

THE EFFECTS OF DIGITAL CURRENCY (ENAIRA) ADOPTION ON NIGERIA ECONOMY

T.A. Adegbite* , M.A. Aremu 
Al-Hikmah University, Ilorin, Kwara State, Nigeria
*email: adetajud@yahoo.com

Abstract. This study examined the determinants of eNaira adoption in Nigeria, and also analyzed the effects of eNaira adoption on economy in Nigeria. The utilized data were randomly collected from banks staff, economists, and Nigerians through Google forms questionnaires which were distributed among the respondents through WhatsApp and Emails. The respondents cut across all six (6) geopolitical zones in Nigeria which are Southwest, Southeast, Southsouth, North central, Northeast and Northwest. The Google forms were continuously distributed until it reached Two thousands five hundred and eighty three (2583) respondents. These were rigorously analyzed through MANOVA, correlation, chi-square and Cronbach's Alpha statistics reliability.

Data garnered were analyzed by employing ANOVA, Chi-square, MANOVA and correlation to test the hypothesis formulated. To gauge the determinants of digital currency adoption in Nigeria, government policy, human behavior, ICT, personnel, and education were taken as independent variables while digital currency adoption was considered as dependent variable.

It was found from the outcome of MANOVA that Education, Block Chain, Government policy, Human Behaviour, and Personnel are the significant determinants of eNaira adoption in Nigeria. It was also discovered that eNaira adoption has positive significant influence on Nigeria economy. Therefore, it is concluded that eNaira has positive significant effect on economy in Nigeria.

It is recommended that CBDC should establish validation scheme (centralized or decentralized) to prevent double spending or identity theft of eNaira code. Also, Citizens must be enlightened to understand the difference between cash deposits' digital representation in bank accounts and eNaira in digital wallets through effective programme which should be organized by CBN to deepen the enlightenment of eNaira in the country.

Keywords: eNaira; economy; adoption; education; blockchain; government policy.

Introduction

The inception of the pandemic which led to the closure of many bank branches throughout the country was further deterred Nigerians to have proximal access to their savings both in urban and rural area due to the entire closure of economy indefinitely. The existence of technology has assisted Nigerians to have access to their financial system with the exemption of Nigerians who are not privy to bank accounts in rural areas. This ignited digital transaction through cryptocurrency which invariably upsurged the country's rank to sixth country that bows for cryptocurrency adoption globally (CBN 2021). Nigerians have been previously using cryptocurrency as a reliable, cheaper and faster alternative currency for both international domestic and transactions before it was recently denounced by federal government due to devaluation of Nigeria currency. Nigeria currency was devalued twice which translated to 12.5 percent reduction in value due to pandemic and emerging of cryptocurrencies (CBN 2021). In a struggle to control the rapid gaining of cryptocurrencies, CBN, in February

2021, issued instruction to local banking institutions to halt transaction in cryptocurrencies, and stop encouraging payments for crypto exchanges in Nigeria which currently illegalized it. This perhaps, four months later, prompted federal government to create digital currency (eNaira) to replace crypto currency adoption which can be used to transact without the inclusiveness of the banks.

Among the CBN's progressive goals is to digitize transactions, and enhance financial inclusion, and offer citizens' accessibility to financial services whether is banked or unbanked. As Nigeria is still considered one of the most 'unbanked' countries in the world (CBN, 2021). In order to expunge totally from this embarrassment, and decentralized identity systems, Central Bank Digital Currencies (CBDCs) have been established with the expectation of providing the users with proof of identity and access to banking services directly from their smartphone. CBDCs are gaining worldwide popularity rapidly, and Nigeria is the country in Africa that firstly and officially launch digital currency which is backed by appropriate authority such as monetary reserves. CBDCs are evolving government path to designate

the momentum that has been structure within digital assets, mainly as a response to cryptocurrencies popularity like Bitcoin, which are reorganized and not within the purview of regulatory authority.

The eNaira system is designed and integrated with the best fraud management system, which guarantees the security of transactions and fosters customers' trust. The eNaira is referred to digital currency which is issued and supported by Nigerian government authority. It is legal tender which is physical cash equivalent unlike Bitcoin and cryptocurrency which is not supported by established authorities. One of the visions of CBN is financial inclusion increment and digitization of payments as well as greater accessibility by the citizen to financial services. Before the existence of digital currencies in Nigeria, the single way the consumers transact or settle debits is physical cash and electronic transaction which is domiciled in commercial bank's account but not central bank.

