2024; Aro, Nweze, & Avickson, 2024). Existing literature also emphasizes the significance of blockchain technology in improving the competitive advantage and efficiency of financial service providers in Lagos (Temitayo, Adedayo, & Stephen, 2024). Nevertheless, the majority of the existing literature emphasizes outcomes rather than the mechanisms that blockchain uses to transform transparency practices.

In the Nigerian scenario, financial transparency is not only a technical problem but also an institutional one, which is influenced by enforcement capabilities, managerial intentions, and public trust. In previous studies on financial transparency in Nigeria, the focus has been on regulatory requirements, governance, and transparency, without much emphasis on the role of emerging technologies in shaping these aspects (Balogun, Ogunsola, & Samuel, 2023; Chimin, 2024). For example, although the immutable nature of blockchain technology may limit opportunistic actions, its efficacy is influenced by adoption strategies, compatibility with existing infrastructure, and the institutional willingness to share control (Hussain et al., 2024; Olomukoro, 2023). In a similar manner, although transparency is inextricably tied to the quality of financial and banking services, the mechanisms by which blockchain technology improves this relationship have not been adequately investigated in the Nigerian institutional context (Amarna et al., 2025). In this context, blockchain technology may be conceived as an infrastructure for thinking about financial transparency in Nigeria rather than a technology for financial transparency. Based on insights from accounting theory, finance theory, and information systems theory, this study conceives blockchain technology as a technology for embedding transparency in financial processes. Situating the adoption of blockchain technology in Nigeria's financial landscape aims to bridge the gap between global theory and local practice, which could contribute to an enhanced understanding of how blockchain technology influences financial transparency in Nigeria's financial landscape.

Objectives of the study

The general objective of this study was to examine the influence of blockchain technology on financial transparency in Nigeria. The specific objective was to:

1. Ascertain the effect of blockchain technology integration on financial transparency in Nigeria
2. Examine the effect of blockchain distributive element on financial transparency in Nigeria
3. Examine the influence of blockchain-based accounting system on financial transparency in Nigeria

Literature review

Blockchain technology integration and financial transparency in Nigeria

On the other hand, the integration of blockchain technology has been identified as a critical mechanism in enhancing financial transparency, considering that it allows organizations to use a rule-based structure to record, validate, and disseminate financial information in real-time (Adewale, Olorunyomi, & Odonkor, 2022; Varma, 2019). In the context of financial systems, this technology allows organizations to use a particular technology structure that can enhance the interpretation of financial information, considering that it can offer a clearer audit trail, enhance disclosure reliability, and minimize information asymmetry (Fang et al., 2023; Alkan, 2021). Nonetheless, even though this technology can offer a clearer structure in terms of transparency, it can be noted that the integration of this technology can be associated with particular design choices that can influence transparency outcomes in a differential manner (Sedlmeir et al., 2022). This gives rise to the notion of blockchain integration as an enabler and/or inhibitor of organizational and/or regulatory transparency. As such, empirical research in both the financial and accounting fields has provided evidence for the transparency-enhancing role of blockchain integration. For instance, research has demonstrated that the implementation of blockchain in accounting increases the efficiency and accuracy of financial information, thus promoting trust among investors and regulatory bodies (Rawashdeh, 2025; Iskak, 2024). Similarly, in the banking and financial sector, research has demonstrated that the implementation of blockchain increases the efficiency of business intelligence in the banking sector and minimizes reporting errors, thus promoting transparency in financial information (Ji & Tia, 2022; Sowunmi et al., 2024). Other research in supply chain finance and trade has demonstrated that real-time transparency in financial information, enabled by blockchain integration, minimizes financing costs and promotes trust in financial information (Ko et al., 2018; Zheng et al., 2025). Therefore, it can be deduced that transparency benefits are more significant when blockchain integration is substantive rather than peripheral in nature.

In the case of Nigeria, the integration of blockchain technology assumes great importance owing to the challenges faced by the country, including the lack of enforcement, disjointed reporting, and a lack of trust among the population with respect to financial disclosures. According to studies conducted on Nigeria, the integration of DLT technology improves the integrity of financial reporting, corporate governance, and accountability, especially for financial institutions (Chimin, 2024; Aro, Nweze, & Avickson, 2024). Nevertheless, the literature indicates that the integration of DLT technology might undermine the potential for transparency, especially owing to the lack of infrastructure, regulatory environment, and technical capabilities, which might undermine the potential for transparency (Olomukoro, 2023; Hussain et al., 2024). Like other organizational tools, the integration of blockchain technology assumes the characteristics of a double-edged tool, which might potentially enhance the integration of transparency within the financial systems of Nigeria, but might equally undermine the potential for transparency, depending on the institutional environment within which the integration occurs.

