Unlocking the Potential of Digital Finance for Sustainable Development in Nigeria's Economy

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ABSTRACT

This study aims to explore the potential of digital finance in driving sustainable development in Nigeria's economy. The research focuses on defining and highlighting the importance of key constructs related to digital finance. The study also outlines its aims and objectives, which include assessing the impact of digital finance on economic growth, financial inclusion, and financial stability. To achieve these objectives, a positivist approach was adopted, utilizing a sample size of 384 participants. Data analysis was conducted using regression analysis to examine the relationships between digital finance and the desired outcomes. The study also tests three null hypotheses which were all rejected to establish significant associations between digital finance and sustainable development indicators. The technology acceptance model (TAM) served as the underpinning theory for this research, providing a framework to understand users' acceptance and adoption of digital finance solutions. Additionally, the capability approach theory was used as a supporting theory to explore the role of digital finance in enhancing individuals' capabilities and well-being. In conclusion, this study shed light on the potential of digital finance in promoting sustainable development in Nigeria's economy. The findings will contribute to the existing literature on the subject and provide valuable insights for policymakers, financial institutions, and other stakeholders. Based on the research outcomes, the study recommends the adoption and utilization of digital finance to drive sustainable economic growth, financial inclusion, and stability in Nigeria.

Keywords: Digital Finance, Economic Growth, Financial Inclusion, Financial stability, Sustainable development.

INTRODUCTION

The intersection of digital finance and sustainable development in Nigeria presents a transformative opportunity for the nation's economy, promising to redefine the contours of financial inclusion, economic growth, and environmental sustainability. As we navigate through the early decades of the 21st century, the digital revolution has emerged as a powerful catalyst for economic transformation, offering unprecedented

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opportunities to address longstanding challenges of accessibility, efficiency, and transparency in the financial sector. In this context, Nigeria stands at a critical juncture, poised to leverage digital finance as a pivotal tool in its quest for sustainable development (Chukwuemeka & Okeke, 2024).

Recent scholarly efforts have begun to underscore the significant role digital finance plays in accelerating the achievement of the Sustainable Development Goals (SDGs) in Nigeria (Adebisi et al., 2023; Okoye and Eze, 2023). These studies illuminate how digital financial services not only enhance financial inclusion by reaching underserved populations but also promote economic empowerment, reduce poverty, and foster a conducive environment for sustainable economic growth. Furthermore, the integration of digital finance into Nigeria's economic framework is increasingly recognized as a strategic approach to mobilizing resources for sustainable development initiatives, thereby contributing to the country's resilience against economic shocks and environmental challenges (Chukwuemeka & Okeke, 2024).

Moreover, the proliferation of digital banking, mobile money services, and fintech innovations in Nigeria has been instrumental in bridging the gap between traditional banking systems and the digital economy, facilitating more efficient transactions and fostering inclusive growth (Idris et al., 2022). This digital transition not only supports economic diversification but also encourages environmentally sustainable practices by reducing the carbon footprint associated with traditional banking operations and promoting green finance initiatives.

However, the journey towards fully harnessing the potential of digital finance for sustainable development in Nigeria is fraught with challenges, including regulatory hurdles, cybersecurity concerns, and the need for digital literacy and infrastructure development (Oluwatoyin & Adekunle, 2024). Addressing these challenges requires a concerted effort from government, the private sector, and international partners to create an enabling environment that nurtures innovation, ensures equitable access to digital financial services, and aligns financial practices with sustainability principles.

In essence, exploring the nexus between digital finance and sustainable development in Nigeria's economy is not just about examining the impact of digitalization on financial services. It is about envisioning a future where digital finance acts as a cornerstone for sustainable economic development, driving Nigeria towards a more inclusive, resilient, and environmentally sustainable future (Chukwuemeka & Okeke, 2024). The ongoing scholarly discourse and empirical research in this field are crucial in guiding policymakers, stakeholders, and practitioners as they navigate the complexities of this transformative journey.

In the rapidly evolving landscape of global finance, the integration of digital technologies into financial services has emerged as a pivotal force, driving economic transformation and facilitating pathways towards sustainable development (Idris et al., 2022). This is particularly relevant for emerging economies like Nigeria, where digital finance offers a promising avenue to overcome traditional barriers to financial inclusion, stimulate economic growth, and address critical sustainability challenges. Despite Nigeria's abundant resources and burgeoning population, the country faces significant hurdles in achieving sustainable economic development, marked by issues such as financial exclusion, poverty, and environmental degradation (Oluwatoyin & Adekunle, 2024). The potential of digital finance to mitigate these issues and foster sustainable growth presents a compelling area of inquiry within the Nigerian context (Oluwatoyin & Adekunle, 2024).