According to CBN (2021) the digital currency with the involvement of blockchain technology can foster economic growth and increase the GDP of Africa's biggest economy by \$29 billion over the next 10 years. The establishment of eNaira can be assisted through the blockchain ledger, eliminates third parties, facilitates efficient and low-cost transactions, and accessibility to low-risk and reliable payment options by consumers. Accessibility can be restricted by digital identity such as National Identity Number and Bank Verification Number which is dependent by eNaira. Physical currency has been devalued severally which has also lead to inflation in Nigeria. The expectation of CBN on digital currency is to control inflation, and simplify transaction without holding cash or visiting banks because it is domiciled with CBN. Nigeria which has been regarded as immature because of persistent electricity crisis, corruption, and internet accessibility problem is probable to face challenge when transact with digital currency virtual wallet which are domiciled with CBN. This new developments has raised questions among the researchers on eNaira accessibility, considerable effects of eNaira on economy. Is it worthy to access cash by the educated and illiterate citizen while offline? Can digital currency adoption impact economy significantly in Nigeria? Therefore, digital currency adoption effect on economy and its determinants in Nigeria are the pertinent motives behind this study.

Literature Review

A digital currency refers to alternative method of payment that occurs without holding physical currency in an electronic form. These currencies are

issued, regulated and controlled by central bank, and supported by the government. This is absolutely different with extant electronic money, which is issued by central banks but its usage is limited to the banks and financial institutions selected. Digital currency (eNaira) is an electronic version of the physical Nigeria currency issued by CBN which is equal in value with the physical currency. It is not with the motives of replacing cash but functioning as an alternative means of settling debt and payment. The eNaira is central bank digital currency (CBDC) issued by the government which possesses the same value as the fiat currency. eNaira is not in coins form neither is in notes format, it is virtual designed format. It is translated that eNaira cannot be hold physically but can be stored in value. It is legally backed by central bank to make payment. CBDC is a direct central bank liability, and can be exchanged, and transferred using blockchain as a technology to regulate and protect eNaira. It refers to a system which stores transaction records across computers network for effective eNaira implementation.

eNaira shall be controlled and administered by CBN through the Digital Currency Management System (DCMS). DCMS provides digital currency and stable coin solutions to CBN, financial institutions and ecosystem participants worldwide. The eNaira system maintenance depends on technological strength such as blockchain engaged to offer system maintenance framework. According to CBN (2021), digital currency and blockchain technology are used to facilitate economic growth, and upsurge GDP of Africa's biggest economy by \$29 billion in the next 10 years. Blockchain is a Distributed Ledger Technology (DLT) which records transactions with an incontrovertible hash (cryptographic signature). This translates that if a change is made in a chain of one block, it is immediately showed that it had been altered. If hackers want to alter blockchain system, every block in the chain distributed versions must be changed across which difficult for the hackers to tamper with.

Digital currency (eNaira) according to CBN (2021), can be available only to whoever possesses bank accounts through blockchain. Yet, eNaira is projected to be universal, that is designed to settle debts, medium of exchange, unit of account and deferred payment globally. The prerequisite to eNaira usage is that eNaira wallet must be created which is digitally storage controlled, managed and created by blockchain technology. There is only one version of eNaira wallet for government, although financial institutions are permissible to develop their own eNaira versions later.

eNaira App must be downloaded by individual using smartphone in order to create eNaira wallet. This can be downloaded through Apple Store or Google Play Store. The registration can be done and completed on eNaira App. The users can be permitted to transfer money, or receive money from bank account immediately eNaira wallet has been created. According to CBN (2021), eNaira system is built with rigorous considerations for data protection, privacy, and in compliance with the National Data Protection Regulations. Nevertheless, this system is constructed based on the guidelines in order to prevent the unlawful flow of funds and usage which necessitate transactions identification and detail so that privacy rights of eNaira system users are not breached.

DCMS will be employed to superintend the currency. This will be engaged by Non Nigerian Company. According to CBN (2021), the decision to engage a Non Nigerian company is to avail the local press criticism. It was stated further that CBN which, the apex bank, selected one company (BITT I emerged the strongest.) which was evaluated through rigorous selection procedure via implementation timeline, technology, efficiency and possession of anti-money laundering, terrorism combat, interoperability, platform security, and implementation experience.

Digital currency which is electronic money, e-money, digital money, network money, digital cash, electronic currency, electronic cash, mobile money and e-cash (Berentsen, 2005). Digital currency are of two types which are digitized state issued currencies and private digital currency (Gans and Halaburda, 2015). The Integral motive for the establishment of eNaira (digitized state currencies) is the necessity to build more synergy with financial institutions. The framework of eNaira is such that it entrenches many pipelines of collaboration and further strengthens financial institutions core service delivery. It also increases customer interaction which can help adopting better customer support models. It also opens up a whole new market of digital currency users for financial institutions to increase their customer base, add value to their account owners and enhances electronic commerce globally.

The eNaira principally offers digital stability and also facilitates ease digital transactions without physical cash. This also minimizes involvement of commercial banks in transaction as intermediary. The expected benefits of eNaira also embedded with cheap, fast, reliable payment channel. It supports

digital economy and improves economic activities. The following are also the benefits of eNaira. It also:

- facilitates and promote financial inclusion
- facilitates citizens' welfare disbursements
- encourages diaspora remittances
- lessens the cash processing cost
- increases the usability and availability

Central Bank currency

- upsurges tax collection and revenue generation

- cross-border payments improvement

In addition, Nigeria with the largest population in Africa is the first country in Africa to organize and control eNaira successfully. This is an omen to Africa regional monetary integration. This can totally eradicate inconvertibility currencies problem in Africa, and assist intraregional trade which has been an issues in Africa. With the operational Continental Free Trade agreement in African, the launch of eNaira can lead to Africa regional monetary integration.