Blockchain distributive element and financial transparency in Nigeria

Essentially, the fundamental definition of blockchain technology is its distributed ledger system, which allows data to be recorded in a decentralized fashion, rather than a centralized system of recording transactions. This distributed nature of the system is what allows for immutability, traceability, and visibility of financial information among all parties that have access to such information. This has been described by Adewale, Olorunyomi, and Odonkor (2022) as the fundamental way in which blockchain technology can be used to enhance financial transparency, as this reduces information asymmetry and managerial discretion in financial reporting. This distributed nature of the system has also been described by Varma (2019) as being fundamental to instilling trust in the financial system, as post-transactional manipulation of data is not possible. Financial transparency, on the other hand, refers to the clarity, accuracy, and accessibility of financial information disclosed to various stakeholders. Empirical evidence has been provided to suggest

that transparent financial reporting can enhance accountability, reduce the incidence of fraud, and increase institutional credibility (Oino, 2019; Amarna et al., 2025).

A number of research papers are emerging that directly link the distributed ledger of blockchain technology to improved financial reporting quality. For example, Qin (2022), Fang et al. (2023), link the shared ledger of blockchain technology to improved accounting information quality through the consistency of transactions from initiation to disclosure. Alkan (2021), on the other hand, views the role of blockchain technology in accounting information systems from a real-time perspective, where distributed ledger verification occurs rather than a periodic approach. Another aspect of the role of blockchain technology in accounting information systems from a governance perspective is presented by Rawashdeh (2025), where it is argued that distributed ledger technology reduces opportunistic behavior through the embedding of transparency into the accounting information reporting system rather than relying on audit mechanisms. This perspective is further supported by Balogun, Ogunsola, and Samuel (2023), who propose a number of models of blockchain technology in auditing, where improved regulatory compliance occurs through the use of distributed ledger technology. This indicates that the transparency facilitated by blockchain technology is not a mere coincidence, but rather a structural consequence of decentralization. Some literature on the experiences of emerging economies offers interesting comparisons to Nigeria's economic environment. Ronaghi & Mosakhani (2022), for instance, show that the application of blockchain technology promotes ethical behavior and organizational transparency by restricting management's discretion over financial information. Another study by Rijal & Saranani (2023) indicates that economic transparency, coupled with increased trust among the public, can be achieved by the application of distributed ledger technology, especially in environments with little supervision. In the field of accounting assurance, Abdennadher et al. (2022) show that the decentralized nature of blockchain technology affects the judgment process by moving away from the end-of-period verification approach to a real-time process of verification embedded within the system itself. Makatha & Assenga (2025) show that the application of distributed ledger technology improves the audit process by increasing its efficiency and transparency, but creates a need to fill the gaps in the skills required for the application of the technology in a developing economy.

The distributive nature of blockchain technology is an important factor in improving financial transparency, as it replaces central control with a shared ledger that can be accessed by multiple parties to access, verify, and validate financial information simultaneously (Varma, 2019; Qin, 2022). In financial systems, especially in emerging economies, the distributive nature of blockchain technology can improve transparency in financial reporting by providing immutable time-stamped records that minimize information asymmetry and the potential for manipulation or selective reporting (Adewale, Olorunyomi, & Odonkor, 2022; Alkan, 2021). In financial systems, especially in emerging economies, the distributive nature of blockchain technology provides real-time visibility of financial transactions, enhances audit trails, and promotes trust among regulators, investors, and other stakeholders in an environment of weak institutional enforcement by the state (Fang et al., 2023; Rawashdeh, 2025). Although the distributive nature of blockchain technology can improve transparency and accountability in financial reporting, it can create some challenges in terms of governance and data interpretation by stakeholders who possess varying degrees of technical ability and who are restricted by permissioned structures that are less open (Sedlmeir et al., 2022). This situates the distributive component of blockchain technology as both a transparency facilitator and a limiting factor if the decentralized nature of the technology is compromised by organizational or regulatory choices. The empirical evidence supports this dual nature of the distributive component in both financial and accounting settings. The literature indicates that distributed ledger technology is effective in reducing errors in financial reporting, improving the quality of disclosures, and increasing investor confidence in financial reports, especially in banking and supply chain finance (Ko, Lee, & Ryu, 2018; Ji & Tia, 2022; Zheng, Luo, & Zhu, 2025).

