Digital Currency and Blockchain Technology in the 21st Century Financial Ecosystem

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Abstract

The study investigated digital currency and blockchain technology in the 21^{st} century financial ecosystem. The empirical study adopted a descriptive survey design. A questionnaire was used for data collection in a sample size of 121 selected randomly from the staff and students of Abia State Polytechnic, Aba. The data collected from the respondents were analyzed with the frequency distribution table and chi-square (x^2) statistical technique. The findings revealed the imperativeness of digital currency and blockchain technology in the 21^{st} century financial ecosystem. In other words, digital currency and blockchain technology has significant effect with financial ecosystem. The study, therefore, recommended among others that Central bank of Nigeria, legislators and financial stakeholders should collaborate to establish compliance standards and best practices for digital currency and blockchain integration in financial ecosystem. These standards should ensure that digital currency algorithms and blockchain technology conform with regulatory requirements and ethical principles, while promoting transparency and accountability.

Keywords: Digitalization, Digital Currency, Blockchain Technology, Financial Ecosystem

Introduction

In numerous spaces, technology has played a key role in transforming our everyday lives. The Fourth Industrial Revolution (4IR) is characterized by the integration and control of production through the connectivity between equipment and sensors between the physical and the virtual world. This process generates enormous changes in the industry through technological developments such as increased productivity, autonomy, and redistribution of work. Together with artificial intelligence and robots, one of the innovations available to industry 4.0 is the blockchain. Similarly, Odeyemi, Okoye, Ofodile, Adeoye, Addy, & Ajayi-Nifise (2024), opines that, in today's rapidly evolving digital landscape, ensuring security in financial services is paramount to safeguarding sensitive data, transactions, and assets. With the proliferation of digital transactions and the increasing sophistication of cyber threats, financial institutions are continuously seeking innovative solutions to enhance security and mitigate risks. One such solution lies in the integration

of digital currency with blockchain technology, which offers a transformative approach to bolstering security in financial services (Abdel-Rahman, 2023, Kafi, & Akter, 2023).

The blockchain (chain of blocks) is the emerging technology that has gained popularity within few years (Romanello, 2021). Blockchain is a swiftly evolving financial technology that transforms the way transactions are being made (Eghe-Ikhurhe, Roni, Mandella & Xihui, 2023). With the spread of financial transactions on the Internet, many people have elevated obligations for financial services, as posited by (Zhang, 2022). The internet was seen as the basis upon which transactions thrive in the economic landscape and that the rapid development can be ascribed to the impact of the internet (Olomukoro, 2023). According to Ajayi, Madewa, Fatoye, and Oladipo (2022), the growth of innovative online business tools is directly attributable to the internet's dynamic environment. Financial technology is now an integral element of the overall growth of the financial industry. This is because it involves the exploitation and mixing of several technologies, such as Data Science and Artificial Intelligence, Hardware, and software, to give the business a variety of services, including "Platform as a Service" (PaaS) and "Software as a Service" (SaaS). For Mondragon, Mondragon and Coronado (2018), the materialization of the Internet of things signifies a boost in connectivity and information sharing and hence a need for increasing trust and efficiency in dealings, which may affect the supply chain and its resilience to pull through from all categories of disruptions.

On the other hand, it is essential to learn about Blockchain's benefits for the financial ecosystem and to research its prospective uses (Pandya, Mittapalli, Gulla, & Landau, 2019). (see Lipton, Hardjono, & Pentland, 2018; Nowiński, & Kozma, 2017; Manta, & Pop, 2017; Caldarelli, & Ellul, 2021). The ecosystem's objective is to construct administration instruments that will help them in exploring the specialized world whereas moreover comprehending a few of the foremost basic components of a vital approach. With the rapid increase in knowledge and usage of digital currency and blockchain technology, there has been lots of researches carried out to harness the usefulness of this technology (Anisiuba, 2020). As Blockchain is not a new concept in the financial ecosystem, numerous studies (Dashkevich, Counsell, & Destefanis, 2020; O'Shields, 2017; Cocco, Pinna, & Marchesi, 2017; Guo, & Liang, 2016) have described the challenges and opportunities of implementing blockchain technology in the banking sector (e.g. Central Bank Digital Currency (CBDC), Payment Clearing and Settlement (PCS) systems operated by central banks, Assets transfer and ownership, Audit trail, Regulatory compliance (Regulation)). Financial industry participants see an opportunity to apply blockchain to their products and services and develop coordinated solutions that could help overcome existing industry challenges by providing greater transparency and improving conduct (Ducas, & Wilner, 2017).