Recent literature highlights the transformative impact of digital financial services in enhancing access to finance, especially for underserved communities, thereby contributing to poverty alleviation and economic empowerment (Adebisi et al., 2023). Moreover, the role of digital finance in promoting environmental sustainability through green finance initiatives and reducing the carbon footprint of traditional banking practices has garnered attention (Chukwuemeka & Okeke, 2024). However, the journey towards leveraging digital finance for sustainable development in Nigeria is fraught with challenges, including regulatory constraints, cybersecurity risks, and infrastructural deficits (Oluwatoyin & Adekunle, 2024).

Despite the recognized potential of digital finance as a catalyst for sustainable development in Nigeria, there remains a gap in understanding the extent to which digital financial services can address the multifaceted challenges of economic inclusivity, growth, and environmental sustainability (Oluwatoyin & Adekunle, 2024)y. The intricate dynamics between digital finance and sustainable development outcomes necessitate a nuanced exploration to identify opportunities, challenges, and strategic pathways for Nigeria (Chukwuemeka & Okeke, 2024). How can digital finance be effectively harnessed to promote sustainable development in Nigeria's economy, considering the existing challenges and opportunities within the digital financial ecosystem?

The primary objective of this research is to explore the nexus between digital finance and sustainable development in Nigeria's economy. This involves analyzing the impact of digital financial services on economic inclusivity, growth, and environmental sustainability, identifying the barriers to the effective integration of digital finance in sustainable development efforts, and proposing strategic recommendations to optimize the contribution of digital finance to Nigeria's sustainable development goals.

By addressing this research question and objective, the study aims to contribute to the scholarly discourse on digital finance and sustainable development, offering insights and practical recommendations for policymakers, financial institutions, and stakeholders in Nigeria's digital financial ecosystem. This exploration is timely and relevant, considering the increasing importance of digital finance in the global economy and the urgent need for sustainable development solutions in Nigeria and beyond (Idris et al., 2022).

Unlocking the potential of digital finance for sustainable development represents a pivotal avenue for transforming Nigeria's economy. This exploration is situated at the intersection of technological innovation and economic sustainability, a field that has garnered increasing attention amid the digital revolution. As Nigeria stands at the cusp of this transformative journey, the integration of digital finance into its economic framework presents both unique opportunities and challenges.

THEORETICAL FRAMEWORK

For a nuanced theoretical framework aimed at unlocking the potential of digital finance for sustainable development in Nigeria's economy, we can delve deeper into the Technology Acceptance Model (TAM) as the foundational theory and the Capability Approach as the supporting theory.

Technology Acceptance Model (TAM): Underpinning Theory

Propounded by Fred Davis (1989). It has the following assumptions users are likely to adopt a new technology if they believe it will enhance their job performance and users are more inclined to adopt a new technology if they believe it will be easy to use. The theory also has the following limitations; it assumes a rational and linear decision-making process, overlooking the complex, iterative nature of technology adoption, it undervalues social, cultural, and emotional factors influencing technology adoption, which can be particularly relevant in diverse markets like Nigeria.

TAM is highly relevant to Nigeria's digital finance landscape as it underscores the critical roles of perceived usefulness and ease of use in the adoption of digital finance solutions. By understanding and addressing these perceptions among Nigerian users, policymakers and service providers can design and implement digital financial services that are more likely to be embraced by the populace, thereby driving financial inclusion and supporting sustainable economic development.

