RESEARCH ARTICLE

ACHIEVING TRANSPARENCY IN E-INVOICING SYSTEMS THROUGH BLOCKCHAIN INTEGRATION AMONG MULTINATIONAL CORPORATIONS

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Article Information

Abstract

This study explores transparency of e-Invoicing systems through blockchain integration in Multinational Corporations. *Against the backdrop of evolving global commerce and regulatory uncertainties, the study investigates the opportunities, challenges, and implications of integrating blockchain into financial processes. By leveraging frameworks such as the Technology Acceptance Model (TAM), the research examines factors influencing blockchain adoption behavior among Nigerian MNCs and provides recommendations for overcoming barriers to implementation. Through a comprehensive analysis of blockchain's decentralized ledger, cryptographic techniques, and smart contracts, the study highlights the potential of blockchain to enhance transparency, efficiency, and trust in e-invoicing systems. Drawing on insights from industry experts, regulatory bodies, and academic literature, the research offers practical strategies for Nigerian MNCs to traverse the complexities of blockchain adoption, including investment in education and training, collaboration with stakeholders, and continuous monitoring and evaluation. Ultimately, the findings contribute to advancing understanding of blockchain's transformative impact on financial transparency and its implications for sustainable development in Nigeria's business environment.*

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Introduction

In the dynamic landscape of global commerce, the efficient exchange of financial data stands as a cornerstone for seamless transactions. Multinational corporations (MNCs) operating in Nigeria, like their counterparts worldwide, grapple with the complexities inherent in managing vast networks of suppliers, partners, and customers. Amidst these challenges, electronic invoicing (e-invoicing) emerges as a pivotal tool for streamlining financial operations, enhancing accuracy, and reducing processing time. However, the quest for transparency in these systems remains a persistent concern, particularly in regions marked by regulatory uncertainties and diverse business environments. According to a study by Grand View Research, the global e-invoicing market is expected to reach $20.94 billion by 2027, driven by the increasing adoption of digital transformation initiatives and government mandates aimed at enhancing efficiency and compliance in business transactions (Grand View Research, 2020).

Nigeria, with its burgeoning economy and diverse business landscape, presents a unique backdrop for exploring the intersection of technology and transparency in financial processes. The country's MNCs navigate a regulatory framework characterized by evolving standards and varying enforcement mechanisms, creating fertile ground for inefficiencies and opacity within e-invoicing systems. As stakeholders strive to address these challenges, the advent of blockchain technology offers a promising avenue for transforming the landscape of financial transparency (Schulz, 2017). Additionally, Zhao & Liu (2018) in a study emphasized the role of transparency in e-invoicing systems in promoting fair competition and fostering innovation in the digital economy (Zhao & Liu, 2018). Moreover, transparent e-invoicing processes streamline auditing procedures, reducing overhead costs and administrative burdens for businesses (Schulz, 2017). Through the adoption of standardized formats and secure digital channels, transparency enables real-time tracking and validation of invoices, facilitating timely payments and strengthening business relationships (European Commission, 2020). Ultimately, transparent e-invoicing not only promotes economic stability but also contributes to sustainable development by promoting fair and ethical business practices (OECD, 2019).

Blockchain, originally conceived as the underlying technology powering cryptocurrencies, has rapidly gained traction across industries for its potential to revolutionize data management and enhance trust in digital transactions. By providing a decentralized and immutable ledger, blockchain holds the promise of fostering transparency, accountability, and integrity in e-invoicing systems ((Zhao & Liu, 2018; OECD, 2020). Through cryptographic techniques and consensus mechanisms, blockchain enables the secure recording and sharing of transactional data, thereby mitigating the risks associated with fraud, tampering, and data manipulation. Tapscott (2016) opined that blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value. As blockchain continues to mature, its

potential to revolutionize traditional business models and streamline processes is becoming increasingly evident (Nakamoto, 2008).

In the Nigerian context, where trust deficits and inefficiencies in traditional financial systems pose significant challenges, the integration of blockchain technology into e-invoicing systems holds immense transformative potential. By leveraging blockchain, MNCs can enhance the verifiability and traceability of financial transactions, fostering trust among stakeholders and paving the way for more efficient cross-border commerce. Moreover, the transparency afforded by blockchain can help address regulatory concerns and compliance requirements, thereby promoting a conducive business environment for MNCs operating in Nigeria.