Initially, blockchain served as the underlying infrastructure for cryptocurrencies such as bitcoin. Numerous financial entities, including banks, private equity firms, startups, and others, are paying close attention to blockchain. After completing a transaction via blockchain technology, several prominent financial institutions are keen to incorporate it into their operations. The various platforms used in blockchain are designed with an improved security system and lending network. The banking industry is now extremely reliant on technology, making blockchain a potentially game-changing innovation. It eliminates the middleman. Although digital currency and blockchain technology is still in its theoretical beginnings, it has the potential to substantially disrupt the financial ecosystem (Ajayi, Madewa, Fatoye, & Oladipo, 2022). Sarmah (2018) posits that Bank and payment systems have stated using blockchain to make their operations smoother, efficient and secure. Funds can be efficiently and safely transferred with the decentralization technology.

Blockchain with its characteristics of decentralization, immutable records, persistency, anonymity, security, auditability, transparency, accuracy, verifiability and sharing of information has the potential of transforming business organization in Nigeria (Oyebanjo, Olabode, & Robertson, 2021; Bergstra, & Burgess, 2018; Santiso, 2018; Kshetri, & Voas, 2018a; Transparency International UK, 2017; Hales, 2020).

Objectives of the Study

The main objective of the study is to examine the effect of digital currency and blockchain technology in the 21st century financial ecosystem. Other specific objectives are:

- > To determine the effect of digital currency on financial ecosystem in Nigeria
- > To ascertain how blockchain technology affect financial ecosystem in Nigeria

Research Question

- 1. What is the effect of digital currency in financial ecosystem of Nigeria?
- 2. How does blockchain technology affect financial ecosystem in Nigeria?

Research Hypotheses

Ho1: Digital currency has no significant effect on financial ecosystem in Nigeria

Ho2: Blockchain technology has no significant effect on financial ecosystem in Nigeria.

Review of the Related Literature

Conceptual Review

Digital currency are two concepts with the nexus of digital and currency. Digitization means the process of changing information from analogue to digital form. While digital currency means creating a digital representation of money or moving it to digital form. Digitalization is the use of digital technologies to change a business model and provide new revenue and value – producing opportunities (BIS, 2021). Currency, on the other hand, is anything whether banknotes or coin that circulates from person to person in the process of exchange, which rests on the trust that money will deliver the usual monetary functions, with a social convention where one party accepts it as payment in the expectation that others will do so, as permitted by the sovereignty of the law. Money is simply a currency of a nation adopted and accepted as an exchange measure and store of value (Obiah, Eke, & Akpelu, 2022).

Therefore, digital currency is a system that permits users to pay, anonymously and electronically, by transmitting a unique digital certificate similar to a banknote number, without the intermediate involvement of a commercial bank. It is a type of currency that can be used in digital or electronic form, in contrast to physical currency such as banknotes or coins (Ghymers, 2020). Digital currencies also tend to appear (or to be presented) as a citizen defence against financial abuse or state conspiracy in the populist mood of distrust in financial institutions and traditional incumbent powers, as well as against foreign dependency. Some authors describe digital currency as a computerized or virtual currency that utilizes cryptography for security (Obiah, Obiah, & Chima, 2020; Aljohani, 2017; Nane Alonso, JorgeVazquez, Echarte Fernandez, Reier Forradellas, 2021). In the financial ecosystem, cryptocurrencies can be extremely innovative, cutting out the intermediaries, such as credit card companies or banks, making it cheaper to transfer money from

one virtual wallet to another (Romanello, 2021). Some central banks round the globe has established digital currencies referred to as Central Bank Digital Currency (CBDC). CBDC is regarded as a monetary asset with a digital value akin to the traditional currency issued by central banks and circulated in a non-centralized way to make payment (Olomukoro, 2023).

Digital currency revolution entails the introduction of a new type of currencies that are more accessible and transferable electronically than fiat currencies of the pre-existing type. Therefore, digitalization has revolutionized money and payment systems that digital currencies now facilitate instantaneous peer-to-peer transfers of value in a way that was previously impossible (Brunnermeier, James & Landau, 2019). The facilitator of this digital currency is blockchain.

According to Schnabel and Shin (2018), the coming revolution of digital inclusion promises to transform the way in which money is stored, transferred and governed, ushering in what we describe as an era of 'global money'. In our world today, money is high-tech, therefore, the digital revolution and the rise of large tech firms present the possibility of a radical departure from the traditional model of monetary exchange.