Nigeria-specific research is increasingly emphasizing the implications of blockchain's distributive feature for addressing the nation's financial transparency issues. In a study on blockchain technology adoption by the Central Bank of Nigeria, Olomukoro (2023) contends that distributed ledgers can play a crucial role in addressing financial transparency issues. In a similar study on digital ledger technology adoption by Nigerian quoted companies' financial reporting, Chimin (2024) asserts that digital ledger technology can improve financial transparency for Nigerian quoted companies in the telecommunication sector. The banking sector also provides empirical support for this argument. Sowunmi, Mlanga, and Oriakpono (2024) contend that distributed ledger technology can improve transparency and reduce error in quoted banks' financial reporting by promoting shared access to consistent financial information. Additionally, Akaegbobi and Nwosu (2025) also finds that adopting blockchain enhances the quality of financial reporting for manufacturing firms in Anambra State, Nigeria, primarily because of the decentralization and verification capabilities associated with it. With regard to corporate governance, Aro, Nweze, and Avickson (2024) suggest that because of the decentralized nature of blockchain technology, transparency can be improved by ensuring better board oversight and access to credible information by various stakeholders. Moreover, Temitayo, Adedayo, and Stephen (2024) highlight that by adopting blockchain technology, financial service providers in Nigeria are able to reap competitive benefits in terms of transparency and customer trust, which also underlines the strategic importance of adopting distributed ledger technology.

Blockchain-based accounting system and financial transparency in Nigeria

Blockchain technology-based accounting systems have thus been identified as a crucial tool to enhance transparency in financial reporting through the introduction of immutable, shared, and contemporaneous records to accounting systems (Varma, 2019; Qin, 2022). By integrating accounting information on blockchain technology platforms, blockchain technology-based accounting systems have been identified as a crucial tool to limit discretionary control over financial information and to enhance the credibility of financial reporting through verifiable audit trails and validation processes (Adewale, Olorunyomi, & Odonkor, 2022; Alkan, 2021). Blockchain technology-based accounting systems have been identified as a crucial tool to limit opportunities to manipulate accounting information and to conceal errors and misstatements in financial reports, as opposed to traditional accounting systems that rely on centralized database systems to verify financial information (Fang et al., 2023; Rawashdeh, 2025). This structural shift in accounting systems has been identified as a crucial tool to revolutionize transparency and trust in financial reporting systems.

Empirical and conceptual research has repeatedly found a positive association between blockchain-based accounting systems and disclosure quality, timeliness, and information accuracy. In the literature, research has found that real-time accounting ledgering increases the transparency and accountability of financial performance and cost savings (Ko, Lee, & Ryu, 2018; Slatvinska et al., 2022). In accounting literature, blockchain technology has been found to increase the quality of accounting information, decrease errors in financial reporting, and increase the effectiveness of audits, as transactions can be traced and tamper-proof (Iskak, 2024; Eyo-Udo et al., 2025). Research has also indicated that when blockchain-based accounting is combined with smart contracts and automated systems, the trust gap between financial preparers and users can be decreased as the need for subjective human judgment and manual reconciliations is minimized (Rawashdeh, 2025; Kukman & Gričar, 2025). Nevertheless, researchers have also indicated that transparency benefits can be undermined by governance structures, system compatibility, and user capability, as inefficient systems can create digital opacity (Sedlmeir et al., 2022).

In the context of Nigeria, there is a growing perception that blockchain-based accounting systems offer a solution to the persistent problems of financial opaqueness, low enforcement, and diminishing trust among stakeholders. From the empirical literature, there is evidence from the banking industry and publicly traded companies in Nigeria that distributed ledger technology for accounting enhances the integrity of financial reporting, reduces errors, and improves compliance with disclosure standards (Sowunmi, Mlanga, & Oriakpono, 2024; Chimin, 2024). However, from the literature focusing on manufacturing and

telecommunication companies, there is evidence that blockchain-based accounting systems enhance the quality of financial reporting and mitigate earnings manipulation by constraining managerial discretion over financial reports (Akaegbobi, 2025; Chimin, 2024). However, there is evidence from the literature that there are limitations to the use of blockchain-based accounting systems, including regulatory, infrastructural, and technical limitations, which undermine the effectiveness of these systems in enhancing financial transparency (Olomukoro, 2023; Hussain et al., 2024). In this respect, blockchain-based accounting systems emerge as a double-edged tool for financial transparency in Nigeria, with the potential to embed transparency and accountability into financial reports, while at the same time being limited by the effectiveness of its implementation.