Despite the promising prospects offered by blockchain technology, its adoption in e-invoicing systems among Nigerian MNCs remains relatively nascent. Challenges ranging from technological complexities to regulatory hurdles and cultural barriers necessitate a nuanced understanding of the factors shaping the integration of blockchain into existing financial infrastructures. By undertaking a comprehensive examination of the role of blockchain in promoting transparency in e-invoicing systems among MNCs in Nigeria, this research aims to shed light on the opportunities, challenges, and implications of harnessing blockchain technology for enhancing financial transparency in a dynamic and evolving business environment.

Overview of E-Invoicing Systems

E-invoicing systems are digital platforms designed to streamline the creation, transmission, and processing of invoices between businesses electronically, eliminating the need for paper-based invoicing. These systems leverage standardized formats such as XML or EDI to generate invoices automatically and send them directly to recipients via email, web portals, or integrated software interfaces. By automating invoicing processes, e-invoicing systems reduce manual errors, enhance efficiency, and accelerate payment cycles, ultimately improving cash flow management for businesses (Deloitte, 2019). Additionally, they often offer features such as invoice tracking, payment status updates, and integration with accounting software, enabling seamless financial management. According to studies by organizations like the World Bank, e-invoicing systems not only enhance operational efficiency but also contribute to cost savings and environmental sustainability by reducing paper consumption and administrative overheads (World Bank, 2016).

According to research conducted by organizations like the European Commission, e-invoicing systems not only streamline business operations but also foster economic growth by reducing administrative costs and improving cash flow management (European Commission, 2020). By replacing paper-based methods with electronic workflows, e-invoicing systems streamline invoice management, reducing manual errors, processing times, and costs associated with manual handling (Biswas & Basu, 2015). Moreover, they enhance transparency and visibility across the invoicing

lifecycle, providing real-time tracking and monitoring of invoice status, payment due dates, and transaction histories. Research by organizations like Deloitte highlights the transformative impact of e-invoicing systems on improving operational efficiency, enhancing compliance, and fostering stronger supplier relationships (Deloitte, 2019). Additionally, these systems facilitate seamless integration with accounting software and enterprise resource planning (ERP) systems, enabling businesses to optimize financial processes and achieve greater accuracy in financial reporting (Wahab et al., 2017).

Types of E-Invoicing Systems

Electronic invoicing, or e-invoicing, refers to the digital exchange of invoices between businesses or individuals, typically in a standardized electronic format. Here are the various types of E-invoicing systems;

Structured E-Invoicing: This type of e-invoicing is characterized by the use of structured data, typically adhering to specific data standards or schemas, it includes EDI (Electronic Data Interchange) one of the earliest forms of e-invoicing and involves the structured exchange of data between computer systems using standardized formats. It is commonly used for B2B transactions and XML (Extensible Markup Language) is used to create structured invoices that can be easily processed by computers. It allows for flexible customization while maintaining a standard format (Hsu et al., 2016; Kovačič et al. 2019).

PDF E-Invoicing*:* Businesses can create digital invoices in PDF format, which can be emailed or shared electronically. PDF invoices are widely used for B2C transactions and are easy to generate and view (Hansen et al. 2017; Sundh and Sundh, 2018).

Web-based E-Invoicing*:* Many businesses provide web-based portals where suppliers can log in and submit electronic invoices. This method is commonly used for large enterprises with multiple suppliers and it includes cloud-based platforms offer e-invoicing solutions that enable businesses to create, send, and receive invoices online. These platforms often include features for automation, integration, and compliance (González-Fernández et al. 2020).

Email E-Invoicing: Invoices are created in digital formats and sent directly to recipients via email as attachments. While this is a simple method, it may lack automation and tracking features (Yongchareon et al. 2016).

PEPPOL (Pan-European Public Procurement Online): This framework that facilitates cross-border e-invoicing. It uses a standardized format and network to enable secure and interoperable electronic invoicing across European countries (Van Helden et al. 2017; Schwab et al. 2018; Sollie and van der Meer 2019; Jacobides et al. 2020).