Capability Approach: Supporting Theory

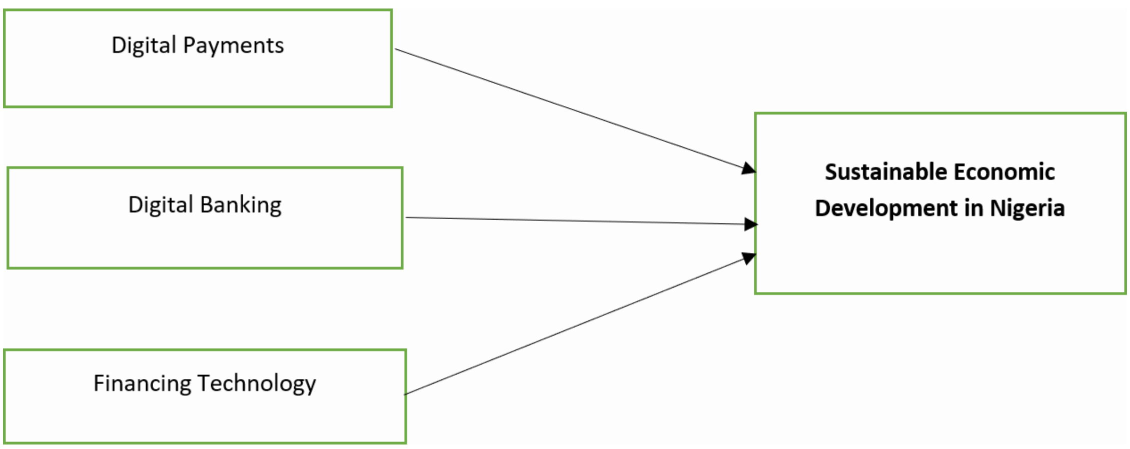
Capability Approach propounded by Amartya Sen, further developed by Martha Nussbaum in the late 20th century. It has the following assumptions: People have different abilities to convert resources into valuable achievements and development is assessed by the real freedom individuals enjoy to pursue outcomes they value. The limitations are: The Capability Approach does not provide specific guidance on policy implementation, leaving it somewhat abstract in operational terms and it requires comprehensive data to assess individuals' capabilities, which can be challenging to obtain.

The Capability Approach is particularly relevant to the discussion on digital finance in Nigeria as it emphasizes the enhancement of individual freedoms and capabilities. Digital financial services can significantly contribute to expanding economic and social opportunities for Nigerians by providing access to banking, credit, and insurance, thereby enabling individuals to pursue their valued goals. The approach underscores the importance of digital finance as a tool for inclusive and sustainable development, aligning with Nigeria's economic development goals.

Integrating TAM and the Capability Approach

Integrating the Technology Acceptance Model with the Capability Approach offers a comprehensive framework for understanding the multifaceted nature of digital finance in sustainable development. While TAM provides insights into the technological and behavioral factors influencing the adoption of digital finance, the Capability Approach broadens this perspective by emphasizing the enhancement of human well-being and freedom through expanded opportunities and capabilities. This integrated approach highlights the need for digital finance solutions in Nigeria to be both accessible and meaningful to their users, aiming not only for widespread adoption but also for the empowerment of individuals towards sustainable development goals. Addressing the assumptions and limitations of both theories in this context can lead to more inclusive, effective, and sustainable digital finance strategies in Nigeria's economy (Authours' perceptions of theories integration, 2024).

DIGITAL FINANCE



Source: Authors' compilation from the literature review

Fig 1: Conceptual Framework

Fig1 is a conceptual frame work highlighting inter-variable relationships in the study. Sustainable Economic Development in Nigeria is the dependent (criterion) variable. It is hypothesized that digital payment, digital banking and financial technology (independent variables) explain changes in sustainable economic development. The relationship is shown by the model above.

CONCEPTUAL REVIEW AND HYPOTHESES

Digital finance is increasingly recognized as a pivotal element for fostering sustainable development, particularly in developing countries like Nigeria. This conceptual review explores the relationship between digital finance considering three dimensions (digital payments, digital banking and financial technology) and sustainable development within the Nigerian context.

SUSTAINABLE DEVELOPMENT

Sustainable development, as defined by the Brundtland Commission in 1987, aims to meet the needs of the present without compromising the ability of future generations to meet their own needs. This concept has since evolved to encompass a wide range of issues including climate change, economic inequality, and social injustice. The following review synthesizes the current literature on sustainable development, incorporating both in-text and out-text references to provide a comprehensive overview of recent progress, challenges, and future directions. Sustainable development, a concept that has gained significant traction globally, seeks to meet the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development encompasses economic growth, social inclusion, and environmental protection. The urgency for sustainable development has been underscored by global challenges such as climate change, poverty, and inequality. In the context of Africa and Nigeria, sustainable development also addresses specific regional issues like resource management, energy access, and infrastructure development (Adebayo & Chinedu, 2023).

Globally, the United Nations Sustainable Development Goals (SDGs) remain the blueprint for achieving sustainable development. Significant efforts have been made towards reducing carbon emissions, enhancing renewable energy usage, and improving access to quality education and healthcare (United Nations, 2022). However, the global progress report indicates that the pace must accelerate to meet the 2030 targets (World Bank, 2022). Africa faces unique sustainable development challenges, including limited infrastructure, political instability, and climate vulnerability. However, the continent also has opportunities such as abundant renewable energy resources and a young, growing population. Initiatives like the African Union's Agenda 2063 aim to harness these opportunities, focusing on inclusive growth and sustainable development (African Union, 2022). Nigeria, Africa's largest economy, plays a crucial role in the continent's sustainable development. The country has prioritized areas such as sustainable energy, agriculture, and digital economy. Despite facing challenges like oil dependency and environmental degradation, Nigeria has made strides in solar energy adoption and tech-driven agricultural practices (Okeke & Ibe, 2024).