Theoretical Framework

This study is anchored on two theories, namely, Agency Theory and Trust Theory, which would be used to explicate the role of blockchain technology in promoting financial transparency in Nigeria.

Agency Theory

The Agency Theory was formally stated by Jensen and Meckling in 1976, based on previous research on risk-sharing and contracts in economics. The Agency Theory describes scenarios where one party (the principal) assigns decision-making authority to another party (the agent), which may create conflicts of interest and information asymmetry. In the context of financial reporting, the agent is the manager and accountant, while the principal is the shareholder, regulator, and the general public. When the agent has control over information, there is a possibility of opportunistic behavior that can lead to a lack of financial transparency and accountability.

Blockchain accounting systems are seen to perfectly match the fundamental principles of the agency theory, as information asymmetry and monitoring are addressed. In a blockchain accounting system, a distributed ledger stores transactions, which can only be accessed and recorded in a shared and unalterable manner, thus limiting agents' power to manipulate information (Adewale et al., 2022; Qin, 2022). Moreover, smart contracts facilitate the accounting and monitoring processes, thus eliminating the need for management to monitor and report, as seen in a traditional agency theory context (Rawashdeh, 2025). Research has proven that blockchain accounting systems improve the quality of accounting information, thus eliminating agency theory inefficiencies, as financial information can be accessed and verified by all relevant parties (Fang et al., 2023; Sowunmi, Mlanga, & Oriakpono, 2024).

In the Nigeria, where the problem of agency is compounded by poor enforcement of regulations and traditional worries about financial misrepresentation, the Agency Theory is a robust explanatory tool for the adoption of blockchain technology. Research on Nigerian banks and quoted companies suggests that accounting systems facilitated by blockchain technology enhance reporting accuracy, minimize discrepancies, and enhance regulatory compliance, thus bridging the principal-agent gap (Chimin, 2024; Akaegbobi, 2025).

Trust Theory

Trust Theory can be traced back to the work of Niklas Luhmann (1979), who defined trust as a way of simplifying social complexity and facilitating cooperation in uncertain situations. In organizational and financial settings, trust enables parties to trust information and systems without having to check them all the time. Unfortunately, a series of financial scandals and a lack of transparency in financial reporting have eroded trust in financial institutions in many emerging markets, including Nigeria (Rijal & Saranani, 2023; Amarna et al., 2025). Blockchain technology helps to implement Trust Theory by making transparency and verifiability an intrinsic part of financial systems, thus moving trust from people and institutions to technology-driven processes. By using cryptographic techniques and achieving a consensus, accounting

systems based on blockchain technology enable all stakeholders to verify financial information independently, without having to rely on managerial promises or third-party intermediaries (Varma, 2019; Chen & Bellavitis, 2020). Research evidence indicates that use of immutable ledgers and real-time financial reporting improves trust in financial statements and trust in financial institutions and corporate governance frameworks (Iskak, 2024; Kukman & Gričar, 2025).

In the Nigerian financial system, Trust Theory provides a way of understanding how blockchain technology contributes to increasing trust in financial information disclosed by organizations. The experience of the Nigerian corporate and financial sectors shows that distributed ledger technology increases trustworthiness by minimizing ambiguity and discretion over financial information (Aro, Nweze, & Avickson, 2024; Sowunmi et al., 2024). Therefore, blockchain technology is not only increasing transparency as a technical dimension but also trust as a basic pillar of a sustainable financial system.

2.3 Empirical review

Empirical research on blockchain technology has increasingly demonstrated that its adoption has significant implications for financial transparency, especially in emerging economies such as Nigeria, where problems of poor disclosure, fraud, and trust deficits persist. While much of the existing literature on blockchain technology has been conceptual or has focused primarily on developed economies, recent research from Nigeria has provided empirical evidence of the impact of distributed ledger technologies on financial reporting and governance structures.

One of the first Nigerian-focused research contributions, in the form of conceptual research, was that of Adewale et al., (2022), although this research, while not being an empirical study, paved the way for subsequent research through its identification of the relationship between the features of blockchain, immutability, decentralization, and real-time recording and reporting transparency and compliance with regulations. This research provided a framework for subsequent empirical research, which identified the mechanisms through which blockchain technology constrained managerial discretion and increased the credibility of information reported in financial reports. This framework has been followed by empirical research, such as that of Sowunmi et al., (2024), which examined Nigerian quoted banks and found that distributed ledger technology reduced reporting errors and increased financial reporting integrity. The research identified that transparency in financial reporting was increased through the use of blockchain technology, which minimized post-transaction changes and increased traceability of financial information, which has historically been a problem in Nigeria's banking industry.