Furthermore, decrease in cash handling expenses and translucent taxing systems are attained with eNaira together with sufficient resources available for capital and development projects like as roads construction, health facilities provision and affordable education services. eNaira supports the government on welfare allowance to Nigerians who are less privileged. It also facilitates immediate cross-border foreign exchange which can boosts the Nigeria economy. Further, eNaira reduces fraudulent activities and unlawful deals like money laundering, and illegal money deals which can be tracked with eNaira unique ID. The transaction cost will be cheaper because intermediary is totally expunged. Theoretically, the eradication of third-party will allow small businesses to access capital, protect Nigerian against capital control, financial extortion, and facilitate innovation. eNaira can remove a multiple authorization charges, customer service and transactions fees which hinders small businesses with current credit card system. However, the hypothesis is stated

HO₁: Digital Currency adoption will not impact economy significantly in Nigeria.

Blockchain

Blockchain is principally a transactions digital ledger that is distributed and duplicated across the whole computer systems network on blockchain. Every block in the chain comprises a transactions number, and anytime a new transaction transpires

on the blockchain, the transaction record is added to all the participant's ledger. The multiple participants

that manage the decentralized database refers to as Distributed Ledger Technology (DLT).

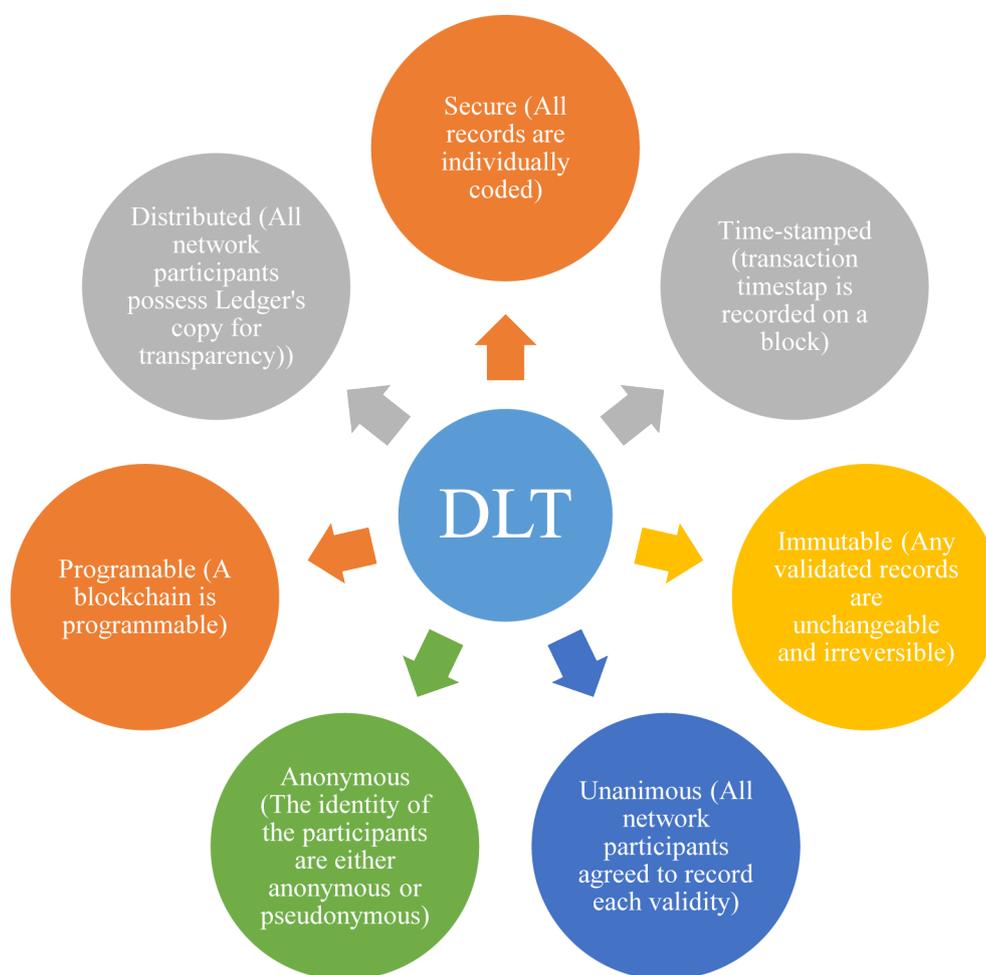


Figure 1 – Property of Distributed Ledger Technology (DLT)

Through blockchain ledger, third parties are eliminated, and also contributes to the effective and efficient low-cost transactions. Consumers, to their advantages, experiences reliable payment and low-risk options. Additionally, it improves oversight payment and funds, and provides transparency that strengthens public confidence as well as tackles with economic fraud and crime by financial authorities. Thus, Hypothesis is stated as:

HO₂: Technology (ICT and block chain) are determinant to Digital Currency adoption in Nigeria.