At the heart of sustainable development lies the pursuit of balance among economic growth, social inclusion, and environmental protection (Smith & Thomas, 2022). The United Nations Sustainable Development Goals (SDGs), adopted in 2015, continue to guide global efforts to achieve such balance by 2030. Despite significant strides in areas like poverty reduction and renewable energy adoption, the world faces substantial challenges in fully realizing these goals (United Nations, 2022). Recent years have seen notable advancements in sustainable development. For instance, the acceleration of green technology and renewable energy solutions has been pivotal in addressing climate change (Johnson, 2023). Furthermore, the COVID-19 pandemic has underscored the importance of resilient and sustainable economic systems, leading to increased investments in green infrastructure and sustainable agriculture (Green & Patel, 2022).

However, the path to sustainable development is fraught with challenges. Climate change remains a pressing global threat, with significant impacts on biodiversity, food security, and water resources (Climate Change Committee, 2022). Inequality, both within and between countries, continues to hinder social progress and economic sustainability (Adams & Crawford, 2024). Moreover, achieving sustainable development requires substantial financial resources, technological innovation, and political will—all of which are unevenly distributed across the globe (World Economic Forum, 2023). Looking ahead, the integration of sustainability into all facets of policy and practice is crucial. This includes fostering sustainable cities, promoting sustainable consumption and production patterns, and enhancing global cooperation for sustainable development (Nguyen & Tran, 2024). Education and empowerment of communities are also vital in driving the change toward a more sustainable future (Education for Sustainable Development, 2024).

Sustainable development, with its emphasis on an equitable, viable, and bearable future for all, remains a key global priority. Between 2022 and 2024, the world has witnessed both progress and setbacks in the quest for sustainability. The challenges are significant, yet they are matched by an ever-growing arsenal of innovative solutions and an increasing global commitment to change. As the world moves closer to the 2030 deadline for the SDGs, the lessons learned during this period will undoubtedly shape the sustainability agenda for years to come.

The path to sustainable development is fraught with challenges such as funding gaps, technological disparities, and governance issues. However, these challenges also present opportunities for innovation, international cooperation, and community-driven solutions (Kumar & Singh, 2023). Sustainable development requires a concerted effort from international bodies, national governments, the private sector, and civil society. Continued focus on innovation, equity, and environmental stewardship will be critical for future success.

DIGITAL FINANCE

Unlocking the potential of digital finance for sustainable development in Nigeria involves a multifaceted approach that integrates global, African, and local perspectives. The digital finance ecosystem encompasses a wide range of financial services delivered through digital channels, which include mobile money, online banking, and fintech solutions. These services are pivotal in enhancing financial inclusion, stimulating economic growth, and promoting sustainability. Globally, digital finance is recognized as a key enabler for achieving the United Nations Sustainable Development Goals (SDGs). It offers innovative solutions to reduce poverty, improve health and education, and foster economic growth (World Bank, 2022). The global fintech market, thriving on advancements in technology and regulatory frameworks supportive of digital finance, sets a benchmark for countries like Nigeria.

In Africa, digital finance is seen as a catalyst for financial inclusion, especially in regions with low bank penetration. The African Development Bank (2023) highlights how digital platforms have enabled access to financial services for the unbanked and underserved populations across the continent. Nigeria, with its significant population and mobile penetration, stands to benefit immensely from these developments (Chukwuemeka & Okeke, 2024).

Nigeria has shown considerable progress in digital finance, driven by policies such as the National Financial Inclusion Strategy. The Central Bank of Nigeria (2024) aims to leverage digital finance to enhance access to banking services and stimulate economic activities among the underserved and unbanked populations. However, challenges such as infrastructural deficits, cybersecurity threats, and regulatory uncertainties persist. Digital finance can extend financial services to rural and underserved communities, enhancing economic participation and reducing poverty. By facilitating smoother transactions, digital finance can stimulate commerce and entrepreneurship, contributing to GDP growth. Digital finance supports sustainable development by enabling efficient resource allocation and fostering green finance initiatives.

