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Impact of Digital Currency on Nigeria's Monetary Policy: A Comparative Analysis with Traditional Fiat Currency.

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ABSTRACT

The objective of the study is to review the impact of digital currency on Nigeria's monetary policy, including its potential effects on inflation, exchange rates, and the overall economy. The study reviewed existing literature on the impact of digital currency on monetary policy, including its effects on inflation, exchange rates, and the overall economy. The study revealed that digital currencies can have a significant impact on exchange rates and monetary policy, and that a well-designed regulatory framework is crucial in shaping monetary policy towards digital currency, amidst the concerns about the negative effects on traditional fiat currency and economic stability persist. Nigeria's financial industry might be revolutionized by digital currencies, but in order to preserve economic stability, it is crucial to control how they affect conventional monetary policy tools. The suggestions include establishing a framework for regulating digital currencies, informing the public about the dangers, carrying out more research to comprehend how monetary policy and digital currencies interact, and encouraging financial inclusion and literacy to promote the adoption and use of digital currencies for development.

I. Introduction

The emergence of digital money over the last ten years has completely changed the global financial scene. Cryptocurrency, another name for digital money, is a decentralized electronic payment method that functions apart from conventional financial institutions. It offers consumers a safe and transparent substitute for conventional fiat currencies by securing financial transactions via the use of cutting-edge encryption techniques (Bernanke, 2020; Market.us, 2025).

With more and more nations looking for methods to integrate this new type of cash into their monetary systems, the emergence of digital currency has resulted in huge changes to the financial landscape (Coingecko, 2024). As a developing nation in Africa, Nigeria has been particularly impacted by this global trend, as it continues to grapple with issues surrounding its traditional fiat currency. The emergence of digital money and its possible impact on Nigeria's monetary policy have been actively watched by the nation's Central Bsafank (Musa & Idris, 2024; Okafor, 2023). As a result, it is becoming increasingly necessary to evaluate how digital money affects Nigeria's monetary policy and contrast it with the effects of conventional fiat currency.

Nigeria, the largest economy on the continent, has a thriving and rapidly growing financial sector. The country's monetary policy is supervised by the Central Bank of Nigeria (CBN), which is in responsibility of managing the money supply, interest rates, and currency circulation (Gbawae & Tonye, 2023). Given its increasing popularity in Nigeria, it is crucial to understand how digital money influences monetary policy. Maintaining price stability, promoting economic growth, and managing the country's foreign reserves are the main objectives of Nigeria's monetary policy (Safiyanu, Haruna, Gurin, & Bayero, 2022). The central bank is essential to achieving these objectives by employing a range of monetary policy tools, such as interest rates and currency restrictions. However, the government has faced challenges in maintaining the value of its fiat currency, the Naira, due to factors such as inflation and fluctuating oil prices (Adewumi, Oyamendan, & Ogunsanwo, 2024; Oloko, Ogbonna, & Adediran, 2024).

The aim of this paper is to compare the impact of digital currency and traditional fiat currency on Nigeria's monetary policy. The relationship between digital currency and traditional fiat currency in Nigeria's monetary policy presents a complex and evolving aspect of financial regulation. As digital currency continues to gain momentum in Nigeria, it is imperative to assess its impact on the country's monetary policy. This is essential for understanding the potential risks and benefits of integrating digital currency into the existing financial system.

2. Literature review

2.1 Rise of Digital Currency Globally

Digital currency—also referred to as cryptocurrency—has quickly become more well-known and widely recognized worldwide. functions separately from conventional financial systems. With a market valuation of more than $1 trillion as of April 2021, Bitcoin is the most popular and extensively utilized digital money (Statista, 2025).

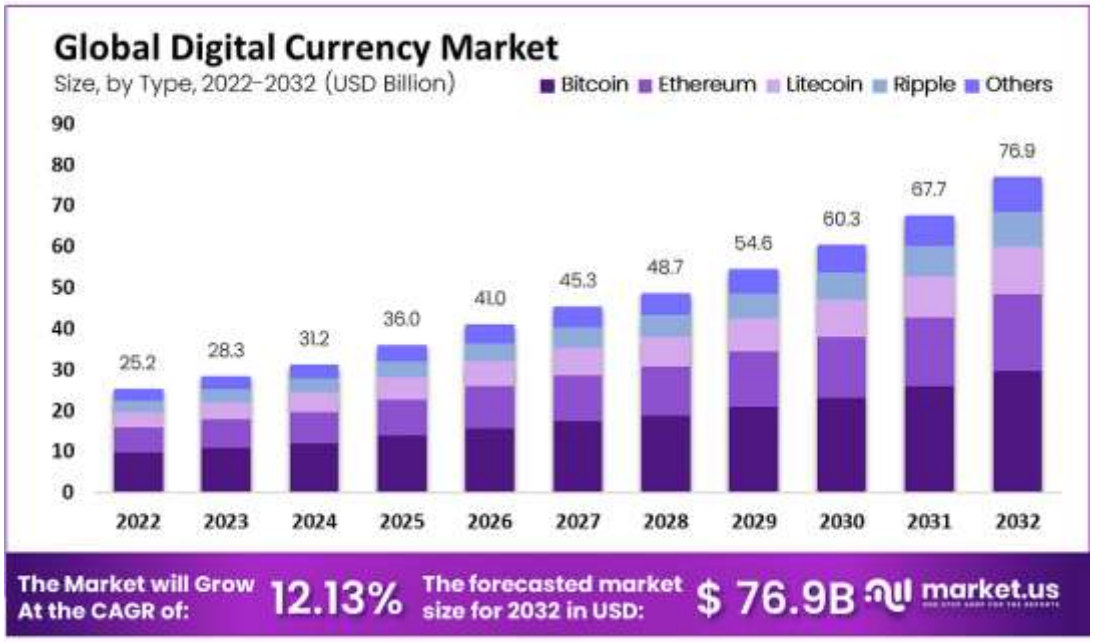

Figure 1: Rise in digital Currency

Source: Market.us (2025)

From 2022 to 2032, the global digital currency market is predicted to develop at a compound annual growth rate of 12.13%, reaching USD 76.9 billion by 2032. The market was said to be driven by investors and rising currency volumes (Market.us, 2025). A number of variables, including shifting consumer habits, technology improvements, and the demand for alternative financial systems, have contributed to the global spread of digital money. This essay will critically discuss the rise of digital currency globally, using key statistics and in-text citations to support the arguments (Coingecko, 2024; Egbuna, 2022).