Government Policy

This refers to the policy made by government on the acceptability of eNaira for settlement of

debt, medium of exchange, store of value and means of deferred payment. For eNaira to be generally accepted as a means of payment, government policy on rules and regulations on eNaira must be enforced. There is must consistent way of dealing with ENaira in Nigeria. There must also be consistent guidance on legal, tax, accounting, and audit related standards. Thus, government policy is a debated issues confronting digital currency issuance. eNaira technology has major unique and extraordinary features that give it the prospective to be impacting on economy, institution and industries when fully implemented, and extensively backed with enforcement. The pertinent extraordinary features are capacity to drive money anywhere

within a minutes globally, its decentralized nature of transfer value and its absolutely digital existence, make government policy on digital currencies to be effective and efficient. Clear legislation on digital currencies must be apparently stated so as to avoid more complex in the process.

HO₃ : Digital Currency adoption does not need government policy in Nigeria.

Human Behaviour

Human behaviour is also considered as the determinant of eNaira in Nigeria. This refers to the culture, believe and enthusiasms of Nigerians towards acceptability of digital currency. The culture and belief of the Nigerian are the determinants of any policy in the country. For the effective implementation of digital currency in Nigeria, culture, belief, attitude and behavior of the users (Nigerian) must be put into consideration.

HO₄: Human behaviour is not significantly important in digital currency adoption in Nigeria

Personnel

This refers to as the recruitment of competent, trust and responsible staff. Personnel is very important in implementation of digital currency in Nigeria, These staffs are saddled with responsibilities of controlling, administrating, organizing, check and balance, and auditing. They are also in charge of strategic positions so as to achieve the policy objectives. The strategic positions such as block chain position, ICT, cyber security, check and balance, and other pertinent positions for effective eNaira implementation. The implication is that any betray from a staff has negative effects on eNaira's successful implementation.

HO₅ : Involvement of personnel is not relatively important in digital currency adoption

Education

This is refers to the enlightenment of the Users (Nigerians) on digital currency adoption, implementation, importance of digital currency, and the benefits attach to it. This can be done through public enlightenment, medians such as Television, Radio, bill boards, churches, mosques, schools, and other channels. Enlightenment cannot be underestimated in digital currency adoption. Through this medium, numerous users will be

contacted and educated on the reason behind the adoption of eNaira in the country. Many questions will be raised and answered by the facilitators. Also, the opinions of the users will be gauged, and necessary information will be garnered for effective and efficient implementation of eNaira.

HO₆ : Education is not significantly necessary on digital currency adoption

Technology Acceptance Theory

This study is anchored on Technology acceptance theory which is absolutely defined as technology's model pronounced by Venkatesh which is entrenched as user acceptance of information technology. It designed to clarify the intentions of the user of a system which embedded with consequential usage attitude and system of revenue collection. This theory is engaged to classicize acceptance and technology usage for revenue collection system in the country. The theory explains expectant effort, expectant performance, and facilitates social influence as four constructed keys. According to this theory, usage attitude, behavior, and intention determinants are classified as the first three while the fourth direct determinant is classified as adopted behavior (Adegbite, Bojuwon & Adegbite 2019). The theory was hypothesized and recognized through an evaluation and agreement of the eight constructed models which are employed by extant research to clarify information on usage behavior (motivational model, reasoned action theory, planned behavior theory, technology acceptance model, a theory of technology acceptance combined model, personal computer usage model, planned behavior, social cognitive and social diffusion theory).

The importance of this model to this research is that behavior, attitude and intention are the cogent determinants of adopted policy if the government expects favorable ends results of the policy. This theory classifies that acceptance, and technology usage are the pertinent determinants for digital currency adoption in the county. If the citizens, through their behaviour, reject the digital currency, it will not be effective in the country, and vice versa. Technology usage according to this theory is the backbone of the effective eNaira, without vital and formidable technology, eNaira cannot be effective. Therefore, this study harnessed on this formidable theory.

Availability of the existing literatures from other countries divulged that digital currency impacted positively and significantly on the respective

countries' economy. For instance, Bordo and Levin (2017) examined the effect of CBDC on Future of Monetary Policy in US, descriptive method of analysis was employed to examine CBDC effect on monetary policy. It was discovered that CBDC serve as a steady unit of account, medium of exchange, and store of value. Engert and Fung (2017) determined the effects of digital currency on general public in Canada. The study started by discussing the conceivable motivations for issuance of digital currency by central bank. The study sets out a standard CBDC with structures that are related to cash. Digital currency implication are explored and focused on central bank monetary policy, financial stability and banking system and payments. Finally, it was concluded that CBDC significant impacts general public positively in Canada.