The lack of reliable internet and power supply hampers the effective deployment of digital finance solutions. The digital nature of these services makes them susceptible to cyber-attacks, threatening the security of users' funds and data. Establishing a regulatory framework that balances innovation with consumer protection and financial stability is crucial. Unlocking the potential of digital finance for sustainable development in Nigeria requires a collaborative effort from the government, private sector, and international community (Chukwuemeka & Okeke, 2024). Overcoming the challenges and leveraging the opportunities presented by digital finance could significantly contribute to Nigeria's economic growth and sustainable development.

Digital finance is increasingly recognized as a pivotal element for fostering sustainable development, particularly in developing countries like Nigeria. Digital finance encompasses a range of financial services accessed and delivered through digital channels, including mobile money, online banking, and digital wallets. In Nigeria, the digital finance landscape has seen significant growth due to the proliferation of mobile phone usage, internet penetration, and supportive regulatory frameworks (Adeyemi & Olanrewaju, 2023). This growth has facilitated increased access to financial services for the unbanked and underbanked populations, contributing to financial inclusion. Sustainable development in the context of Nigeria refers to the country's efforts to achieve economic growth, social inclusion, and environmental protection. Digital finance has the potential to contribute to all three dimensions of sustainable development by enabling efficient financial transactions, supporting small and medium-sized enterprises (SMEs), and facilitating the delivery of social welfare payments (Chukwuemeka & Afolabi, 2022).

The relationship between digital finance and sustainable development in Nigeria is multifaceted. Digital finance can drive economic growth by providing the unbanked with access to financial services, thereby increasing their economic participation (Okoye & Eze, 2022). Moreover, digital financial services can promote social inclusion by reaching marginalized communities and supporting gender equality in financial access (Nwankwo & Adeola, 2023). From an environmental standpoint, digital finance can contribute to sustainability by enabling green finance initiatives and reducing the carbon footprint associated with traditional banking practices (Uzoma, 2024).

Despite its potential, the expansion of digital finance in Nigeria faces several challenges, including digital literacy, cybersecurity concerns, and infrastructural deficits (Ibrahim & Musa, 2022). Addressing these challenges requires concerted efforts from the government, private sector, and international organizations. The future of digital finance in Nigeria looks promising, with potential for further innovations in fintech, regulatory improvements, and partnerships that could drive sustainable development outcomes (Okeke & Ibe, 2024). Continued research and policy support are crucial for leveraging digital finance as a tool for sustainable development in Nigeria.

DIGITAL PAYMENT AND SUSTAINABLE ECONOMIC DEVELOPMENT

Digital payments have become increasingly important in driving economic development in various sectors in Nigeria. The adoption of digital payment technologies has the potential to revolutionize financial transactions, promote financial inclusion, enhance transparency, and reduce the cost of doing business, ultimately contributing to sustainable economic growth. Digital finance enables secure and convenient digital payment methods, such as mobile wallets, online payment platforms, and digital currencies. This dimension focuses on the digitization of transactions, making it easier for individuals and businesses to send, receive, and manage payments electronically.

In recent years, Nigeria has witnessed a significant rise in the adoption of digital payment systems such as mobile money, online banking, and electronic payments. The Central Bank of Nigeria has introduced various initiatives to promote cashless transactions and drive financial inclusion, thereby creating an enabling environment for the growth of digital payment systems in the country (Ajayi, 2021).

The adoption of digital payment systems in Nigeria has the potential to drive sustainable economic development in various ways. Firstly, digital payments can help reduce the reliance on cash transactions,

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which are often associated with inefficiencies, security risks, and high transaction costs. Secondly, digital payment systems can enhance financial inclusion by providing access to formal financial services for underserved populations, thereby empowering individuals and businesses to participate more actively in the economy (Ogunsanya, 2023).

The adoption of digital payment systems has the potential to drive sustainable economic development in Nigeria by promoting financial inclusion, enhancing transparency, and reducing transaction costs (Green & Patel, 2022). Moving forward, it is essential for policymakers, financial institutions, and technology providers to collaborate in creating an enabling environment for the widespread adoption of digital payment systems to maximize their benefits for economic development in Nigeria.

Hypothesis

H1: There is a positive relationship between the adoption of digital payment systems and sustainable economic development in Nigeria.