One of the main factors driving the rise of digital currency is technological advancement. The invention of blockchain technology, which enables secure and decentralized transactions, has been significantly responsible for the emergence of digital currency. Blockchain technology makes it harder for anybody to abuse the system by ensuring that transactions are recorded and validated by a network of computers (Idisi, Adeagbo, Idiege, Hassan, Simpa, & Atteh, 2024). This has increased trust and confidence in digital currency, leading to its widespread adoption. According to a survey by Statista (2025), 23% of global internet users own a form of cryptocurrency, with the majority being in the age group of 25-34 years. This draws attention to the group most likely to adopt new technology, which will accelerate the growth of virtual money.

Another element influencing the rise of digital currency is the changing preferences and behaviors of customers. As the use of technology and the internet increases, more people are looking for simple and secure ways to do business. Customers find digital money appealing as it offers a quick, simple, and safe substitute for conventional banking systems. Mishchenko and Naumenkova, (2021) found that 48% of North Americans are interested in using digital currency for online transactions. Additionally, the COVID-19 epidemic expedited the trend towards digital transactions as consumers fear physical touch with banknotes and prefer contactless purchases. This has further fueled the rise of digital currency globally (Cova et al., 2022).

Another important factor driving the rise of digital currency is the need for alternative financial systems. While traditional banking systems are centralized, meaning they are run by a central authority like a bank or government, which can result in issues like inflation and financial instability (Igoni, Onwumere, & Amaewhule, 2020; Ozili, 2024), digital currency is decentralized, meaning it free from the influence and control of a central authority, which makes it appealing to people and businesses looking for more independent and stable financial systems. In 2020, the total market capitalization of all cryptocurrencies was $882 billion, demonstrating the increasing demand for decentralized finance (Okafor, 2023).

Digital money has grown significantly worldwide, but it is not without problems and detractors. One major concern is its volatility, or the large swings in the value of digital currencies. For instance, the price of Bitcoin reached a record high of almost $64,000 in April 2021, but it dropped to less than $30,000 a few months later (Market.us, 2025). Investors are put at risk by this volatility, which also casts doubt on the currency's stability. Additionally,

fraud and frauds in the digital currency market have been caused by certain nations' lack of legislation and control. Because of this, some people and organizations are hesitant to completely adopt digital money (Oko, 2024; Caccia, Tapking, & Vlassopoulos, 2024).

2.1.2 Monetary policy

Bernanke (2020) defines monetary policy as "the actions of a central bank to influence the availability and cost of money and credit, in pursuit of the central bank's macroeconomic objectives." This perspective holds that in order to achieve certain economic goals like price stability and full employment, central banks use monetary policy as a tool to regulate the quantity of credit and money in the economy. Nwoko, Ihemeje, & Anumadu, (2016) define monetary policy as the process by which a country's central bank controls the money supply, interest rates, and credit availability to achieve macroeconomic goals such as economic development, price stability, and currency stability. Gbadebo and Mohammed (2015) define monetary policy as the central bank's attempts to affect the money supply, interest rates, and the cost and accessibility of credit in order to achieve the objectives of exchange rate stability, price stability, and economic growth.

According to these definitions, one of the fundamental instruments that governments employ to accomplish their macroeconomic objectives—such as encouraging economic expansion, preserving price stability, and containing inflation—is monetary policy.

Monetary policy is classified as either expansionary or contractionary in the literature. While contractionary monetary policy slows economic development by reducing the money supply and raising interest rates, expansionary monetary policy stimulates economic growth by increasing the money supply and lowering interest rates (Bernanke, 2020; Obiaje, 2023).

One of the main arguments in the literature is that monetary policy contributes to economic growth. Nwoko et al. (2016) assert that expansionary monetary policies have the potential to increase investment and consumption, both of which contribute to economic growth. These measures include raising the money supply and lowering interest rates. But according to Bernanke (2020), factors like the monetary policy transmission mechanism and the zero lower bound on interest rates limit how effectively monetary policy may promote development.

The effect that monetary policy has on inflation is another crucial factor. According to Gbadebo and Mohammed (2015), monetary policy—specifically, the application of interest rates—has a major influence on containing inflation in Nigeria. However, He (2018) contends that structural elements including supply shocks and wage rigidities may restrict the ability of monetary policy to regulate inflation.

Furthermore, there is a debate on whether monetary policy should focus solely on maintaining price stability or also target other objectives such as economic growth and financial stability. Nwoko et al. (2016) suggest that central banks should have a dual mandate of both price stability and economic growth, while Bernanke (2020) argues that monetary policy should primarily focus on price stability as it is the foundation for sustainable growth and financial stability.

2.1.3 Relationship between digital currency and monetary policy

The use of digital currencies has become more widespread in recent years, raising new concerns about monetary policy. Bordo and Levin (2017) assert that the rise of digital currencies, such as cryptocurrencies, has the potential to fundamentally change the financial system and the application of monetary policy.

Some studies suggest that the implementation and communication of monetary policy may be greatly impacted by digital currencies (DCs) (Böser & Gersbach, 2020; Caccia et al., 2024). DCs, a type of digital currency that central banks create and control, have the potential to have a direct impact on the money supply and interest rates, two crucial instruments that central banks use to implement monetary policy (Pfister, 2017).