Qianru (2017) employed econometric model to discover the connections between digital currency, velocity of money and money supply monetary system of China. To measure the digital currency effects on fiat currency, it employed inferential statistics to analyzing the connection among cash ratio, financial electronic level, electronic currency level, and interest rate. The results divulged that connection which is significant existed among the variables examined. The study advocated that extensive digital currency would bring variation to the rapidity of money both in the short and long term. In the same vein, Appiah Otoo and Nemati (2017) analyzed the digital currency impact on quality of life in selected

developing countries. Approach of mixed method was used to analyse hypotheses and conceptual model. Physical interviews were also conducted to confirm research instrument and improve the study. Survey questionnaire were administered to 400 digital currency users, particularly, students from developing country were randomly selected. Five-Likert scale were employed while partial Least Squares (PLS) was used to analyse the data collected from students selected from developing countries. It was concluded that digital currency impacted quality of life significantly and positively.

Purnawana, and Riyantia (2019) examined CBDC significant effect on Canada monetary policy. The study sets out pertinent CBDC standard in numerous countries. According to the study several central banks are aggressively exploring sovereign digital currencies initiation. Primary results showed that the new monetary instruments provided by CBDC improved financial inclusion and monetary policy transmission. In another study of Jiang and Yu Zhu (2021) which investigated the effect of CBDC on interest-bearing rate for bank deposits and monetary policy. The study, after rigorous analysis, concluded that CBDC weakened and reduced interest on reserves. CBDC interest impacted deposit market extensively and positively when compared with reserve interest. According to the study, CBDC rate is also stronger to loan market, and improved market positively more than fiat currency but effective coordination of CBDC is needed to successfully attain policy goals.

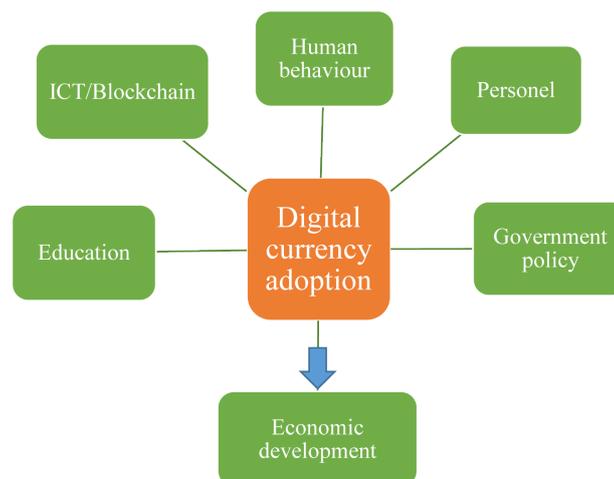


Figure 2 – Digital currency adoption and Economic Development

Methodology

To examine the view of the Nigerians on eNaira adoption, data were collected through questionnaire which were administered to staff of selected banks and elite Nigerians through random sampling. This was done using Google forms questionnaires which were sent to respondents in Nigeria through WhatsApp and Emails. The respondents cut across all six (6) geopolitical zones in Nigeria. The six (6) geopolitical zones are Southwest, Southeast, Southsouth, North central, Northeast and Northwest. The Google forms were continuously distributed until it reached Two thousands five hundred and eighty three (2583) respondents. But each respondent was given a chance of assessment because questionnaire on Google forms was restricted to one response per respondent. Data garnered were analyzed by employing ANOVA, Chi- square, MANOVA and correlation to test the hypothesis formulated. To gauge the determinants of digital currency adoption in Nigeria, government policy, human behavior, ICT, personnel, and education were taken as independent variables while digital currency adoption was considered as dependent variable.

$$DICURR = f (GOVPOL, HUBEH, ICT, PERS, EDUC, \mu) \tag{1}$$

$$DICURR = \alpha_0 + \beta_1 GOVPOL + \beta_2 HUBEH + \beta_3 ICT + \beta_4 PERS + \beta_5 EDUC + \mu \tag{2}$$

To examine the digital currency adoption effect on economy, eNaira was picking as independent variable while economy was taken as dependent variable. These were measured through questionnaire administered on the respondents.

$$Economy = f (eNaira, \mu) \tag{3}$$

$$Economy = \alpha_0 + \beta_1 DICURR + \mu \tag{4}$$

- DICURR - Digital Currency
- GOVPOL - Government Policy
- HUBEH - Human Behaviour
- PERS - Personnel
- EDUC - Education
- ICT - Technology

Results and Discussion

Table 1 – Cronbach’s Alpha Statistics Reliability Analysis on Research Instrument

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

Source: Author’s Computation (2022)

As rightly stated in methodology because of the primary nature of data collection through administered questionnaires, this study carried out

reliability test of the instruments employed. It was discovered from Cronbach’s Alpha statistics that the instrument used was valid and reliable

Table 2 – Reliability Statistics on Digital Currency Adoption in Nigeria

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.72	.72	20

Source: Author’s Computation (2022)

Table 3 – Analysis of the Benefits of Digital Currency Adoption on economy in Nigeria