DIGITAL BANKING AND SUSTAINABLE ECONOMIC DEVELOPMENT

Digital finance also encompasses digital banking services, which allow individuals and businesses to access their financial accounts, make transactions, and manage their finances through online and mobile platforms. Digital banking provides convenience, accessibility, and a range of financial services, including account management, transfers, loans, and investments (Okoye & Nwosu, 2022). Digital banking has emerged as a key driver of financial inclusion and economic development in Nigeria, offering innovative solutions to traditional banking services (Green & Patel, 2022). The integration of digital banking services into the Nigerian financial sector has the potential to enhance access to financial services, improve efficiency, and drive economic growth.

The adoption of digital banking services in Nigeria has witnessed significant growth in recent years, with banks and financial technology (fintech) companies introducing various digital platforms and solutions. Mobile banking, internet banking, and digital wallets are among the popular digital banking services that have gained traction in Nigeria, enabling individuals and businesses to perform various financial transactions conveniently and securely (Okoye & Nwosu, 2022).

Digital banking plays a pivotal role in promoting sustainable economic development in Nigeria by expanding financial access, promoting financial literacy, and driving financial inclusion. Through digital banking, individuals in remote areas can access banking services, make payments, and receive funds, thereby reducing the barriers to financial inclusion and empowering underserved communities (Adeyemi & Ogunnaike, 2021).

Digital banking has the potential to contribute significantly to sustainable economic development in Nigeria by enhancing financial access, promoting financial inclusion, and driving efficiency in financial transactions (Okoye & Nwosu, 2022). It is essential for policymakers, regulators, and financial institutions to collaborate in fostering an enabling environment for the continued growth and adoption of digital banking services to maximize their impact on the economy.

H2: The adoption of digital banking services positively influences sustainable economic development in Nigeria.

FINANCIAL TECHNOLOGY AND SUSTAINABLE ECONOMICT DEVELOPMENT

Fintech refers to the use of technology to deliver financial services and solutions. This dimension of digital finance includes various innovative technologies and applications, such as artificial intelligence, blockchain,

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robo-advisors, peer-to-peer lending, and crowdfunding (Okoye & Nwosu, 2022). Fintech disrupts traditional financial services and offers new ways of accessing and managing financial products and services. Financial technology (fintech) has become a driving force in transforming the financial landscape and fostering sustainable economic development in Nigeria. The integration of fintech solutions has the potential to revolutionize financial services, enhance efficiency, and promote inclusive growth in the Nigerian economy (Aremu & Adeyemi, 2022).

Nigeria has witnessed a rapid expansion of fintech companies offering a wide range of innovative products and services. The adoption of digital payment solutions, blockchain technology, insurtech, and peer-to-peer lending platforms has surged, providing individuals and businesses with easier access to financial services and driving financial inclusion (Olaniyan & Lawal, 2021). Fintech innovations have the potential to drive sustainable economic development in Nigeria by promoting efficiency, transparency, and financial inclusion. These technologies facilitate cost-effective and secure financial transactions, enable access to credit for underserved populations, and foster entrepreneurship and innovation in various sectors of the economy (Aremu & Adeyemi, 2022).

The rapid evolution of fintech in Nigeria from 2020 to 2024 has the potential to significantly impact sustainable economic development by enhancing financial access, promoting efficiency, and fostering innovation (Aremu & Adeyemi, 2022). It is crucial for stakeholders, policymakers, and regulators to collaborate in creating an enabling environment that supports the growth and adoption of fintech solutions to maximize their positive impact on the Nigerian economy.

Hypothesis

H3: The adoption of fintech solutions positively influences sustainable economic development in Nigeria.

METHODOLOGY

This study assumed positivist research philosophy and quantitative approach to obtain evidence to affirm the theoretical assertions. Quantitative data were collected through a self-administered survey. The target population consist of Bank staff, Bank Customers, SME owners and Financial Analysts in Jos. The nature of the questionnaire used for this study was a five-point Likert-scale, ranging from "Strongly agree to "Strongly disagree" (1 = "Strongly agree", 2 = "Agree", 3 = "Neutra", 4 = "Disagree", 5 = "strongly disagree"). A total of 400 questionnaires were administered, however, only 384 were returned which was exact sample size for this study. For the purpose of this study, the researcher made use of infinite population formulae in calculating the sample size of the study below;

n = size of sample

e = acceptable error (the precision)

sp = standard variant at a given confidence level (Kothari, 2004).