One important conclusion drawn from the research is that DCs may give central banks additional instruments with which to implement monetary policy (Beniak, 2019). Because DCs are programmable and have interest rates, central banks may be able to directly affect aggregate spending and the demand for money (Beniak, 2019). This gives central banks more flexibility in managing interest rates and liquidity in the economy, which are critical tools in monetary policy. DCs can also increase the effectiveness of traditional monetary policy instruments. By reducing costs associated with implementing monetary policy, such as the need for infrastructure for processing currency and the use of intermediaries, DCs can improve the precision and speed of its implementation (Davoodalhosseini, 2022). A more efficient transfer of monetary policy to the real economy might lead to better macroeconomic outcomes.

The potential impact of DCs on conventional monetary policy instruments and processes is one of the primary topics of discussion. DCs may provide central banks with more ways to carry out monetary policy, including limiting the anonymity of cash transactions and maximizing the implementation of a negative interest rate policy (Cova et al., 2022). However, Assenmacher (2020) argues that DCs might limit the central bank's capacity to adjust interest rates since they could lead to a rush to digital currencies in times of financial difficulty, which could lead to instability in the economy.

The efficiency of conventional monetary transmission channels may potentially be impacted by digital currency. A DC may avoid traditional financial intermediaries, reducing the power of monetary policy to influence loan and investment decisions (Nelson, 2021). The decentralized nature of digital currencies may make it more challenging for central banks to monitor and control the money supply, which might hinder their ability to achieve their monetary policy objectives (Purnawan and Riyanti, 2019). Beniak (2019) argues that the introduction of DCs may result in capital flow volatility across

borders, impacting monetary policy independence in open economies. In addition, the use of DCs may also change the dynamics of exchange rate regimes, altering the inflation targets, and potentially leading to coordination problems between central banks.

Some countries, such as Malaysia and Sweden, have already started exploring the possibility of implementing DCs. Ahmat and Bashir (2017) argue that these efforts could bring significant benefits, including reducing transaction costs, promoting financial inclusion, and improving financial stability. These advantages can, however, be accompanied by difficulties, such as guaranteeing the stability and security of virtual currencies and dealing with any possible effects on conventional monetary policy instruments and practices (Igoni et al., 2020).

2.1.4 Factors that influence monetary policy in the context of digital currency

Central banks throughout the globe are interested in the advent of digital money because of its possible influence on monetary policy. In the context of digital currency, a number of elements have been found in the research to have an impact on monetary policy.

Demand for Digital Currency: The demand for digital currency among financial institutions and the general public is one of the key variables that might affect monetary policy in this setting. The broad use of digital currency may lessen the demand for conventional banknotes and deposits, which might have a big effect on how well monetary policy is implemented and communicated, claims Beniak (2019). This is because a decline in the usage of traditional currency might reduce the effectiveness of the instruments that central banks employ to influence borrowing and spending in the economy: interest rates and changes in the money supply (Beniak, 2019; Meaning, Dyson, Barker, & Clayton, 2018).

Technological Advancements: In terms of monetary policy, central banks now face difficulties as a result of the technical developments that gave rise to digital money. According to Davoodalhosseini (2022), central banks find it difficult to keep an eye on and control the flow of money in the economy due to the decentralization and anonymity of digital currency, which can significantly impact their decisions on monetary policy. Central banks may need to develop new tools and strategies to effectively manage the economy in the era of digital currencies (Caccia et al., 2024; Böser & Gersbach, 2020).

Inflation and price stability: One of the main goals of monetary policy is price stability. Assenmacher (2020) asserts that the use of digital money raises inflation rates by improving the payment system's efficiency and transparency. This may lessen the effect of shocks on the economy and provide central banks more control over inflation.

Regulatory framework: Concerns over the regulatory environment for cryptocurrencies and digital currencies are also brought up by the introduction of digital money (Mohammed, Hayewa, Shuaibu & Bunu. 2022). According to Ahmat and Bashir (2017), a supportive regulatory environment is necessary for the effective adoption of digital currency, and this might have an effect on monetary policy choices.

Financial Stability Concerns: Concerns over the stability of the financial system are also raised by the adoption of digital money. Mishchenko and Naumenkova (2021) note that the use of digital currency may potentially hinder the role of traditional banks in the economy as individuals and businesses may prefer to store digital currency rather than deposit funds in traditional banks. This might also have an impact on how successfully monetary policy promotes economic growth and lead to a drop in credit demand.

Digital currency Design: Monetary policy may also be significantly impacted by the architecture of a digital currency. According to Pfister (2017), central banks may find it simpler to carry out monetary policy and regulate the money supply if a digital currency bears interest. On the other hand, a digital currency like Bitcoin that has a fixed quantity would make it harder for central banks to regulate interest rates and inflation (Idisi et al., 2024).

Cross-border Transactions: Monetary policy may also be impacted by digital currencies' capacity to ease cross-border transactions. The increasing use of digital currencies may make it more difficult for central banks to regulate exchange rates and ensure the stability of their currency on the global market (Meaning et al., 2018). Therefore, in the context of digital currencies, new monetary policy management strategies and rules could be needed.

Public Perception and Confidence: The public's opinion and trust in digital currencies can also have an impact on the efficacy and success of monetary policy. According to Ahmat and Bashir (2017), a lack of public trust in digital currencies may have a detrimental effect on their uptake and usage, which may reduce their influence over conventional monetary policy instruments. Therefore, to guarantee the seamless incorporation of digital currencies into their monetary policy, central banks need to consider public sentiment and handle any issues (Jimoh & Oluwasegun, 2020).

Financial Inclusion: Digital currency has the potential to increase financial inclusion by providing access to financial services to people who were previously excluded from traditional banking systems. Purnawan and Riyanti (2019) assert that greater financial inclusion can promote economic growth and lead to a more efficient transmission of monetary policy, both of which can significantly impact the effectiveness of monetary policy.