S/N	Benefits	Pearson chi-square	Pr(value)	Remark
1	Digital transactions enhancement	44.4041	0.007	Accepted
3	Financial inclusion	77.5617	0.000	Accepted
4	Employment generation	66.2314	0.001	Accepted
5	Direct welfare disbursements enablement	47.9478	0.008	Accepted
6	Revenue and tax collection Increment	43.1459	0.000	Accepted
7	Reduction in cost of processing cash	53.9410	0.010	Accepted
8	Resilient payment system supports	22.2946	0.034	Accepted
9	Central bank currency usability improvement	178.2899	0.000	Accepted
10	Economic activities enhancement	74.4925	0.000	Accepted
11	Easy payment of services by customers	23.9335	0.009	Accepted
12	It boosts ecommerce and enhances global recognition	133.7278	0.000	Accepted

Source: Author's Computation (2022)

Decision Rule: Decision rule on the significant effects of digital currency adoption on economy in Nigeria cannot be rejected because in Table 3 employed to testing hypothesis one, minimum calculated chi – square is 23.9335 ($x^2 - cal$) is higher than tabulated chi – square of

3.74 ($x^2 - tab$) which make all the benefits to be significant with the value of all probability of the benefits below 0.000. Mutually, the study rejected the null hypothesis. This signified emphatically that digital currency (eNaira) is of benefits to the economy.

Table 4 – Determinants of Digital Currency Adoption in Nigeria

S/N	Relationship	Pearson chi-square	Pr(value)	Remark
1	Government Policy	94.4041	0.000	Significant
2	Human Behaviour	77.5617	0.000	Significant
3	Technology (blockchain and ICT)	86.2314	0.000	Significant
4	Personnel	47.1324	0.000	Significant
5	Education	69.5634	0.000	Significant

Source: Author's Computation (2022)

Table 4 showed the determinants of digital currency adoption in Nigeria. It is discovered that government policy has the highest significant figure of 94.4041. The implication is that the policy of digital currency adoption needs effective enforcement in order to be generally acceptable for medium of exchange and settlement of debts. This is followed by the involvement of technology for effective and efficient generation of eNaira code and security against hackers. Human behavior is also considered as the determinant of eNaira in Nigeria with the Pearson chi-square value of 77.5617. This displayed that the culture, believe and enthusiasms of Nigerians towards acceptability of digital currency are significant and important. The culture and belief of Nigerian are the determinants of digital currency's

implementation in the country. In the same vein, education which is enlightenment also divulged Pearson chi-square value of 69.5634, translates that users' education towards the importance and benefits of digital currency is sacrosanct. This explains further that for eNaira to be generally acceptable, government must education her citizen extensively on the advantages of eNaira. Lastly, Personnel displayed Pearson chi-square value of 47.1324 meaning that recruitment of competent, trust and responsible staff is also importance. These staff are saddled with responsibilities of controlling, administrating, organizing, check and balance, and auditing. The implication is that any betray from a staff will absolutely has negative effects on eNaira implementation.

Table 5 – Results of ANOVA on Determinants of Digital Currency Adoption in Nigeria

Source	Sum of Square	Df	Mean Square	F	Prob > F	Remark
MODEL	1924.7064	21	91.652686	139.17	0.000	Accepted
GOVPOL	877.68814	4	219.42203	333.18	0.0000	
HUBEH	131.44387	4	32.860967	49.90	0.0000	
ICT	192.14857	4	48.037142	72.94	0.0000	
PERS	106.02184	5	21.204369	32.20	0.0000	
EDUC	70.852971	4	17.713243	26.90	0.0000	
Residual	1686.5967	2,561	.65856959			
TOTAL	3611.3031	2,582	1.3986457			
R-squared = 0.5330	Adj R-squared = 0.5291	Number of observations =	2,583		Root MSE =	.811523

Dependent variable: DICURR

Source: Author's Computations (2022)

Table 5 showed the determinants' effects of the adoption of digital currency in Nigeria. It was discovered that GOVPOL (government policy) enforcement will increase the level of digital currency adoption in Nigeria by 8.77%. Also, HUBEH (human behaviour) has positive effect on adoption of digital currency by 1.31%. Block chain and ICT significantly influence adoption of digital currency positively by

1.92%. This shows the importance of ICT on the adoption of digital currency in Nigeria. In the same vein, PERS and EDUC display positive influence on the adoption of digital currency in Nigeria by 1.06% and 0.7% respectively. These decisions negated the null hypotheses of each variable on adoption of digital currency, therefore, all variables under study influence the adoption of digital currency in Nigeria.

Table 6 – The Relationship between Digital Currency Adoption and its Determinants in Nigeria

	DICURR	GOVPOL	HUBEH	ICT	PERS	EDUC
DICURR	1.0000					
GOVPOL	0.6215**	1.0000				
HUBEH	0.1922	0.4321**	1.0000			
ICT	0.5532****	0.2466**	0.3342**	1.0000		
PERS	0.2642**	0.1327**	0.9835**	0.6745**	1.0000	
EDUC	0.1835*	0.0109	0.1167	0.0432	0.2245*	1.0000

** . Correlation is significant both at the 0.01 level and 0.05 level (2-tailed)

Source: Author's Computation (2022)

Table 6 showed the connection between digital currency adoption and its determinants in Nigeria. It shows that government policy has positive connection with digital currency adoption with coefficient of 0.6215*. This result implies that an increase in government policy enforcement will enhance digital currency adoption for transaction in the country. Further, human behaviour also augments digital currency adoption with the coefficient of **0.5112**** positively. In the same vein, Technology

(ICT, and blockchain) displays positive correlation with digital currency adoption with coefficient **0.1922****. This result displays that the mindset of the final users (Nigerians) determines the sustainability of digital currency adoption.