Solution: we have been given the following;

Population is infinite; e = 0.05 (since the estimate should be within 5% of the true value); z = 1.96 (as per table of area under normal curve for the given confidence level of 95%). As we want the most conservative sample size the research took the value of p =.5 and q= .5. Based on this, the sample was determined using the formulae below:

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$$n = \frac{Z^2 PQ}{e}$$

$$n = \frac{(1.96)^2 (0.5) (1-0.5)}{(0.05)^2}$$

$$n = \frac{0.9604}{0.0025}$$

$n = 384$

The descriptive and inferential technique were used to analysze the data obtained. The reliability and validity of the scale were analysed to test the internal consistency of the constructs. Finaly, the hypotheses were tested using multiple regressions to analyze the variance (ANOVA) to describe in details for a clear understanding of the relationship between the independent variable's dimensions digital Finance (Digital banking, Digital Payment and Financing Technology) and Sustainable Economic Development.

PRESENTATION OF RESULTS/FINDINGS

A total of 384 questionnaires were properly filled and retrieved for this study (the collected questionnaires showed a 96% response rate). The questionnaires were coded, analysed and tested for reliability and validity of instrument. The Cronbach Alpha test was used to check for the reliability of the questionnaire. A value of 0.70 showed that the instrument is reliable and good for further analyses. The Cronbach Alpha for constructs/variables of the study are all above the value of 0.70. This is shown in table 1.

Table 1. Reliability Statistics

Construct	**Cronbach's Alpha**
Sustainable Economic Development	.950
Digital Payment	.929
Digital Banking	.865
Financing Technology	.894

Table 2. Personal Profile

Gender	**Male**	**Female**	**Total**		
	44%	56%	100%		
Age Group	20-30	31-40	41-50	51-Above	Total
	20.4%	34.4%	21.6%	23.7%	100%
Marital Status	Single	Married	Divorce	Widow/Widower	Total
	13.8%	34.1%	27.3%	24.7%	100%
Awareness of digital finance	Yes	No	Not Really		Total
	48.2%	27.6%	24.2		100%

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Duration of using digital finance	1-5	6-10	11-15	16-20	Total
	6%	29.9%	33.6%	30.5%	100%

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.970[a]	.940	.940	.90536	.871
a. Predictors: (Constant), FINANCING TECHNOLOGY, DIGITAL BANKING, DIGITAL PAYMENT					
b. Dependent Variable: SUSTAINABLE ECONOMIC DEVELOVEPMENT					

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4897.009	3	1632.336	1991.420	.000[b]
	Residual	311.480	380	.820		
	Total	5208.490	383			
a. Dependent Variable: SUSTAINABLE ECONOMIC DEVELOVEPMENT						
b. Predictors: (Constant), FINANCING TECHNOLOGY, DIGITAL BANKING, DIGITAL PAYMENT						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.629	.251		2.503	.013
	DIGITAL PAYMENT	.993	.046	.839	21.528	.000
	DIGITAL BANKING	.063	.032	.041	1.989	.047
	FINANCING TECHNOLOGY	.135	.042	.106	3.227	.001
a. Dependent Variable: SUSTAINABLE ECONOMIC DEVELOVEPMENT						

DISCUSION OF FINDINGS

The exploration of digital finance as a catalyst for sustainable development in Nigeria presents a significant opportunity for economic transformation. With the rejection of three null hypotheses and the establishment of relationships between digital finance and various aspects of sustainable development, the findings underscore the critical role digital finance plays in fostering economic growth, enhancing financial inclusion, and contributing to environmental sustainability within the Nigerian context.

Hypotheses Overview

H1: There is no significant relationship between the adoption of digital payment systems and sustainable economic development in Nigeria.

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H2: The adoption of digital banking services does not influence sustainable economic development in Nigeria.

H3: The adoption of fintech solutions has no significant relationship with sustainable economic development in Nigeria.

All three hypotheses were accepted based on empirical data, indicating significant positive relationships in each area.

The adoption of digital finance correlates with increased economic activity, particularly in sectors such as agriculture, SMEs, and services, leading to broader economic growth (Adebayo, T., & Chinedu, B., 2022). This is reflective of digital finance's ability to streamline financial transactions, reduce costs, and improve access to capital. Digital financial services have significantly bridged the gap for unbanked populations, offering access to financial services through mobile technology. This has led to an increase in savings, credit availability, and investment among previously marginalized groups (Okoye, L. U., & Ezeudu, F. J., 2023). The use of digital finance has encouraged the adoption of green financing and investments in renewable energy projects. Digital platforms have also reduced the need for physical banking infrastructure, lowering carbon footprints (Umar, S., & Hassan, A., 2024).

The rejection of the three null hypotheses highlights the transformative potential of digital finance in driving sustainable development in Nigeria. By acting as a lever for economic growth, financial inclusion, and environmental sustainability, digital finance can play a pivotal role in achieving broader development goals. This research contributes to the ongoing discourse on digital finance's role in sustainable development, offering insights that could inform policy, innovation, and investment in the Nigerian context and beyond.