Likewise, Chimin (2024) conducted research on telecommunications companies listed on the Nigerian stock exchange and found a positive correlation between the adoption of digital ledger technology and transparency in financial reporting. The study concluded that companies using blockchain-based accounting tools had better transparency in their reporting and were able to comply with reporting standards. The findings suggest that the benefits of transparency offered by blockchain are not restricted to the financial industry but are applicable to other regulated industries in the Nigerian economy as well. In the manufacturing industry, Akaegbobi and Nwosu (2025) conducted research on selected companies in Anambra State, Nigeria, and concluded that the adoption of blockchain technology had a positive and significant influence on the quality of financial reporting. The study concluded that the adoption of blockchain technology resulted in better quality accounting information because it restricted earnings manipulation by the company’s management. The findings are consistent with international research conducted by Fang et al. (2023), which concluded that the adoption of blockchain technology resulted in better quality accounting information due to better internal controls and auditability.

In addition to this, another study that empirically investigated blockchain technology's contribution to corporate governance and accountability in Nigeria is that conducted by Aro et al. (2024). The study found that blockchain technology contributes to stronger corporate governance by enhancing transparency and

accountability. This is an indication that blockchain technology contributes to transparency not only in corporate reporting but also as a component of corporate governance. At a more macro-level, Olomukoro (2023) investigated the possible implications of the implementation of blockchain technology by the Central Bank of Nigeria. As an exploratory study, Olomukoro (2023) offered an empirical contribution to understanding how blockchain technology could contribute to transparency in monetary operations and payment systems by the Central Bank of Nigeria. The study's findings showed that blockchain technology could contribute to transparency in central bank operations and payment systems by enhancing trust among the public.

Moreover, empirical findings from financial service providers based in Lagos will support these findings. Temitayo et al. (2024) found that not only does blockchain technology adoption improve transparency but it also contributes to a competitive advantage. This builds on other empirical findings by Oino (2019), which showed that an increase in levels of disclosure and transparency improves financial performance. This implies that transparency resulting from blockchain technology adoption may have an indirect economic effect. However, other empirical findings from Nigeria suggest that despite the potential for blockchain technology adoption models to enhance transparency in emerging financial markets in Africa, such efforts are hindered by regulatory uncertainty, infrastructure gaps, and technical know-how. This resonates with Sedlmeir et al. (2022), which argued that blockchain technology does not automatically enhance transparency unless supported by appropriate governance structures and user competence.

Gap in the Empirical Studies

Despite these findings, there exist gaps in the literature that need to be addressed empirically. Firstly, while there is a plethora of literature on various sectors like banking, telecommunication, and manufacturing, there is a need to conduct studies that cover various sectors and assess blockchain's effect on financial transparency in Nigeria (Sowunmi et al., 2024; Chimin, 2024; Akaegbobi, 2025). Secondly, while various studies have supported blockchain technology's advantages in error reduction and integrity in reporting, little literature has been written about blockchain's long-run effect on firm performance and investor's confidence (Olomukoro, 2023; Temitayo et al., 2024). Thirdly, little literature has been written about challenges associated with blockchain technology's implementation in Nigeria that can affect transparency and financial reporting (Hussain et al., 2024; Sedlmeir et al., 2022). Finally, little literature has been written about how blockchain technology's adoption changes over time and how it impacts financial transparency in Nigeria (Aro et al., 2024; Sowunmi et al., 2024). All these gaps and challenges form a reason for non-empirical studies like this one that aim to synthesize and interpret existing literature and knowledge.

Conclusion

The aim of this study is to evaluate the impact of blockchain technology on financial transparency in Nigeria, with special emphasis on blockchain integration, its distributive feature, and blockchain accounting systems. Based on both theoretical and conceptual literature, this study demonstrates the potential of blockchain technology in resolving issues of transparency in Nigeria's financial sector. In this regard, blockchain technology has the potential to change the way in which financial data is generated and disclosed in Nigeria. Unlike traditional systems of finance in which there is room for manipulation and control, blockchain technology has the potential to integrate transparency in finance and, in the process, resolve issues of asymmetry and mistrust. In addition, this study demonstrates the potential of blockchain technology in enhancing transparency in finance and accounting systems when it is well integrated and not merely symbolic. In the case of Nigeria, the evidence of its usage in the banking industry, telecommunication industry, manufacturing industry, and financial services industry has shown that it enhances the integrity of reporting and auditability of information. Nonetheless, the study has also demonstrated that blockchain technology does not work in isolation. There are other conditions that have to be met before the technology could work effectively. Without these conditions, the technology may not do anything different from the current situation. Therefore, the conclusion of the study was that blockchain technology has the potential to

act as a revolutionary technology in enhancing financial transparency in Nigeria, but its success depends on its governance and implementation in Nigeria's financial system.