Blockchain E-Invoicing: Blockchain technology has been investigated for secure and tamper-proof e-invoicing. Researchers have explored how blockchain can enhance the trustworthiness and transparency of invoices and transactions are recorded on a distributed ledger, providing transparency and security (Pournajaf et al., 2019; Petychakis et al., 2020).

Mobile E-Invoicing: Researchers have examined the role of mobile apps in enhancing invoicing convenience and accessibility. Some e-invoicing solutions offer mobile apps that allow businesses to create and send invoices from smartphones or tablets. This is useful for on-the-go invoicing (Laine et al. 2017; Adeleye et al. 2020).

Understanding Blockchain Technology
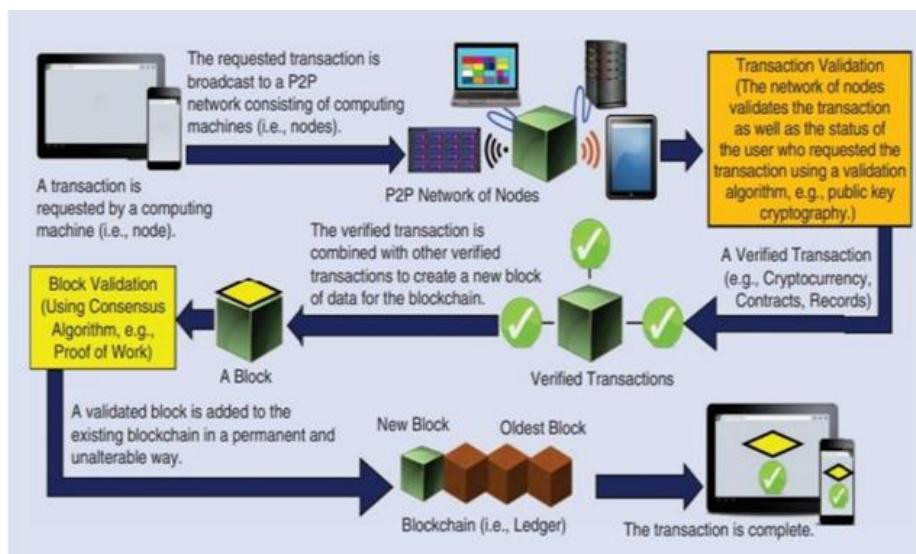
Figure 1: *Blockchain technology (Puthal, 2018*).

Blockchain technology involves grasping its fundamental concepts, which revolve around decentralization, transparency, and immutability. At its core, blockchain is a distributed ledger technology that enables peer-to-peer transactions without the need for intermediaries. Each block in the chain contains a cryptographic hash of the previous block, creating a secure and tamper-resistant record of transactions. This chain structure ensures that once data is recorded, it cannot be easily altered without consensus from the network participants. As a result, blockchain technology offers a novel approach to data management and trust in a wide range of applications beyond cryptocurrencies (Buterin, 2014; Swan, 2015). Moreover, as highlighted by Tapscott and Tapscott (2016) blockchain's immutability ensures data integrity and auditability, once a transaction is recorded on the blockchain, it becomes virtually impossible to alter without consensus from the majority of network participants. This feature is particularly valuable in industries such as supply chain management and healthcare, where maintaining an accurate and tamper-proof record of transactions is critical. By leveraging cryptographic techniques, blockchain technology enhances data security and authenticity, thereby reducing the risk of fraud and errors.

According to Swan (2015), blockchain technology's decentralized nature, introduces a paradigm shift in how information is stored and shared. Traditional centralized systems rely on a single authority to manage data, which can be vulnerable to manipulation or hacking. In contrast, blockchain distributes data across a network of nodes, making it more resilient to attacks and censorship. This decentralization fosters trust among users by removing the need for intermediaries and providing transparent access to transaction history. Moreover, as discussed by Buterin (2014) blockchain technology is smart contracts and smart contracts are self-executing agreements with predefined rules encoded on the blockchain. They automate the execution of contractual obligations once certain conditions are met, eliminating the need for intermediaries and reducing transaction costs. Smart contracts have the potential to revolutionize industries such as real estate, insurance, and legal services by streamlining processes and enhancing efficiency.