2.2 Current state of digital currency adoption in Nigeria

Nigeria's use of digital currencies has been accelerating in recent years, as seen by the rise in the use and acceptance of cryptocurrencies like Bitcoin, Ethereum, and Litecoin throughout the nation. This is demonstrated by the nation's increasing number of digital currency exchanges, retailers, and users (Fepetu & Adewumi, 2024).

The growing usage of mobile devices and internet penetration in Nigeria are two major factors driving the growth of digital money. Nigeria is a promising market for digital currencies, with an anticipated 198 million mobile subscribers and a 40% internet penetration rate, according to the Nigerian Communications Commission (Adegbite & Aremu, 2022). Furthermore, the high expense of traditional banking services in Nigeria is another factor

contributing to the rising adoption of digital currencies (Oko, 2024). Because they provide a more cost-effective and efficient method of transaction, cryptocurrencies are a desirable substitute for both people and companies. Given that they may now access financial services through digital currencies, the nation's sizable unbanked and underbanked population will find this particularly alluring (Musa & Idris, 2024).

The rise in digital currency adoption has also been fueled by the increasing number of exchanges in the country, making it easier for individuals to buy, sell and trade cryptocurrencies. Some of the popular exchanges in Nigeria include Luno, Quidax, and Buycoins, which offer local currency/fiat pairings with major cryptocurrencies (Egbuna, 2022).

Nigeria's adoption of digital currency is also being fueled by the country's improved regulatory clarity and official backing. Digital currencies were recently acknowledged as securities by the Securities and Exchange Commission (SEC), which also provided recommendations for their regulation. This has brought a sense of legitimacy and security to the market, attracting more investors and businesses to embrace digital currencies (Nghargbu, 2024; Okwara & Okechukwu, 2024).

The number of companies in Nigeria that accept digital currencies as payment has increased in terms of merchant adoption. This includes e-commerce sites, restaurants, and even real estate companies. Major players such as Jumia, Nigeria's largest e-commerce platform, now accept Bitcoin as a payment option (Safiyanu et al., 2022; Abu & Ohiaeri, 2023).

Egbuna (2022) reported that with more than 13 million cryptocurrency owners, Nigeria leads Africa in the use of cryptocurrencies. The total amount of bitcoin transactions was above $400,000,000 in 2020 and $318.90,000,000 in 2021.

Nigeria, South Africa, Morocco, and Ghana are the African nations most interested in cryptocurrencies in 2023, according to CoinGecko (2024).

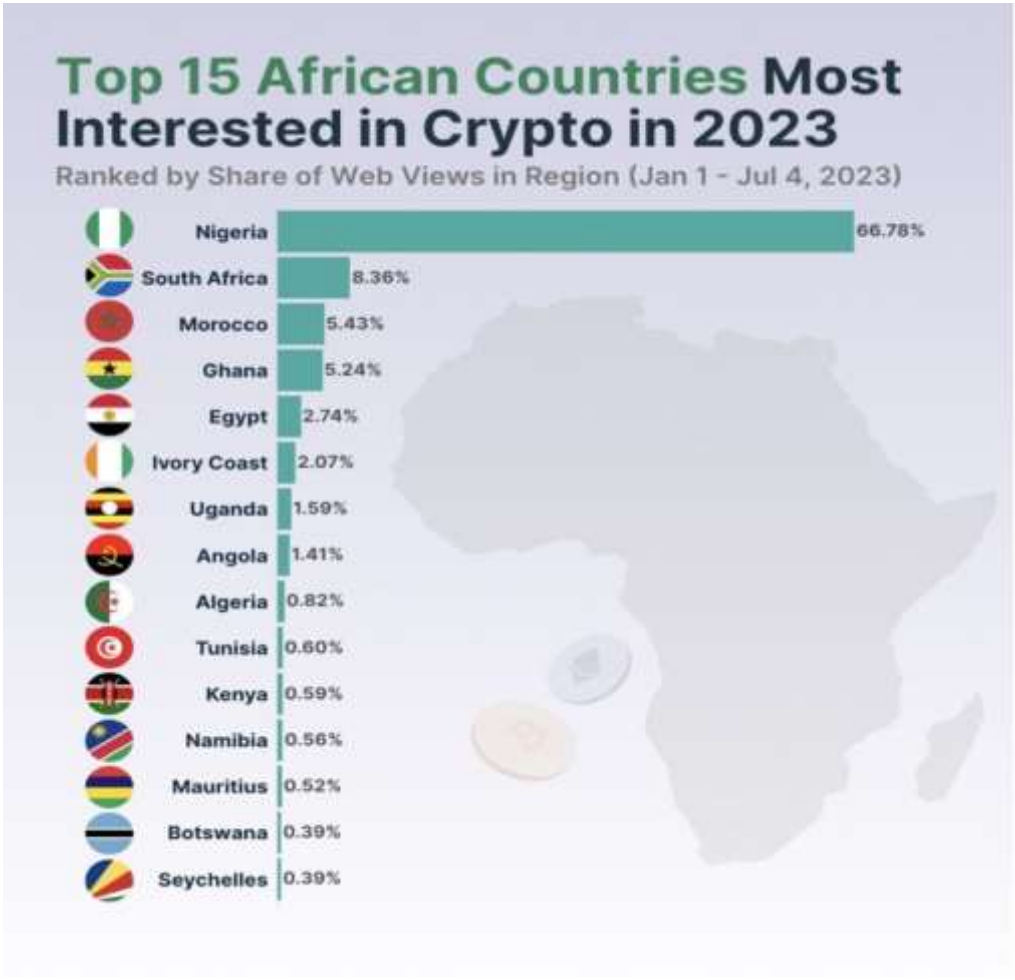

Figure 2: Nigeria investment rank in digital currency 2023

Source: Coingecko (2024)

2.3. Impact of Digital Currency on Inflation in Nigeria

A sustained rise in the average level of prices for goods and services over time in an economy is known as inflation. With an average annual inflation rate of 12.43% between 2016 and 2021, Nigerian officials have been extremely concerned about inflation (Abdullahi, Ahmad, Pandey & Pandey, 2024).