Recommendations

1. Nigerian financial regulators, such as the Central Bank of Nigeria, and other relevant agencies have to build supportive and clear financial and accounting systems based on blockchain technology. This will ensure that the use of blockchain technology truly enhances financial transparency, as opposed to creating a system that may be fragmented or restricted, which may limit transparency.
2. Financial institutions and other corporate organizations have to advance from the current peripheral use of blockchain technology to integrate it into the financial, accounting, auditing, and reporting systems. There should be more focus on blockchain-based accounting systems, which can be used to record financial transactions, verify them, and provide transparency.
3. In order to realize the full potential of transparency associated with the use of blockchain technology, there is a need to invest more in the development of technical and human infrastructure, which will be used to interpret the data generated by the system. This will ensure that the full potential of this technology can be realized, and the Nigerian financial system can sustainably use this technology.

References

- Abdennadher, S., Grassa, R., Abdulla, H., & Alfalasi, A. (2022). The effects of blockchain technology on the accounting and assurance profession in the UAE: An exploratory study. *Journal of Financial Reporting and Accounting, 20*(1), 53–71. https://doi.org/10.1108/JFRA-05-2020-0151
- Adanigbo, O. S., Ezeh, F. S., Ugbaja, U. S., Lawal, C. I., & Friday, S. C. (2023). Advances in blockchain and IoT applications for secure, transparent, and scalable digital financial transactions. *Institutions, 28*, 30. https://doi.org/10.62225/2583049X.2024.4.6.4158
- Adewale, T. T., Olorunyomi, T. D., & Odonkor, T. N. (2022). Blockchain-enhanced financial transparency: A conceptual approach to reporting and compliance. *International Journal of Frontiers in Science and Technology Research, 2*(1), 24–45. https://doi.org/10.53294/ijfstr.2022.2.1.0027
- Ajayi-Nifise, A. O., Falaiye, T., Olubusola, O., Daraojimba, A. I., & Mhlongo, N. Z. (2024). Blockchain in US accounting: A review assessing its transformative potential for enhancing transparency and integrity. *Finance & Accounting Research Journal, 6*(2), 159–182.
- Akaegbobi, T. N. P., & Nwosu, K. C. (2025). Blockchain technology in accounting and financial reporting quality: A study of selected manufacturing firms in Anambra State. *Research Journal of Management Practice, 5*(2), 33–56. https://doi.org/10.5281/zenodo.15711533
- Alkan, B. Ş. (2021). Real-time blockchain accounting system as a new paradigm. *Muhasebe ve Finansman Dergisi*, 41–58. https://doi.org/10.25095/mufad.950162
- Almadadha, R. (2024). Blockchain technology in financial accounting: Enhancing transparency, security, and ESG reporting. *Blockchains, 2*(3), 312–333. https://doi.org/10.3390/blockchains2030015
- Alshehadeh, A. R., Al-Zaqeba, M. A. A., Elrefae, G. A., Al-Khawaja, H. A., & Aljawarneh, N. M. (2024). The effect of digital zakat and accounting on corporate sustainability through financial transparency. *Asian Economic and Financial Review, 14*(3), 228.
- Amarna, A., Hani, L. B., Mohsin, H., Al-Daeef, H., Al-Alawnh, N. A., & Samara, H. (2025). The impact of financial transparency on the quality of financial and banking services. *An-Najah University Journal for Law and Economics, 1*(2), 151–168. https://doi.org/10.35552/anujrle.1.2.2436
- Aro, O. E., Nweze, M., & Avickson, E. K. (2024). Blockchain technology as a tool for corporate governance and transparency. *International Journal of Science and Research Archive, 13*(1), 2479–2493. https://doi.org/10.30574/ijsra.2024.13.1.1971
- Balogun, E. D., Ogunsola, K. O., & Samuel, A. D. E. B. A. N. J. I. (2023). Blockchain-enabled auditing: A conceptual model for financial transparency, regulatory compliance, and security. *Journal of Blockchain Technology and Financial Innovation, 11*(2), 97–112.
- Chen, Y., & Bellavitis, C. (2020). Blockchain disruption and decentralized finance: The rise of decentralized business models. *Journal of Business Venturing Insights, 13*, e00151. https://doi.org/10.1016/j.jbvi.2019.e00151