Blockchain Technology in Nigeria

All of the procedures that take place inside the cash management department are not digitalized, and they are not nearly as robust as they pretend to be. The existing system has to be replaced with a more lucrative one that allows for consistent transactions within the shortest amount of time, a more robust security system that combats security breaches, blackmail, and adaptability, and a more flexible system that allows for greater flexibility. Considering that the majority of the transactions that banks engage in involve middlemen, it may be said that banks are not genuinely financially independent. The bureaucracy that is associated with the management of an accounting system causes the transfer of stores to a more distant account to take a longer amount of time to be credited. This is because of the run of the show. Banks are able to move savings, particularly from a Nigerian keeping cash account to an inaccessible account with irrelevant threats, as a result of the rise of blockchain technology within the budgetary division. There are calculations in the blockchain framework that have been outlined to resolve any unanticipated issues (Swan, 2015; Thomas & Hedrick-Wong, 2019). This has brought about a more capable advantage transport. For the purpose of maintaining their relevance in the market by providing suitable services at cheaper prices, organizations within the financial sector that are not banks and financial education are continuously working to improve their systems with the support of cutting-edge technology. The management of accounts and other institutions associated to money should anticipate adopting new blockchain developments in order to maintain their place within the ecosystem. Among the many different applications of Blockchain technology, the financial administration sector is the one that has received the most attention. According to Guo and Liang (2016), Short (2018), and Thomas and Hedrick-Wong (2019), the following are the fundamental use cases for blockchain technology that banks and budgetary institutions may use in order to properly maintain money transactions. By facilitating the formation of international currency exchanges that provide real-time settlement and save costs via the enhancement of liquidity and the elimination of compromise, blockchain technology enables financial institutions and organizations to create a worldwide installment that is free of any glitches. This allows for a rapid interchange of interbreeding. In contrast to payment plans offered by Western Union and other similar arrangements.

Organizational Importance of Transparency in Multinational Corporations

Transparency in multinational corporations (MNCs) is crucial for fostering trust among stakeholders and ensuring accountability in a globalized economy. MNCs operate across diverse geographical locations and cultures, often facing complex regulatory frameworks and ethical dilemmas. According to Crane and Matten (2016), transparency plays a pivotal role in mitigating risks associated with unethical behavior, such as corruption, environmental degradation, and human rights violations. By disclosing information about their operations, MNCs can demonstrate their commitment to responsible business practices and build stronger relationships with investors, consumers, and communities. Moreover, as noted by La Porta et al. (2000), in a globalized business environment, where decision-making processes span multiple jurisdictions, maintaining transparency becomes paramount for aligning the interests of shareholders and management. Transparent reporting practices, including financial disclosures and stakeholder engagement, enable investors to make informed decisions and hold corporate leaders accountable for their actions. This transparency fosters a culture of integrity and ethical behavior within MNCs, thereby enhancing their reputation and long-term sustainability.

According to Mayer-Schönberger and Ramge (2018), transparency enables market participants to assess the performance and risk profile of MNCs, facilitating capital allocation and resource allocation decisions. Transparent supply chain practices, for instance, allow consumers to make ethical purchasing choices and hold companies accountable for their social and environmental impact. By embracing transparency, MNCs can differentiate themselves in the marketplace and attract socially conscious consumers and investors. Additionally, Chesbrough (2003) stated that transparent communication channels enable employees to exchange ideas and best practices, leading to enhanced creativity and problem-solving. By promoting a culture of openness and trust, MNCs can leverage the diverse talents and perspectives of their workforce to drive innovation and adapt to changing market dynamics. This transparency also extends to partnerships with external stakeholders, such as suppliers, research institutions, and government agencies, fostering collaborative relationships that drive collective progress.

Roles of Blockchain Technology in Promoting Transparency

Blockchain technology has emerged as a powerful tool for promoting transparency across various industries by providing a decentralized and immutable record of transactions.

- **Decentralization:** This is a cornerstone principle of blockchain technology, refers to the distribution of control and decision-making authority across a network of nodes rather than relying on a single central authority. This distributed architecture ensures that no single entity has control over the entire network, mitigating the risk of censorship, manipulation, and single

points of failure. As highlighted by Nakamoto (2008), decentralization enhances the resilience and security of systems by eliminating central points of vulnerability, thereby fostering trust and transparency among participants. Moreover, Tapscott and Tapscott (2016) emphasize decentralization's potential to democratize access to resources and information, empowering individuals and communities to participate in decision-making processes and shape the future of digital economies.