The introduction of a digital money might impact inflation in a variety of ways. Because fewer individuals are using cash as a result of the acceptance of digital money, there may be a decrease in the need for physical currency. This might have a deflationary effect if there is less money in circulation as a result of the drop in demand for actual currency (Ozili, 2024). However, the impact on inflation would depend on the quantity of cash in circulation as well as the pace of digital currency adoption.

Second, according to the CBN, the eNaira would cut transaction costs and boost payment system efficiency, which might result in reduced production costs and, eventually, cheaper pricing (Mohammed et al., 2022). The degree to which these cost savings are transferred to customers and if the price drop is substantial enough to counteract any possible deflationary impacts will determine how this affects inflation (Yadulla, Nadella, Maturi, & Gonaygunta, 2024). Furthermore, the economy's money supply may be directly impacted by digital currency. As central banks across the world continue to look into the idea of launching their own digital currencies, the amount of money in the economy may increase. This can lead to a growth of the money supply, which can lead to inflation. But according to the Nigerian government, the eNaira would be issued under strict control and won't result in an expansion of the money supply (Okwara & Okechukwu, 2024).

Digital money may have deflationary impacts, but there is no actual data on how it affects inflation in Nigeria. The findings of studies carried out in different nations have been conflicting. For example, the introduction of digital money had a favorable and substantial influence on inflation, according to research by Gbawae and Tonye (2023) on the effect of the paperless economy on inflation in Nigeria. However, in a cross-country analysis, Adewumi et al. (2024) discovered that digital money issued by central banks had no discernible effect on inflation.

Research by Abdullahi et al. (2024) looked at the global spread of digital currencies and its potential impact on the Nigerian economy. According to the study, using digital money may result in less cash transactions, which may result in reduced inflation and cheaper pricing. But the report also made clear that in order to fully utilize digital currency's potential to lower inflation, appropriate infrastructure and regulation are required. Ozili (2024) investigated how central bank digital currency (CBDC) affected inflation and economic growth. According to Ahiabenu (2022), the implementation of CBDC may boost economic expansion and reduce inflation rates. The study's findings provide more credence to the notion that digital currency might lower inflation and money velocity.

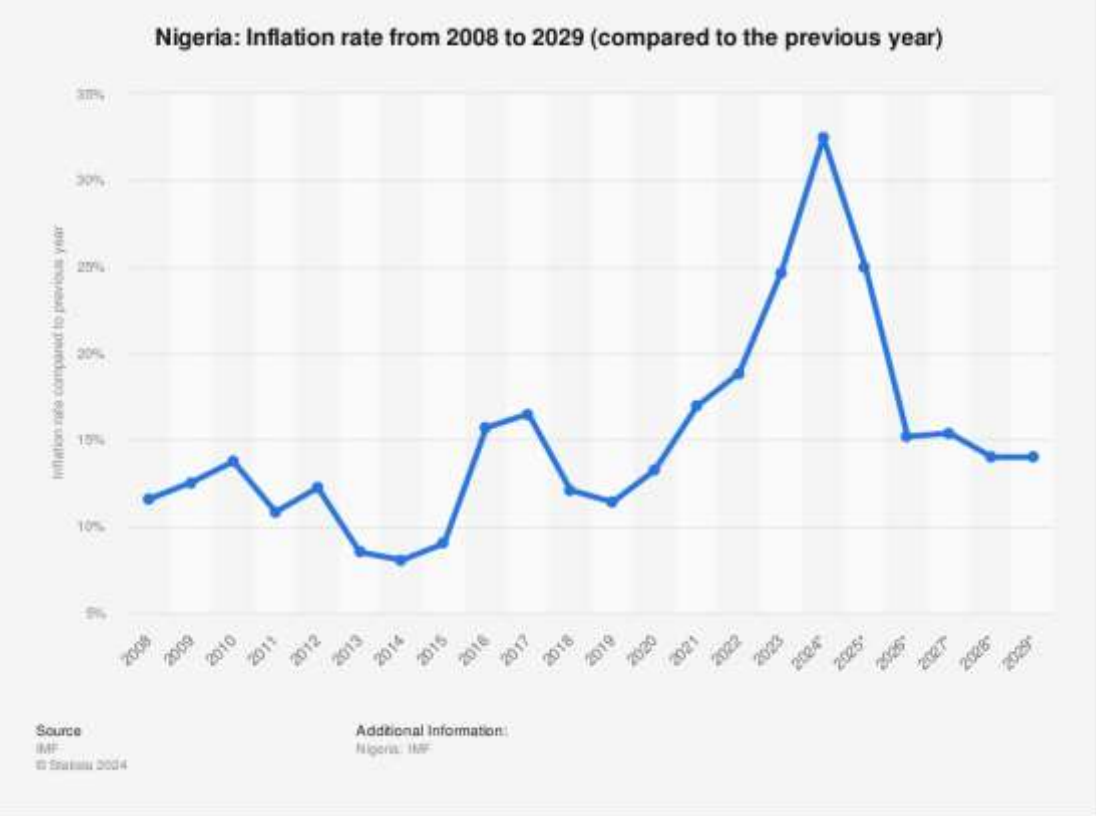

Figure 3: Inflation rate projections with the rise in digital currency adoption

Source: Statista (2024)

Because digital currency use is still in its infancy, there is currently no empirical data on how it affects inflation in Nigeria. A few studies, nonetheless, have looked at the connection between digital money and inflation in other nations, which may provide some light on the possible effects in Nigeria.

Nonetheless, some research has indicated a favorable relationship between inflation and the use of digital currencies. Mohammed et al. (2022) looked at how Nigerian inflation was affected by cryptocurrencies. According to the study, the adoption of cryptocurrencies and inflation are positively correlated, which implies that using digital currencies might raise inflation in Nigeria.