A blockchain is essentially a public ledger, where groups of transactions or events are recorded and stored in a chain-like data structure (Simoyama, Grigg, Bueno, & Oliveira 2017). A blockchain is an automated ledger created to lock up transactions carried out by several parties in a network. It is an internet based, peer-to-peer, detached ledger which includes all transactions since creation (Ugwu, Okeke, & Ebisi, 2023). According to the Chartered Professional Accountants of Canada (CPA Canada), blockchain technology has the potential to impact all record keeping processes, including the way transactions are initiated, processed, authorized, recorded, and reported. They further explained that independent auditors will need to understand this technology as it is implemented by their clients, for example, methods for obtaining sufficient and appropriate audit evidence will need to consider both traditional stand –alone general ledgers as well as blockchain ledgers. Blockchain also has probability for greater consistency and precision in reporting and accounting which could facilitate more efficient data mining and analysis (Ugwu et al, 2023).

For the sake of this study, the researchers adopt Blockchain as a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat in the financial ecosystem. Blockchain is a distributed ledger technology that utilizes a decentralized network of nodes that provide a level of trust (also known as consensus) instead of a utilizing a third-party to verify transactions (Phan, Li, & Mentzer, 2019). The technology relies on cryptography as a means of security. Bitcoin utilizes the Elliptic Curve Digital Signature Algorithm (ECDSA), a cryptographic algorithm that creates a set of public and private keys, to ensure the authenticity of the transactions (Alcazar, 2017). A blockchain is defined as a distributed database (ledger) that maintains a permanent and tamperproof record of transactional data. A blockchain is completely decentralized by relying on a peer-to-peer network. More precisely, each node of the network maintains a copy of the ledger to prevent a single point of failure. All copies are updated and validated simultaneously (Hammi, Hammi, Bellot, & Serhrouchni, 2018). The blockchain ledger is composed of multiple blocks, and each block is composed of two parts. The first part represents the transactions or facts (that the database must store), which can be of any type such as monetary transactions, health data, system logs, traffic information, and so on. The second part is called the header and contains information about its block (e.g. timestamp, hash of its transaction, as well as the hash of the previous block) (Hammi, Zeadally, Adja, Giudice, & Nebhen, 2022).

The definition of Blockchain technology is a digitized, decentralized, public ledger of all cryptocurrency transactions. It allows transactions to be recorded and added to the block in

chronological order and keeps track of the digital currency transactions without central recordkeeping (Yun, 2020). Idehen and Mayor (2021), explained that a blockchain is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain. Each block in the chain contains a number of transactions that are linked together using cryptography and every time a new transaction occurs in the blockchain, a record of that transaction is added to every participant's ledger. For clarity, each block contains a cryptographic hash of the previous block, a time stamp and transaction data. The time stamp proves that the transaction data existed when the block was published in order to get into its hash. Anisiuba (2020), simply describe Blockchain as a chain of blocks that contains information. The data, which is stored inside a block, depends on the type of blockchain.

The real purpose of blockchain is to address the problems of double records without need of a central server. The integration of digital currency and blockchain technologies offers a robust and scalable approach to mitigating financial fraud in dynamic and increasingly digital financial ecosystems (Familoni, & Shoetan, 2024; Bello, 2022). What makes digital currency and blockchain interesting is that Blockchain can increase the integrity of the transactions financially and non-financially (Yun, 2020). At present, digital currency and blockchain technology allows business enterprises to make digital interactions or record transactions in a way that is transparent, secure, auditable, efficient, and highly resistant to interruptions (Schatsky, & Muraskin, 2015). Those features could not only decrease the accounting, auditing and compliance costs but also transform and facilitate the work of auditors (Spoke, 2015; Bello, Idemudia, & Iyelolu, 2024).

Theoretical Framework

Chartalism Theory otherwise called Modern Monetary Theory (MMT) will be adopted for this study.