More so, PERS (Personnel) further displays positive correlation with digital currency adoption with coefficient of **0.2642****. It translates that involvement of trustworthy personnel determines the sustainability of digital currency adoption. Lastly,

EDUC (education) can be seen from the outcome of analysis having positive correlation (0.1835*) with digital currency adoption. This signifies that enlightenment of the users has positive impacts on

digital currency adoption. Having scrutinizingly analyzed the correlation, it is therefore suffice to finalize that all the determinants have positive correlation with digital currency adoption in Nigeria.

Table 7 – Analysis of the effect of Digital Currency Adoption on Economy in Nigeria by MANOVA

Source	Statistic	Df	F(df1,	df2)	F	Prob>F	
Economy	W	0.9305	4	4.0	2578.0	48.12	0.0000 e
	P	0.0695		4.0	2578.0	48.12	0.0000 e
	R	0.0747		4.0	2578.0	48.12	0.0000 e
	L	0.0747		4.0	2578.0	48.12	0.0000 e
Residual		2578			Number of obs =	2,583	
Total		2582					

Dependent variable = Digital Currency Adoption.
Source: Author’s Computation (2022)

W = Wilks’ lambda, P = Pillai’s trace, L = Lawley-Hotelling trace, R = Roy’s largest root, a = approximate, e = exact, and u = upper bound on F

After discovering positive correlation between digital currency adoption and its determinants, the next steps is to examine the effects in which digital currency adoption dispenses on economy. MANOVA was employed to examine the significant effects of digital currency adoption on economy. The effects were discovered from four statistic parameters in MANOVA (W, P, R, and L). According Wilks’ lambda parameter, one percent increment in digital currency adoption will

absolutely enhance economy by 0.93%. This is further supported that Pillai’s trace which brought out that an increase in digital currency adoption will increase economy by 0.06%.

But the opinion of the remaining parameters (Lawley-Hotelling trace and Wilks’ lambda) are of the same in the sense that both agreed on 0.07% as the effects in which digital currency adoption will dispense on economy in Nigeria. In short, all the statistic parameters suggest that digital currency adoption will increases economy positively when fully implemented in Nigeria, which was further advocated by F (Prob>F) equal to 0.0000e.

Table 8 – Wald Test after MANOVA

Wald Test	Value	Decision
(1) [Economy]3.Digital Currency = 0	F(1, 2578) = 22.29 Prob > F = 0.0000	Accepted

Source: Author’s Computation (2022)

To certify with the outcome of MANOVA, Wald test was carried out. The essence of this test is to confirm the significant level of the effect of digital currency adoption on economy. It was discovered from Table 8 that digital currency when adopt it fully in Nigeria will be favorably impacted economy significantly. This is advocated by Prob > F = 0.0000 which is below 0.05 significant level. Therefore, digital currency adoption will increase economy positively when it is fully implemented in Nigeria.

Discussion

This study examined digital currency adoption and its determinants, and also analyzed its effect on economy in Nigeria. It was discovered that the determinants of digital currency adoption are government policy, human behaviour, technology (ICT, and blockchain), personnel and education. This divulged that the enforcement of government policy on the actualization of digital currency adoption on Nigerian for transaction implementation

will facilitate prompt implementation. Also, it was further realized that technology through effective usage of ICT and blockchain will also enhance the digital currency delivery in Nigeria. This is line with Otoo and Nemati (2017). Personnel and education are also an integral part of the digital currency adoption determinants. This is absolutely true because the enlightenment on the usage and benefits of digital currency adoption will be superintended by dynamic personnel with formidable median. This outcome is also in consonance with Qianru (2017).

The benefits expected to dispense from digital currency adoption on economy in Nigeria are seen as employment generation, easy facilitation of transaction, security of money, direct welfare disbursements enablement, revenue and tax collection increment, reduction in cost of processing cash, resilient payment system supports, Central bank currency usability improvement, and economic activities enhancement. Also, eNaira opens up a whole new market of digital currency users for financial institutions to increase their customer base, and add value to their account owners. It is not a subtle scheme to steal customers' financial properties but it is a collaboration to grant access to more financially excluded people.