To prevent any potential inflationary effects of digital currency, policymakers may need to implement certain policies. In order to control inflation expectations, the CBN can first use forward guidance. This entails informing the public on the central bank's monetary policy position in order to affect their projections of future inflation (Oloko et al., 2024). In order to control the money supply and avoid any possible deflationary impacts, CBN can also employ its monetary policy instruments, including as interest rates and open market operations (Ajayi, Oloyede, & Oluwaleye, 2022).

Second, the exchange rate between digital and physical currency may be controlled by the government through the implementation of regulations. This would lessen the likelihood of a sharp drop in the physical currency's value, which may raise import costs and cause inflation (Fepetu & Adewumi, 2024). The government can also enact laws to guarantee that consumers receive the cost savings from the use of digital money (Safiyanu et al., 2022).

Therefore, the dynamics of inflation may be impacted by Nigeria's adoption of digital money. The degree to which digital currency adoption affects inflation will depend on a number of circumstances, but it may also lower production costs and diminish the need for traditional cash. Since there is no empirical evidence linking digital money to inflation in Nigeria, officials would need to implement appropriate safeguards to prevent any inflationary effects. If regulations are in place, the introduction of digital currency can increase Nigeria's economic development and financial inclusion while containing any potential inflationary pressures.

2.4 Effect of Digital Currency on Exchange Rates

The impact of digital money on Nigerian exchange rates has been the subject of several research. According to Safiyanu et al. (2022), digital currencies significantly affect Nigerian exchange rates. This is due to the fact that the value of traditional currencies, such as the Nigerian Naira, can be impacted by the sharp price swings of digital currencies. In a similar vein, Jimoh and Oluwasegun (2020) discovered that stock prices and exchange rate return volatility are significantly affected by the volatility of digital currency returns in Nigeria. This illustrates even further how digital currencies and exchange rates are related.

Additionally, the usage of digital currencies may affect the demand for conventional currency, which might affect exchange rates. Ajayi et al. (2022) claim that market shocks in the digital currency arena have an effect on Nigerian exchange rates. This is because traditional currency demand declines as demand for digital currencies increases, leading to a depreciation of the exchange rate. Similarly, Kabari and Macarthy (2019) found that the use of digital currencies in cross-border transactions might affect the value of the Nigerian Naira. This is due to the fact that digital currencies offer a quicker and less expensive option for cross-border transactions, which lowers demand for conventional currencies and influences the exchange rate.

Abu and Ohiaeri's (2023) study looked at the impact of digital currency adoption on the value of the Nigerian naira. The results indicated that there is a negative correlation between the two, indicating that the value of the naira may decline as the use of digital currencies rises. This is explained by the decentralized nature of digital currencies and their lack of governmental oversight, which may cause people to lose faith in the nation's fiat currency.

Igoni et al. (2020) looked into how digital currency affected South African monetary policy and how it affected the Nigerian economy. They discovered that the use of digital currencies could lead to financial dualism, in which the economy is split between using digital currency and traditional fiat currency, which would distort monetary policy and undermine economic stability.

In conclusion, these investigations show that Nigerian exchange rates may be significantly impacted by digital money.

2.4.1 Challenges for policymakers in managing exchange rates with the rise of digital currency

The emergence of digital money presents a major obstacle for exchange rate management by governments. The absence of authority over digital currency is one of the difficulties. According to Abu and Ohiaeri (2023), regulators find it challenging to control the usage of digital currencies and their influence on exchange rates due to their decentralized structure. Since the usage of digital money is not governed by conventional monetary rules, this lack of control may make it more difficult to maintain the stability of traditional currencies.

Furthermore, the volatility of digital currencies makes it more challenging for authorities to govern exchange rates. Because of their extraordinary volatility, which creates economic uncertainty, policymakers find it difficult to predict how digital currencies will affect exchange rates (Igoni et al., 2020). This may cause people to lose faith in conventional currencies, which would cause exchange rates to decline. Furthermore, officials' incapacity to successfully control exchange rates may also be hampered by their ignorance of digital currencies. Policymakers can lack the skills and information needed to control the usage of digital currencies and their effects on exchange rates, as noted by Gbadebo and Mohammed (2015).

2.5 Financial Stability in the Context of Digital Currency

According to Guo and Zhang (2024), financial stability is the capacity of a financial system to operate effectively and efficiently without experiencing unwarranted disturbances or crises. Because it guarantees that financial institutions can carry out their responsibilities as intermediators, lenders, payment and settlement facilitators, and risk managers, it is critical to the general well-being of an economy. Since financial system disturbances may have a big effect on the actual economy, financial stability is essential for long-term economic growth (Ozili, 2022).

The emergence of digital currency has had a profound impact on the global financial landscape. One of the primary changes is the decentralization of the financial system, where digital currencies operate apart from governments and traditional financial institutions (Yadulla et al., 2024; Market.us, 2025).

This decentralization has sparked debates about central banks' roles in preserving financial stability because they have no control over the value and flow of digital currencies.

Additionally, the widespread use of digital currency has led to disintermediation in the financial sector. Traditional financial intermediaries like banks and credit card firms are losing their dominating position in the payment system as digital transactions occur directly between peers (Donoiu & Iacob, 2023; Yadulla et al., 2024). Since their conventional business methods could become outdated in the face of digital money, this has sparked worries about the possible influence on these intermediaries' stability.

Moreover, by providing access to financial services to previously underserved individuals and areas, the use of digital currency has enhanced financial inclusion. By lowering the number of unbanked people and encouraging economic growth, this might enhance financial stability (Saadah & Whafa, 2020). However, it also presents challenges, such as the need for regulatory frameworks to protect consumers and prevent financial crimes through digital channels (Manaa et al., 2019).