Chartalism Theory

Chartalism approach has been replicated by the scholars developing the Modern Monetary Theory (MMT). This insight was first described in a book published by a German economist who lived from 1842 – 1926, Georg Friedrich Knapp with the title 'The State Theory of Money' (1905). MMT has its base in the ideas of what is called chartalism coined by Knapp, a name derives from the Latin Charta, in the sense of a token or ticket. According to Knapp, metalist try to deduce the monetary system without the idea of a state. This he believes is 'absurd,' for "the money of a state" is that which is "accepted at the public pay offices" (Wray, 2014). Therefore, the first sentence of The State Theory of Money is a direct attack on the existing idea that money has intrinsic value based on precious metal. Knapp defines money as a creature of the law and concludes that "we must deal with legal history". He opposes the widely held view that money can be understand from numismatics, the study of the collection of coins, yet instantly distances himself from embracing a paper money pure and simple (Ehnts, 2019). Today, if Knapp is alive, who knows what will be his perception about digital currency? But since he has affirmed that we must deal with legal history, he will still question the legality of digital currency. However, in the chartalist mechanism(s) of money's introduction, the intrinsic value of money is therefore immaterial, for the only factor that matters is the unique power of money to extinguish debts and other obligations to the state. Even when no more than a symbol of token, money is a commodity in the sense that it can directly represent real commodities. With this argument, chartalism strongly agree that money is historically the creation of the state and not, as mainstream neoclassical theory claims,

an extension from barter trading; or in the Marxist view that money appears with the emergence of markets and commodity production; even the revolutionary technologists claim that blockchain and digital currency is as a result of internet boom. Thus, MMT idea runs contrary to digital currency, which is neither backed nor issued by any law or central authority until recently that central banks are issuing digital currency. Chartlaist founder Knapp says, money is a creature of the law, the denomination of means of payment according to the new units of value is a free act of the authority of the state; and in modern monetary systems the proclamation (by the state) is always supreme. Thus, the modern monetary system is an administrative phenomenon and nothing more. Knapps analysis went further, if we have already declared in the beginning that money is a creation of law, this is not to be interpreted in the narrower sense that it is a creation of jurisprudence, but in the larger sense that it is a creation of the legislative activity of the state, a creation of legislative policy (Wray, 2014). Chartalist approach revolves around single point, backed by Mitchell A Innes and John Keynes. Innes echoed that, the modern state can make anything it chooses generally acceptable as money..., including digital currency. It is true that a simple declaration that such and such is money will not do, even if backed by the most convincing constitutional evidence of the state's absolute sovereignty. But if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. Following Knapp, Keynes argued that money comes in doubly when, in addition, it claims the right to determine and declare what thing corresponds to the name, and to vary its declaration from time to time when, that is to say, it claims the right to re-edit the dictionary. The Age of Chartalist or State Money had been reached, when the state claimed the right not only to enforce the dictionary but also to write the dictionary (Wray, 2014). Nevertheless, chartalism has become flavour of the time among many leftist economic views in recent years. This theory, therefore, deserve a place in the discussion of digital currency and blockchain technology.

Empirical Review

Salawu and Moloi (2018), examined four of the ostensible benefits, which at the same time constitute risks, from the view of Nigerian professional accountants towards legislating cryptocurrency in Nigeria. Data were elicited from the respondents through the demonstration of a structured questionnaire in a sample of 250 practitioners that was conveniently selected. Stratified group of 1,300 Chartered Accountants among whom were tax practitioners, financial analysts, statutory auditors, bankers, accountants, lawyers, lecturers and other specialists in the field of accounting. Data were analyzed using descriptive statistics. Results revealed that the Professional Accountants in Nigeria are willing to operate in the cryptocurrency environment provided the government would legislate its use. The study concluded that the legislation of cryptocurrency or its modified form by the federal government of Nigeria is desirable for the protection of her economy as well as the interest of her citizens.

Aliyev (2019), in his paper, delves into the reliability of blockchain technology as a tool for anticorruption. The author looks at how this tool can be utilized to reduce corruption in public administration. The author adopted two-round Delphi Method, the author engaged the services of 17 blockchain experts to assess the potential of the blockchain, the benefits and barriers of blockchain technology in the anti-corruption process. The author addresses the research question of to what extent newly emerging blockchain can be implemented in anti-corruption activities. Ikegwuru, and Nwokah (2022), examined the impact of block chain technology application on supply chain collaboration of energy companies in Rivers State of Nigeria. The population of the study consisted of 295 registered energy companies operating in Rivers State of Nigeria. To obtain the sample size, the Krejcei and Morgan's formula was used to determine a sample size of 169 Energy companies. The simple random sampling technique was used to obtain two (2) executives from each of the 169 companies under study, to turn up 338 management staff for the whole sample. A 4-point likert-scale structured questionnaire was distributed to the respondents, of which out of the 338 copies of structured questionnaire distributed, 246 copies accounting for 73% were retrieved from the respondents, and after data cleaning, 202 (82%) of the questionnaire were found useful for analysis. The analysis was carried out using the simple regression technique to test the hypotheses at 0.05 level of significance. The findings revealed that, BTC-enabled visibility strongly, positively and significantly influence supply chain collaboration. It was also, found that BTC-enabled traceability moderately, positively and significantly influences supply chain collaboration. The study therefore, concludes that blockchain technology application positively and significantly influences supply chain collaboration of energy companies in Rivers State.