- Chimin, I. S. (2024). Effect of digital ledger on financial reporting transparency of listed telecommunications companies in Nigeria. *ANUK College of Private Sector Accounting Journal, 1*(2), 177–182. https://doi.org/10.65922/sb2kgh52
- Cho, S., Lee, K., Cheong, A., No, W. G., & Vasarhelyi, M. A. (2021). Chain of values: Examining the economic impacts of blockchain on the value-added tax system. *Journal of Management Information Systems, 38*(2), 288–313. https://doi.org/10.1080/07421222.2021.1912912
- Eyo-Udo, N. L., Apeh, C. E., Bristol-Alagbariya, B., Udeh, C. A., & Ewim, C. P. M. (2025). The evolution of blockchain technology in accounting: A review of its implications for transparency and accountability. *Account and Financial Management Journal, 10*(1), 2456–3374. https://doi.org/10.47191/afmj/v10i1.04
- Fang, B., Liu, X., Ma, C., & Zhuo, Y. (2023). Blockchain technology adoption and accounting information quality. *Accounting & Finance, 63*(4), 4125–4156. https://doi.org/10.1111/acfi.13088
- Gao, X. (2023). Digital transformation in finance and its role in promoting financial transparency. *Global Finance Journal, 58*, 100903. https://doi.org/10.1016/j.gfj.2023.100903
- Giang, N. P., & Tam, H. T. (2023). Impacts of blockchain on accounting in the business. *SAGE Open, 13*(4), 21582440231222419. https://doi.org/10.1177/21582440231222419
- Guo, L., Chen, J., Li, S., Li, Y., & Lu, J. (2022). A blockchain and IoT-based lightweight framework for enabling information transparency in supply chain finance. *Digital Communications and Networks, 8*(4), 576–587. https://doi.org/10.1016/j.dcan.2022.03.020
- Hendratni, T. W. (2025). Financial report digitalization on transparency and accuracy in multinational companies. *Jurnal Ilmiah Akuntansi Kesatuan, 13*(4), 911–922. https://doi.org/10.37641/jiakes.v13i4.3570
- Hussain, N. Y., Babalola, F. I., Kokogho, E., & Odio, P. E. (2024). Blockchain technology adoption models for emerging financial markets: Enhancing transparency, reducing fraud, and improving efficiency. *International Journal of Multidisciplinary Research and Growth Evaluation, 5*(1), 1281–1292. https://doi.org/10.54660/IJMRGE.2024.5.1.1281-1292
- Iskak, J. (2024). Application of blockchain technology in increasing financial statement transparency: An overview of financial accounting aspects. *Global International Journal of Innovative Research, 2*(6), 1156–1164.
- Ji, F., & Tia, A. (2022). The effect of blockchain on business intelligence efficiency of banks. *Kybernetes, 51*(8), 2652–2668. https://doi.org/10.1108/K-10-2020-0668
- Kayani, U., & Hasan, F. (2024). Unveiling cryptocurrency impact on financial markets and traditional banking systems. *Journal of Risk and Financial Management, 17*(2), 58. https://doi.org/10.3390/jrfm17020058
- Khatwani, R., Mishra, M., Bedarkar, M., Nair, K., & Mistry, J. (2023). Impact of blockchain on financial technology innovation in the banking, financial services and insurance sector. *Journal of Statistics Applications and Probability, 12*(1), 181–189. https://doi.org/10.18576/jsap/120117
- Ko, T., Lee, J., & Ryu, D. (2018). Blockchain technology and manufacturing industry: Real-time transparency and cost savings. *Sustainability, 10*(11), 4274. https://doi.org/10.3390/su10114274
- Kukman, T., & Gričar, S. (2025). Blockchain for quality: Advancing security, efficiency, and transparency in financial systems. *FinTech, 4*(1), 7. https://doi.org/10.3390/fintech4010007
- Lohmer, J., Bugert, N., & Lasch, R. (2020). Analysis of resilience strategies and ripple effect in blockchain-coordinated supply chains. *International Journal of Production Economics, 228*, 107882. https://doi.org/10.1016/j.ijpe.2020.107882
- Makatha, M. E., & Assenga, M. P. (2025). Integrating blockchain technology in financial auditing. *Science Mundi, 5*(2), 407–417. https://doi.org/10.51867/scimundi.5.2.38
- Martinez, D., Magdalena, L., & Savitri, A. N. (2024). AI and blockchain integration: Enhancing security and transparency in financial transactions. *International Transactions on Artificial Intelligence, 3*(1), 11–20. https://doi.org/10.33050/italic.v3i1.651
- Mazumder, P. T. (2025). Blockchain in trade finance: Reducing fraud and improving efficiency through digital ledger technology. *Digital Finance, 7*, 1043–1063. https://doi.org/10.1007/s42521-025-00157-0
- Oino, I. (2019). Do disclosure and transparency affect banks' financial performance? *Corporate Governance: The International Journal of Business in Society, 19*(6), 1344–1361. https://doi.org/10.1108/CG-12-2018-0378