The effect of digital money on financial stability has been the subject of several research. The volatility of digital currencies is one of the primary issues brought up by research, since it has the potential to cause financial system instability. For example, research by Guo and Zhang (2024) discovered that the high volatility of digital currencies is associated with their limited acceptance and dependence on speculative investments. Financial stability is at jeopardy because of this, particularly if digital currencies become a common form of payment.

Research on the relationship between digital currencies and financial crime, including money laundering and terrorism funding, has also sparked concerns. Law enforcement finds it challenging to monitor and halt unlawful online behavior since digital currencies operate outside of the existing financial system (Saadah & Whafa, 2020; Donoiu & Iacob, 2023). This poses a significant risk to financial stability as it jeopardizes the integrity of the financial system and endangers consumers.

Additionally, a study by Panigrahi (2023) suggests that the emergence of central bank digital currencies (CBDCs) might significantly impact financial stability. Decentralized digital currencies like Bitcoin are not the same as central bank-issued and backed currencies, or CBDCs. According to the report, the issuing of CBDCs may cause a substantial change in the demand for conventional forms of currency, thereby destabilizing financial institutions that mostly depend on them.

2.5.1 Potential risks and challenges for financial stability in Nigeria

The use of digital currency has gradually gained traction in Nigeria, with the country ranking third globally in terms of Bitcoin trading volumes. This poses potential risks and challenges for financial stability in the country. The absence of regulatory supervision is one of the primary issues, leaving customers open to financial frauds and scams (Babajide & Olokoyo, 2017). The Central Bank of Nigeria (CBN) has responded by warning of the dangers of digital money and declaring that it does not accept it as legal cash. But this absence of regulation also runs the danger of impeding the development of cutting-edge financial services and products that might improve the nation's financial stability and inclusion (Ozili, 2022).

Additionally, Nigeria's financial stability is at danger due to the volatility of digital currencies, especially Bitcoin. As seen in the case of the 2017 cryptocurrency bubble, the value of Bitcoin can fluctuate significantly, potentially impacting the financial system's stability. Furthermore, the widespread use of digital currencies for illegal activities like money laundering and Ponzi schemes jeopardizes consumer protection and the integrity of the financial system (Manaa et al., 2019).

The effect of digital currencies on Nigeria's conventional banking system is another possible issue. Traditional financial intermediaries may be displaced when the need for traditional banking services declines as digital currencies continue to gain traction. The stability of the nation's financial system may be significantly impacted by this (Panigrahi, 2023; Saadah & Whafa, 2020). Furthermore, there may be a risk to financial stability due to Nigerians' low level of digital financial literacy. Due to a lack of understanding regarding the use of digital currency and security procedures, customers may be at danger of suffering financial losses if these transactions become more common (Babajide & Olokoyo, 2017). The acceptance of digital money and a loss of confidence in the financial system might result from this, which could impede its expansion and affect financial stability.

All things considered, Nigeria might gain a lot from the use of digital money, including greater efficiency and financial inclusion. To maintain the nation's financial stability, it also poses possible hazards and difficulties that must be resolved. Nigerian regulators and policymakers must thus establish a robust regulatory framework that balances innovation and consumer protection if they are to fully realize the promise of digital currency to promote financial stability.

2.6 Regulatory Frameworks and their Role in Shaping Monetary Policy towards Digital Currency

2.6.1 Overview of regulatory frameworks for digital currency in Nigeria

In Nigeria, the regulatory framework for digital currency is still in its nascent stage. The country does not have specific legislation or regulations governing digital currencies, but it is generally understood that the existing laws and regulations apply to them. In 2017, the Central Bank of Nigeria (CBN) issued a circular warning the public that digital currencies are not accepted as legal cash in Nigeria and advising them not to use them (Arop, 2023). Furthermore, in 2017, the Securities and Exchange Commission (SEC) issued a statement alerting investors to the dangers of digital currency investments (Ahiabenu, 2022).

To keep an eye on and control the nation's usage of digital currency, the CBN has also set up a fintech division. The SEC declared in 2019 that it will create a framework for regulating digital assets and a set of rules for how initial coin offerings (ICOs) should be conducted. In addition, the Nigerian Financial Intelligence Unit (NFIU) published a guideline in 2019 stating that, in accordance with Nigeria's anti-money laundering and counter-terrorism funding regulations, cryptocurrencies were a valid form of payment in the nation (Ogwu, 2022). The SEC formally acknowledged digital assets as securities in October 2020, providing them with legal support and enabling regulation. The SEC's action is a big step in the right direction toward giving Nigerian digital currencies a clear regulatory framework (Abdullahi, 2024).

2.6.2 Role of regulation in shaping monetary policy towards digital currency

Since regulation offers a way to control the hazards connected to digital currencies, including fraud, volatility, and money laundering, it plays a critical role in determining monetary policy. Because of their apparent anonymity and lack of traceability, digital currencies may be used for illicit purposes, which is one of the primary worries of central banks and policymakers (Babajide & Olokoyo, 2017; Ozili, 2022; Arop, 2023). Regulatory frameworks are therefore required to guarantee that transactions using digital currencies are transparent and traceable, enabling the detection and stoppage of illicit activity.

Regulation also plays a vital role in shaping monetary policy towards digital currency by promoting financial stability. Central banks and policymakers have a responsibility to safeguard financial stability in their jurisdictions, which includes addressing potential risks from digital currencies (Ogwu, 2022; Igoni et al., 2020). For instance, the Financial Stability Board (FSB) has raised awareness of the potential risks that digital currencies provide to financial stability, such as those pertaining to market integrity, consumer and investor protection, and money laundering (Ozili, 2022). The efficient implementation of monetary policy depends on regulatory structures that manage these risks and promote financial stability.