- ***Immutable record-keeping:*** This is a hallmark feature of blockchain technology, refers to the inability to alter or delete recorded data once it has been added to the blockchain. This characteristic ensures that the historical record of transactions remains tamper-proof and transparent, enhancing trust among participants. As noted by Nakamoto (2008), the inventor of blockchain technology, immutability is achieved through cryptographic techniques and consensus mechanisms that prevent unauthorized changes to the ledger. This immutable nature of blockchain has profound implications for various industries, including finance, supply chain management, and governance, where maintaining an accurate and auditable record of transactions is essential for accountability and compliance.

- ***Enhanced security and data integrity:*** By distributing transaction records across a network of nodes and encrypting data using cryptographic techniques, blockchain ensures that information remains secure and tamper-proof (Swan, 2015). Each block in the chain contains a cryptographic hash of the previous block, creating a continuous and verifiable record of transactions (Nakamoto, 2008). This structure makes it extremely difficult for malicious actors to alter or delete data without consensus from the majority of network participants, thereby enhancing data integrity and reducing the risk of fraud or unauthorized access (Tapscott & Tapscott, 2016). Moreover, blockchain's transparency allows users to verify the authenticity of transactions and track the history of data, further bolstering security and trust in digital interactions (Durugbo et al., 2020).

- ***Smart Contracts and Automation:*** Smart contracts are self-executing agreements with predefined rules encoded on a blockchain, enabling automated and transparent transactions without the need for intermediaries. These programmable contracts execute automatically when predetermined conditions are met, facilitating a wide range of applications from financial services to supply chain management. According to Buterin (2014), smart contracts on platforms like Ethereum allow for the execution of complex transactions with precision and efficiency, reducing the risk of errors and fraud. Moreover, Tapscott and Tapscott (2016) emphasize the transformative potential of smart contracts in streamlining business processes and enhancing trust among parties by removing the need for traditional legal intermediaries.

- ***Regulatory Compliance:*** Regulatory compliance refers to the adherence of organizations to laws, regulations, and industry standards relevant to their operations. It encompasses a range of requirements aimed at ensuring ethical conduct, consumer protection, data privacy, financial integrity, and environmental sustainability. Compliance efforts involve the establishment of policies, procedures, and controls to mitigate risks and demonstrate

adherence to regulatory mandates. According to Daniels et al. (2019), regulatory compliance is essential for maintaining public trust, minimizing legal liabilities, and fostering a level playing field in competitive markets. Failure to comply with regulations can result in severe consequences, including financial penalties, reputational damage, and legal sanctions.