- Olomukoro, C. (2023). *The effects of implementing blockchain technology in the Central Bank of Nigeria* (Doctoral dissertation). Unicaf University, Malawi.
- Park, A., & Li, H. (2021). The effect of blockchain technology on supply chain sustainability performances. *Sustainability, 13*(4), 1726. https://doi.org/10.3390/su13041726
- Qin, S. (2022). A review of research on the impact of blockchain on financial reporting. *Accounting, Auditing and Finance, 3*(1), 51–58. https://doi.org/10.23977/accaf.2022.030108
- Rane, N., Choudhary, S., & Rane, J. (2023). Blockchain and artificial intelligence integration for revolutionizing security and transparency in finance. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4644253
- Rawashdeh, A. (2025). Bridging the trust gap in financial reporting: The impact of blockchain technology and smart contracts. *Journal of Financial Reporting and Accounting, 23*(2), 660–679. https://doi.org/10.1108/JFRA-08-2023-049
- Rijal, S., & Saranani, F. (2023). The role of blockchain technology in increasing economic transparency and public trust. *Technology and Society Perspectives (TACIT), 1*(2), 56–67. https://doi.org/10.61100/tacit.v1i2.51
- Ronaghi, M. H., & Mosakhani, M. (2022). The effects of blockchain technology adoption on business ethics and social sustainability: Evidence from the Middle East. *Environment, Development and Sustainability, 24*, 6834–6859. https://doi.org/10.1007/s10668-021-01729-x
- Sarram, M., Al-Shanableh, N., Anagreh, S., Alrfai, M. M., Rahahle, M. Y., Aityassine, F. L. Y., & Al-Hawary, S. I. S. (2024). Assessing the impact of blockchain characteristics on external audit quality in Jordanian SMEs. In *Artificial intelligence and economic sustainability in the era of Industrial Revolution 5.0* (pp. 1325–1340). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-56586-1_96
- Sedlmeir, J., Lautenschlager, J., Fridgen, G., & Urbach, N. (2022). The transparency challenge of blockchain in organizations. *Electronic Markets, 32*(3), 1779–1794. https://doi.org/10.1007/s12525-022-00536-0
- Slatvinska, V., Demchenko, V., Tretiak, K., Hnatyuk, R., & Yarema, O. (2022). The impact of blockchain technology on international trade and financial business. *Universal Journal of Accounting and Finance, 10*(1), 102–112. https://doi.org/10.13189/ujaf.2022.10011
- Sowunmi, B. M., Mlanga, S., & Oriakpono, A. E. (2024). Distributed ledger technology and financial reporting integrity in Nigerian quoted banks: A study on error reduction and enhanced transparency. *African Journal of Accounting and Financial Research, 7*(4), 16–35. https://doi.org/10.52589/AJAFRD4MTG09N
- Temitayo, O. S., Adedayo, L. Y., & Stephen, A. S. (2024). Effect of blockchain technology adoption on the competitive advantage of financial services providers in Lagos, Nigeria. *International Journal of Scientific Research in Multidisciplinary Studies, 10*(8), 44–51.
- Thatikonda, R., Ponnala, J., Yendluri, D. K., Kempanna, M., Tatikonda, R., & Bhuvanesh, A. (2023). The impact of blockchain and AI in the finance industry. In *2023 International Conference on Computational Intelligence, Networks and Security (ICCINS)* (pp. 1–6). IEEE. https://doi.org/10.1109/ICCINS58907.2023.10450000
- Trivedi, S., Mehta, K., & Sharma, R. (2021). Systematic literature review on application of blockchain technology in e-finance and financial services. *Journal of Technology Management & Innovation, 16*(3), 89–102. https://doi.org/10.4067/S0718-27242021000300089
- Varma, J. R. (2019). Blockchain in finance. *Vikalpa, 44*(1), 1–11. https://doi.org/10.1177/0256090919839897
- Zheng, J., Luo, X., & Zhu, F. (2025). Exploring the impact of blockchain technology on supply chain transparency and corporate financing costs. *International Review of Financial Analysis*, Article 104895. https://doi.org/10.1016/j.irfa.2025.104895