Dinesh, Manoj and Anandh (2020) investigated blockchain technology in food supply chain security in India using the methods of information science, management science, system science and other theories and empirical research methods, chiefly by means of the PEST analysis, compare and exhibit studying the appliance of Blockchain in the food supply chain. It was established that, transactions are cryptographically secured by means of double SHA 256; Bit algorithm guarantee immutability, transparency, distributed and easy to uphold; blockchain transaction secured cryptographically by means of Hashing Algorithm Double SHA 256; the blockchain can keep the information secured void of manipulation. The blockchain technologies realize multifaceted enterprise of the food supply is the government demand, through the system of food market transaction record. (see also, Wu & Liang, 2017; Nowiński & Kozma, 2017; Casino, Dasaklis, & Patsakis, 2018; Phan, Li, & Mentzer, 2019).

Research Methodology

The study adopted a descriptive survey design. The study used a questionnaire for data collection with a purposive random sampling technique to select the respondents in Abia State, composing of staff of Abia State Polytechnic, Aba and accounting practitioners. The population for the study is 121 staff of Abia State Polytechnic, Aba and accounting practitioners in Abia State. The primary data were sourced through a closed-ended questionnaire using a scale of 1 - 5: where (5) strongly agreed (4) agree (3) undecided (2) strongly disagree (1) disagree. 121 copies of the questionnaire were administered, and the researchers retrieved 121. The 10% of the 121 were administered first to confirm the reliability of the questionnaire. The data collected from the retrieved questionnaire was tested with Cronbach's alpha reliability test to determine the internal consistency of the questionnaire item as a measurement. The data collected from respondents were analyzed with the frequency distribution table and chi-square (x2) statistical technique.

Presentation and Analysis of Data

Research Question: What is the effect of digital currency in financial ecosystem of Nigeria? In order to answer this question, items 1-5 of the copies of the questionnaire were distributed to 121 respondents and the questions seeks to understand the effect of digital currency in financial ecosystem of Nigeria. In order to answer this question, percentages, mean, standard deviation, skewness and kurtosis were used in analysis.

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s/no	Variable	Scale	Freq.	%	Mean	S.D	Skew	Kur t
	Internet is the predictor of digital currency	SD	2	1.7	4.27	0.76	-1.65	4.90
		D	2	1.7				
		U	5	4.1				
		А	64	52.9				
		SA	48	39.7				
		Total	121	100				
2	Digital currency should be considered in financial application	SD	4	3.3	4.07	0.97	-1.39	2.06
		D	6	5.0				
		U	10	8.3				
		А	58	47.9				
		SA	43	35.5				
		Total	121	100				
3	Blockchain technology is relevant in 21 st century financial advancement	SD	1	.8	4.25	0.79	-1.20	2.16
		D	3	2.5				
		U	11	9.1				
		А	56	46.3				
		SA	50	41.3				
		Total	121	100				
4	Digital currency is relevant in financial ecosystem in this 21 st century	SD	3	2.5	4.02	0.97	-1.16	1.27
		D	8					
		U	13					
		А	57					
		SA	40					
		Total	121	100				
5	Digital currency promoters should adopt these internet technologies in Nigeria	SD	3	2.5	4.23	0.91	-1.49	2.63
								<u> </u>
		D	3	2.5				<u> </u>
		U	12	9.9				<u> </u>
		A	48	39.7				<u> </u>
		SA	55	45.5				<u> </u>
		Total	121	100				

Source: Authors' Field Survey (2025)

Table 1 shows the responses of the respondents with respect to the effect of digital currency in financial ecosystem of Nigeria. The majority of the respondents agreed that digital currency,

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blockchain technology and internet application, all impact on financial ecosystem in Nigeria. This is evident as their mean values are all approximately 3 and 4, which implies that majority of the respondents agreed to the assertion