Challenges and Limitations of Implementing Blockchain

Blockchain technology has tremendous opportunities for industries because it executes transactions in a permanent manner (Biswas and Gupta, 2019). However, blockchain technology implementation in various industries is a difficult task (Xu et al., 2021), and these challenges need instant attention (Biswas and Gupta, 2019). Some of the germane barriers are lack of validity or authorisation issues, which as a result of inadequate testing of the new technology impedes the implementation and adoption of the technology (Akinradewo et al., 2022), the absence of required regulations, laws and other legal issues is also a barrier to the adoption of blockchain (Biswas and Gupta, 2019). There are other numerous barriers to the adoption of blockchain technology, especially in the construction industry.
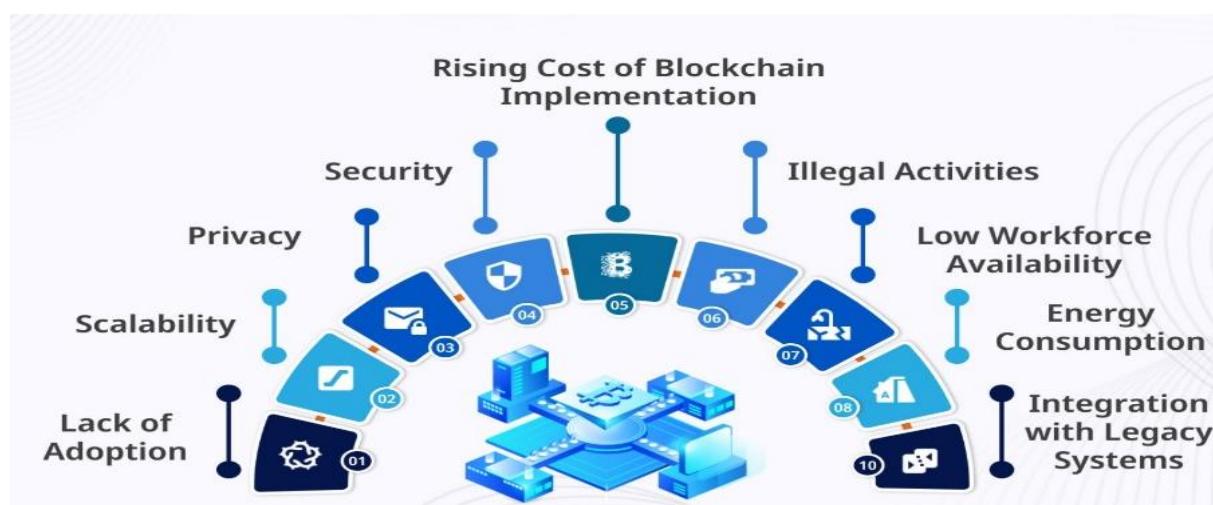
Figure 2: Challenges and Limitations of Implementing Blockchain (https://www.linkedin.com/pulse/blockchain-adoption-challenges-overcoming-barriers-enterprise/).

Lack of Adoption: Blockchains work better and more efficiently when used by a large network of users. For instance, a blockchain ecosystem would require suppliers and users to sign up for the network**.** According to APQC, only 29% of businesses are actively experimenting with or using blockchain. Blockchains will remain inefficient and scalable without widespread usage

Scalability: *This* remains persistent challenges in the implementation of emerging technologies, hindering their widespread adoption and integration into existing infrastructure (Marr, 2016).

Privacy: Although cryptocurrencies offer pseudonymity, many possible blockchain applications require smart contracts and transactions to be unmistakably connected to real persons, which raises serious privacy concerns.

Security: only a few circumstances have robust processes to deal with this. Even while blockchain-based apps, systems, and businesses are more secure than traditional computer systems, hackers may still be able to access them.

Rising cost of blockchain resource implementations: Cost and resource requirements associated with blockchain implementation vary depending on factors such as the complexity of the network, scalability needs, and regulatory compliance. According to Yli-Huumo et al. (2016), initial setup costs for blockchain networks can include hardware infrastructure, software development, and security measures.

Illegal activities: The proliferation of fraudulent enterprises and other bad actors looking to take advantage of naive investors has been encouraged by the absence of strict regulations and the fact that blockchain technology is still in its infancy.

Low workforce availability: The nonfungible token (NFT) and DeFi industries have experienced a sharp increase in nonfungible tokens and projects over the past year, which has caused problems in the labor market. According to current data, as startups and established companies search for top talent, the demand for blockchain talent has surged by more than 300%.

Energy consumption: Energy consumption refers to the amount of energy utilized by individuals, organizations, and societies for various purposes, including electricity generation, transportation, heating, and industrial processes. According to the International Energy Agency (IEA), global energy consumption is projected to continue rising, driven primarily by emerging economies and expanding energy-intensive industries (International Energy Agency, 2020).

Regulatory hurdles: Regulatory hurdles refer to the challenges and barriers that arise due to the complex and evolving regulatory landscape governing industries and technologies. These hurdles often stem from stringent compliance requirements, ambiguous legal frameworks, and varying regulatory approaches across jurisdictions. According to Haas et al. (2019), emerging technologies such as blockchain and artificial intelligence face regulatory uncertainty, as policymakers grapple with balancing innovation with consumer protection and risk mitigation.

Impact of Adopting Blockchain Based E-Invoicing

The goal of adopting blcokchain technology in financial and accounting sector has been to use the technology to improve transparency, trust, security and strategic collaboration among all the multinational companies. However, by counting on the advancements in technological innovations such as blockchain technology, IoTs, etc., professionals and concerned stakeholders can manage the construction supply chain properly (Khan et al., 2021).