Furthermore, it was discovered that government policy has highest positive relationship with digital currency adoption with the coefficient of 0.6215*. This translates that government policy on digital currency (eNaira) adoption in Nigeria supported by full enforcement by law have impact on the general acceptability of eNaira by the end users of the currency. This further translates that it will be generally accepted as a settlement of debts and transaction. This outcome is in line with Engert and Fung (2017). This is followed by Technology via ICT and block chain with the relationship benchmark of 0.5532. This displays that ICT and blockchain are the integral ingredients for the successful of eNaira in Nigeria. This will checkmate the fraudsters in hacking CBN data base for manipulating or generating eNaira code. Without this, according to the outcome of this research, the generated code by CBN can be manipulated or hacked for their own treacherous ecstasy. The eNaira system is designed and integrated with the best fraud management system which guarantees the security of transactions, and fosters customers' trust through blockchain.

Human behaviour through culture and beliefs also has positive significant relationship with

adoption of eNaira in Nigeria. This is also in consonance with the view of Qianru (2017) who revealed that culture and beliefs cannot be discarded when adopting digital currency in any country. Education was also seen having positive correlation with eNaira adoption in Nigeria. This displays that for effective implementation of eNaira, the populace must be enlightened and educated on the importance and the benefits attached with eNaira adoption in the country. The implication of education is that it will promptly enhance eNaira adoption, and gives it general acceptability for the settlement of debt, transaction, store of value, and medium of exchange. Lastly, eNaira will ensure taxable assets traceability, taxation transparency, and enforcement in the systems, which will invariably increase revenue, and impact economy favourably.

Conclusion

This study examined the determinants of eNaira adoption in Nigeria, and also analysed the effects of eNaira adoption on economy in Nigeria. The utilized data were randomly collected from banks staff, economists, and Nigerians through questionnaires. These were rigorously analyzed through MANOVA, correlation, chi-square and Crombach's Alpha statistics reliability. It is concluded that eNaira have positive significant effect on economy in Nigeria in terms of employment generation, economic stability, easy facilitation of transaction, security of money, direct welfare disbursements enablement, revenue and tax collection increment, reduction in cost of processing cash, resilient payment system supports, central bank currency usability improvement, and economic activities enhancement. It will also serve as medium of exchange, secured store of value, and stable unit of account in Nigeria. It is therefore recommended that CBDC should establish validation scheme (centralized or decentralized) to prevent double spending or identity theft of eNaira code. Also, there is need to train Nigerians about eNaira by the government on the importance of this new development. Citizens must be enlightened to understand the difference between cash deposits' digital representation in bank accounts and eNaira in digital wallets. There must also be implemented through effective and formidable programme which should be organized by CBN to deepen the enlightenment of eNaira in the country.

References

- Adegbite T.A., Bojuwon M. & Adegbite A.F. (2019). The Impact of ICT on Taxation: Evidence from Oyo State. *Copernican Journal of Finance & Accounting, Copernican University*, 8(4), 7–25.
- Adegbite, T.A. & Anene E.C. (2014): Analysis of the Impact of Internet Advertising on Productivity of Telecommunication Industry in Nigeria: MTN Nigeria Outlook. *International Journal of Multidisciplinary Research and Development*, 1 (2): 161-166. www.allsubjectjournal.com
- Andolfatto, D. (2020) \Assessing the Impact of Central Bank Digital Currency on Private Banks,» *The Economic Journal*, ueaa073, <https://doi.org/10.1093/ej/ueaa073>
- Berentsen,A. (1997) Monetary Policy Implications of Digital Money. *University of Bern*. **51**(1); pp. 89-118.
- Berentsen, A. (2005). Digital Money, Liquidity, and Monetary Policy, (originally published in July 1997), *First Monday*, pp. 89-117.
- Bordo D. & Levin, A. T. (2017) *Central Bank Digital Currency and the Future of Monetary Policy*, *Econ. Working Paper 1714 3* n. 10, Hoover Institution (Aug. 2017), https://www.hoover.org/sites/default/files/research/docs/17104-bordo-levin_updated.pdf; *see also* Dyson, *supra* note 93, at 8; Mancini-Griffoli, *supra* note 78, at 16 n. 22
- Brigid A. Appiah Otoo . A. & Nemati H. (2017). *Digital Currency and Impact on Quality of Life. Emergent Research Forum Paper, Twenty-third Americas Conference on Information Systems, Boston, 2017*
- Engert W. & Fung S.C. Fung (2017). *Central Bank Digital Currency: Motivations and Implications*, BANK OF CAN. (2017), at 1, <https://www.bankofcanada.ca/wp-content/uploads/2017/11/sdp2017-16.pdf>
- Gans, J. S., & Halaburda, H. (2015). "Some economics of private digital currency. *Economic Analysis of the Digital Economy*," University of Chicago Press, pp. 257-276.
- Purnawan M.E & Riyanti R. (2019) Significant Effect of the Central Bank Digital Currency on the Design of Monetary Policy. *Jurnal Ekonomi Indonesia*, 8 (1); 125–151
- Qianru X (2017). The Impacts of Digital Currency on China’s Monetary System.
- Zhou, G. (2006). The impact on money circulation velocity of electronic money: An Empirical study with cointegration method. *China Economic Quarterly*. 5(4); 1999-1234.
- CBN (2021) <https://www.trtworld.com/magazine/nigeria-launches-its-central-bank-digital-currency-enaira-51063>