Research Question 2: How does blockchain technology affect financial ecosystem in Nigeria? In order to answer this question, items 1-5 of the copies of the questionnaire were distributed to 121 respondents and the questions seeks to understand how blockchain technology affect financial ecosystem in Nigeria. In order to answer this question, percentages, mean, standard deviation, skewness and kurtosis were used to analyze the question

s/no	Variable	Scale	Freq	%	Mean	S.D.	Skew	Kurt
1	Blockchain technology is necessary	SD	2	1.7	3.95	0.98	-0.97	0.51
	to promote financial system in							
	Nigeria							
		D	12	9.9				
		U	13	10.7				
		А	57	47.1				
		SA	37	30.6				
		Total	121	100				
2	Internet and internet infrastructure	SD	4	3.3	3.93	0.98	-1.27	1.50
	are important for digital currency operation							
		D	10	8.3				
		U	8	6.6				
		А	67	55.4				
		AS	32	26.4				
		Total	121	100				
3	Electrification and internet connectivity in rural areas will enhance the use of digital currency	SD	2	1.7	4.03	1.00	-0.93	0.31
		D	9	7.4				
		U	19	15.7				
		А	44	36.4				
		SA	47	38.8				
		Total	121	100				
4	Digital currency operators should promote and contribute in enhancing blockchain technology in financial ecosystem	SD	1	.8	3.98	0.80	-0.68	0.88
		D	3	2.5				
		U	24	19.8				
		Α	62	51.2				
		SA	31	25.6				

Table 2: Respondents' opinion on blockchain technology in financial ecosystem

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		Total	121	100				
5	Education and enlightenment are necessary on the use of digital currency and blockchain technology in financial institutions	SD	5	4.1	3.98	1.08	-1.18	0.84
	-	D	10	8.3				
		U	11	9.1				
		А	51	42.1				
		SA	44	36.4				
		Total	121	100				

Source: Authors' Field Survey (2025)

Table 2 shows the responses of the respondents with respect to how blockchain technology affect financial ecosystem in Nigeria. The majority of the respondents agreed that internet and internet infrastructure with respect to electricity, internet connectivity, all impacts on the financial ecosystem in Nigeria. This is evident as their mean values are all approximately 3 and 4 which implies that majority of the respondents agreed to the assertion.

Table 3Test of Hypothesis

	Hypothesis 1	Hypothesis 2			
	Digital currency has	Blockchain technology has			
	significant effect on the	significant effect on financial			
	financial ecosystem in	ecosystem in Nigeria			
	Nigeria				
Chi-square	53.802 ^b	68.843 ^b			
Df	12	12			
Asymp sig.	.000	.000			

Discussion of Findings

Ho1: digital currency has no significant effect on financial ecosystem in Nigeria

The test analysis rejects the null hypothesis (Ho) at 5% level of significance if the probability of the chi-square statistics for the hypothesis is less than 5%; otherwise, we fail to reject the null hypothesis. Thus, we reject the null hypothesis and accept the alternative, and conclude that digital currency has no significant effect on financial ecosystem in Nigeria.

Ho2: blockchain technology has no significant effect on financial ecosystem in Nigeria.

In hypothesis two, the study rejected the null hypothesis because the probability of the chi-square statistics in table 3 for hypothesis is less than 5% and thus, we reject the null hypothesis and accept the alternative and conclude that blockchain technology has significant effect on financial ecosystem in Nigeria.

RECOMMENDATIONS

The study provides the following measures by way of recommendations:

- Central bank of Nigeria, legislators and financial stakeholders should collaborate to establish compliance standards and best practices for digital currency and blockchain integration in financial ecosystem. These standards should ensure that digital currency algorithms and blockchain technology conform with regulatory requirements and ethical principles, while promoting transparency and accountability.
- ➤ Governments at all levels and regulatory authorities should provide investment incentives, such as tax credits and grants, to encourage research and development in blockchain technology in financial ecosystem. These encouragements can motivate innovation, attract talent, and fast-track the adoption and adaption of blockchain-driven solutions in the financial ecosystem. In addition, internet connectivity and electrification are essential for the advancement of the technologies.

Conclusion

The study investigated digital currency and blockchain technology in the 21st century financial ecosystem. The study revealed that there is a significant relationship between digital currency, blockchain technology and financial ecosystem. Thus, a lot can be done to increase the number of blockchain professionals in the financial ecosystem. Through collaboration between government agencies, regulatory authorities, financial institutions, technology providers, and academic institutions can drive innovation and encourage the training of digital currency and blockchain experts in the financial ecosystem. Thus, it is important to focus on capacity and skill building to increase blockchain expertise and understanding. Moreover, staying up-to-date of regulatory changes and guaranteeing compliance with data protection laws will be precarious for the general acceptance of these technologies. As the landscape of financial system evolves, so must the strategies and tools used to improve it.

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