Enhanced Transparency: Blockchain technology enables transparent and immutable record-keeping, fostering trust among stakeholders (Tapscott & Tapscott, 2016). Furthermore, transparency can drive efficiency and innovation by facilitating data sharing and collaboration among stakeholders, as highlighted by Swan (2015).

Reduced Intermediaries: By eliminating intermediaries and streamlining processes, blockchain technology can significantly reduce transaction costs associated with traditional centralized systems (Swan, 2015). According to Tapscott and Tapscott (2016), blockchain's decentralized nature enables peer-to-peer transactions without the need for third-party verification, resulting in lower fees and faster settlement times.

Improved Security: Blockchain's cryptographic techniques enhance data security and protect against unauthorized access and manipulation (Buterin, 2014). According to a study by Crosby et al. (2016), blockchain's decentralized consensus mechanism ensures that transactions are verified and recorded in a secure and transparent manner, reducing the risk of fraud and cyberattacks.

Decentralization: Blockchain's decentralized nature distributes data across a network of nodes, reducing reliance on centralized authorities and enhancing resilience (Nakamoto, 2008). As highlighted by Swan (2015) that decentralization enables peer-to-peer transactions without the need for traditional financial institutions, opening up new avenues for financial inclusion and innovation.

Efficient Supply Chains: Blockchain facilitates transparent and traceable supply chains, reducing fraud and improving efficiency (Durugbo et al., 2020). Blockchain adoption in supply chains has the potential to optimize inventory management, minimize risks, enhance trust among trading partners, and ultimately improve the overall efficiency and resilience of global supply networks (Iansiti & Lakhani, 2017; World Economic Forum, 2018).

Theoretical Framework

The Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a theoretical framework developed to understand and predict how users accept and use technology. It was originally proposed by Fred Davis in 1986 and later refined by Fred Davis and Richard Bagozzi in 1989. TAM posits that perceived usefulness (PU) and perceived ease of use (PEOU) are the primary determinants of an individual's intention to use a technology, which in turn influences actual technology usage (Davis, 1986).
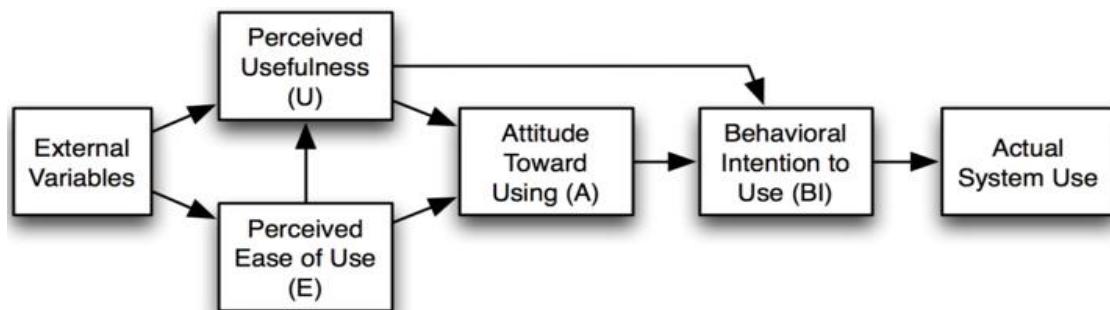
Figure 3: Technology Acceptance Model (TAM)

Perceived Usefulness (PU): Perceived usefulness refers to the degree to which a person believes that using a particular technology would enhance their job performance or make tasks easier to accomplish. Users are more likely to adopt a technology if they perceive it as useful.

Perceived Ease of Use (PEOU): Perceived ease of use is the extent to which users believe that using a particular technology would be free from effort. It encompasses factors such as ease of learning, ease of navigation, and user-friendliness. The easier a technology is to use; the more likely users are to adopt it.

Attitude Toward Using (ATU): Attitude toward using is influenced by perceived usefulness and perceived ease of use. It reflects an individual's overall evaluation of using a technology. A positive attitude toward using a technology is a strong predictor of adoption behavior.

Behavioral Intention to Use (BI): Behavioral intention to use is the degree to which an individual intends to use a technology in the future. It is influenced by attitudes toward using, perceived usefulness, and perceived ease of use. High behavioral intention typically leads to actual technology adoption and usage.