The adoption and use of digital currencies may also be impacted by regulation, which might influence monetary policy. Some countries, notably China, have enacted laws that limit or completely forbid the use of digital currencies, which has an immediate impact on monetary policy (Shen & Hou, 2021; Wang, 2023). Other nations, on the other hand, have adopted a more lenient regulatory framework, which may affect the efficacy of monetary policy by raising volatility and uncertainty (Beniak, 2019). Regulation is therefore essential in shaping the adoption and usage of digital currencies, which may affect monetary policy.

Regulation of digital currencies is also necessary to protect consumers and investors. Digital currencies are vulnerable to fraud because they are decentralized and not backed by a single entity. In order to safeguard investors and consumers from any losses and maintain the integrity of the digital currency market, regulatory frameworks are thus required. Strict laws have been implemented in certain nations, including the US and Japan, to safeguard investors and consumers, fostering market stability and trust (Meaning et al., 2018; Cova et al., 2022).

Despite the importance of regulation in shaping monetary policy towards digital currency, there are challenges in implementing and enforcing effective regulatory frameworks. The decentralized and global nature of digital currencies makes it difficult for countries to enforce regulations, especially when there are discrepancies in regulations across different jurisdictions (Guo & Zhang, 2024). This can lead to regulatory arbitrage, where users can bypass regulations by moving to countries with more permissive regulatory environments. Therefore, effective international cooperation and coordination are essential for regulating digital currencies and shaping monetary policy (Donoiu & Iacob, 2023).

Regarding lessons learned from other nations, some have already put in place efficient regulatory frameworks for virtual currencies, which can provide others insightful information. For example, Japan has been a leader in the regulation of digital currencies by implementing strict licensing requirements, capital reserve duties, and consumer protection measures. Consequently, a reliable and controlled digital currency market has emerged, supporting the effectiveness of the country's monetary policy (Heckel & Waldenberger, 2022; Grassman et al., 2021). However, since illegal activities and speculation are still prevalent in the market, China's tactic of banning digital currencies has had mixed results. This highlights how important it is to achieve a regulatory balance that promotes financial stability and consumer safety without obstructing innovation and growth in the digital currency industry (Wang, 2023).

3. Conclusion

3.1 Summary of Key Findings

- The review found that digital currencies have the potential to provide central banks with new tools to conduct monetary policy, enhance the effectiveness of traditional monetary policy measures, and reduce the costs associated with implementing monetary policy.
- In contrast, digital currencies were found to have the potential to devalue the value of the Nigerian naira due to its inflationary and exchange rate volatility effects, leading to financial dualism, distortion of monetary policy and affecting economic stability.
- Regulation is crucial in shaping monetary policy towards digital currency because it provides a mechanism for managing the risks associated with these currencies, such as money laundering, fraud, and volatility.
- Japan as a pertinent case study has become a leader in digital currency regulation by introducing strict licensing requirements, capital reserve obligations, and consumer protection measures. This has facilitated the development of a trustworthy and regulated digital currency market, bolstering the efficacy of the nation's monetary policy.

The study concludes that there is a complicated and as-yet-unstudied link between digital currencies and monetary policy. Although some research indicates that DCs may give central banks additional instruments and avenues for implementing monetary policy, other studies express apprehensions over their possible influence on conventional monetary policy practices and goals. To fully comprehend the consequences of digital currencies for monetary policy and the economy as a whole, further study is required as they continue to gain popularity (Mishchenko & Naumenkova, 2021).

By controlling risks, fostering financial stability, safeguarding investors and consumers, and influencing the uptake and usage of digital currencies, regulation plays a critical role in monetary policy regarding digital currencies. Effective regulatory frameworks are still difficult to adopt and enforce, thus international collaboration is essential. The establishment of efficient regulatory frameworks, which are essential for influencing the use and monetary policy implications of digital currencies, may benefit greatly from lessons learned from other nations.

3.2 Implications for Nigeria's monetary policy

Digital currencies have complicated and varied effects on Nigeria's monetary policy. On the one hand, the Central Bank of Nigeria (CBN) may be able to implement monetary policy more effectively if digital currencies are used to give it additional instruments and avenues. On the other side, the stability of the Nigerian economy and conventional monetary policy may suffer if digital currencies become widely used.

The possible effect on the value of the Nigerian naira is one of the main implications of digital currencies on monetary policy in Nigeria. The value of traditional fiat currencies may decline as a result of the growing use and adoption of digital currencies, as has been observed in other nations. It could be challenging for the CBN to accomplish its monetary policy goals as a result of the serious effects this could have on the Nigerian economy, including inflation and currency depreciation.

The possibility of financial dualism, in which the usage of digital currencies establishes an independent financial system apart from the conventional banking system, is another implication. Because the CBN could find it difficult to oversee and manage the flow of funds in the digital currency market, this could skew monetary policy and have an impact on economic stability. Additionally, using digital currencies may make Nigeria's monetary policy transmission mechanism more difficult. By using traditional monetary policy tools like interest rates, the CBN has direct influence over the money supply and economic activity. However, because digital currencies are decentralized and immune to governmental control, the CBN may find it challenging to affect the economy through traditional channels. This might result in a loss of control over the money supply and jeopardize the effectiveness of monetary policy.

The CBN could have to modify its monetary policy frameworks to account for digital currencies in order to handle these ramifications. This might entail investigating novel instruments and avenues for monetary policy implementation, such the use of digital currencies issued by central banks or collaborating with other regulators and international organizations to create efficient regulatory frameworks. Furthermore, the CBN would need to put in more effort to inform the people about the advantages and disadvantages of digital currencies. This can lessen the possible detrimental effects on the economy and help control expectations.

3.3 Future research directions

Future study in this area might involve additional research on the influence of digital currency on inflation in Nigeria, as well as the development of measures to mitigate any possible inflationary impacts. Furthermore, studies may look at the impact of digital currencies on financial inclusion, loan availability, and economic growth. Furthermore, comparative studies between nations can shed light on the efficacy of various regulatory methods and their effects on the digital currency market and monetary policy.

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