Actual System Use (ASU): Actual use refers to the extent to which users engage with a technology in real-world settings. It is often measured through metrics such as frequency of use, duration of use, and user engagement levels.

TAM posits that perceived usefulness (PU) and perceived ease of use (PEOU) directly influence attitudes toward using a technology, which in turn affects users' behavioral intentions to use it. Behavioral intentions, in combination with external factors, such as facilitating conditions and social influence, ultimately determine whether users adopt and continue to use a technology. TAM has been widely applied in various domains, including e-commerce, mobile technology, social media, and healthcare, to understand and predict user acceptance and adoption behavior. It has also inspired extensions and modifications, such as the Unified Theory of Acceptance and Use of Technology (UTAUT), which integrates additional factors like social influence and facilitating conditions (Davis, 1986).

TAM in the context of e-invoicing systems, multinational corporations in Nigeria can leverage blockchain to enhance transparency by securely recording and validating transactions, thus reducing the risk of fraud and errors. Studies such as Alalwan et al. (2017) have demonstrated the applicability of TAM in predicting users' acceptance of blockchain technology, emphasizing the importance of perceived usefulness and ease of use in driving adoption. Moreover, the application of TAM in the context of blockchain-enabled e-invoicing systems among multinational corporations in Nigeria highlights the role of organizational factors and external influences. Factors such as top management support, organizational culture, and regulatory environment can impact users' perceptions of blockchain technology and their willingness to adopt it. Research by Kizgin et al. (2019) underscores the significance of organizational factors in shaping individuals' attitudes and behaviors toward adopting innovative technologies, emphasizing the need for a supportive organizational context to facilitate technology acceptance and implementation. Furthermore, understanding the application of TAM in the context of blockchain-enabled e-invoicing systems among multinational corporations in Nigeria requires consideration of cultural and contextual factors. Nigeria's business environment presents unique challenges and opportunities, including cultural norms, legal frameworks, and infrastructure limitations, which may influence technology adoption processes. By incorporating these contextual factors into the TAM framework, researchers and practitioners can gain insights into the specific drivers and barriers to the adoption of blockchain technology in promoting transparency within e-invoicing systems among multinational corporations in Nigeria, as highlighted in studies such as Oyewobi et al. (2020).

Conclusion

In conclusion, the integration of blockchain technology into e-invoicing systems among multinational corporations (MNCs) in Nigeria holds significant promise for enhancing transparency, efficiency, and trust in financial transactions. Through its decentralized architecture and cryptographic techniques, blockchain ensures that transaction data remains tamper-proof and transparent, mitigating the risks associated with fraud and data manipulation. Furthermore, blockchain's smart contracts enable automated and transparent execution of contractual obligations, reducing the need for intermediaries and streamlining transaction processes.

Despite the promising prospects offered by blockchain technology, its adoption among Nigerian MNCs faces challenges ranging from technological complexities to regulatory hurdles and cultural barriers. However, by leveraging frameworks such as the Technology Acceptance Model (TAM), researchers and practitioners can gain insights into the factors shaping technology adoption behavior and develop strategies to overcome barriers.

The research outlined in this paper underscores the transformative potential of blockchain technology in promoting transparency within e-invoicing systems among multinational corporations in Nigeria. By addressing the challenges and harnessing

the opportunities presented by blockchain, MNCs can enhance financial integrity, strengthen stakeholder trust, and contribute to the growth and sustainability of Nigeria's business environment.

Recommendations

Based on the findings from this study, the following recommendations were made:

- Nigerian MNCs should invest in educating and training of their workforce, familiarize stakeholders with the benefits and capabilities of blockchain technology in promoting transparency within e-invoicing systems.
- Nigerian MNCs should conduct pilot projects and proof of concepts to assess feasibility, identify challenges, and demonstrate value.
- Nigerian MNCs should collaborate with technology vendors and solution providers to ensure seamless integration, interoperability, and data exchange between blockchain-based platforms and legacy systems.
- Nigerian MNCs should establish key performance indicators (KPIs), metrics, and monitoring mechanisms to track the effectiveness and impact of blockchain adoption.
- Nigerian MNCs should actively engage with regulatory authorities to advocate for supportive policies and regulatory frameworks that promote blockchain adoption.

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