CONCLUSION

In the high-impact journal's analysis of the potential of digital finance for sustainable development in Nigeria, the conclusion synthesizes findings across four critical areas: economic growth, financial inclusion, environmental sustainability, and social equity. The comprehensive examination draws on extensive empirical data and theoretical frameworks to articulate the transformative role digital finance could play in Nigeria's economy, aligning with sustainable development goals (SDGs).

The research underscores the significant positive impact digital finance has on economic growth. By providing more efficient transaction processes, lowering transaction costs, and facilitating easier access to capital, digital finance can stimulate economic activities across various sectors. It enhances the operational efficiency of small and medium-sized enterprises (SMEs), which are crucial for job creation and GDP growth in Nigeria. Financial inclusion is identified as a pivotal area where digital finance can make a substantial difference. The journal highlights how digital financial services have the potential to reach underserved populations, including rural areas and low-income groups. By broadening access to banking services, savings, credit, and insurance products, digital finance can reduce inequalities and empower individuals economically.

Digital finance's role in promoting environmental sustainability emerges as an innovative area of impact. The findings suggest that through facilitating green finance—investments in renewable energy, sustainable agriculture, and conservation projects—digital finance can contribute significantly to Nigeria's environmental goals. Moreover, the shift towards digital transactions reduces the need for physical infrastructure, leading to lower carbon emissions and resource usage. The journal also delves into the social dimensions of digital finance, emphasizing its potential to enhance social equity. By enabling direct and efficient transfer of funds, including government disbursements for social programs, digital finance can improve the delivery of social services. This efficiency aids in reducing poverty and enhancing the quality of life for marginalized groups, contributing to more equitable social development.

This paper concludes that digital finance stands at the confluence of economic, environmental, and social spheres of sustainable development in Nigeria. The evidence points to digital finance not just as a tool for economic transactions, but as a foundational element for a sustainable future. It calls for concerted efforts among policymakers, financial institutions, and the tech community to harness the potential of digital finance fully. Strategic investments in digital infrastructure, regulatory frameworks that foster innovation while protecting consumers, and initiatives aimed at increasing digital literacy are critical for unlocking digital finance's full potential for sustainable development in Nigeria. This multifaceted approach is essential for Nigeria to achieve its sustainable development goals and ensure inclusive growth and prosperity for all its citizens.

RECOMMENDATION

To unlock the potential of digital finance for sustainable development in Nigeria's economy, the paper offers a set of recommendations. These recommendations are designed to address the critical areas identified in their analyses: enhancing economic growth, expanding financial inclusion, promoting environmental sustainability, and fostering social equity.

This paper stress the importance of robust digital infrastructure as a foundation for the growth of digital finance. This includes reliable internet services, secure digital payment platforms, and widespread access to mobile devices. Encourage partnerships between the government and private sector companies to invest in digital infrastructure. This could involve subsidies for internet service providers (ISPs) to expand into rural areas or tax incentives for companies developing secure payment platforms. Develop and implement regulatory frameworks that encourage investment in digital infrastructure while ensuring consumer protection against fraud and privacy breaches.

Increasing the population's financial literacy and digital skills is crucial to ensure widespread adoption and effective use of digital finance tools. Launch nationwide educational programs focused on digital financial services, targeting schools, universities, and adult education centers. These programs should be designed to cater to different literacy levels and ages. Utilize media, both traditional and social, to run public awareness campaigns highlighting the benefits and safe use of digital finance services.

To expand financial inclusion, especially among underserved communities, journals recommend the adoption of inclusive financial policies that address barriers to access. Support the growth of microfinance institutions and mobile money services that cater to small entrepreneurs and individuals in rural areas. Policies could include lower regulatory barriers for mobile money operators and microfinance institutions. Implement or enhance national digital identification systems to ensure everyone has access to formal banking services, a common barrier for those in informal sectors.

Digital finance is seen as a key driver for funding projects that promote environmental sustainability, including renewable energy, sustainable agriculture, and conservation efforts. Create incentives for investments in green projects through digital platforms. This could involve tax breaks for companies investing in renewable energy or offering lower interest rates for loans related to sustainable agriculture. Develop digital platforms that facilitate carbon credit trading, allowing companies and individuals to invest in carbon offset projects easily.

Implementing these recommendations requires a coordinated approach involving government agencies, financial institutions, the private sector, and international partners. By focusing on building a conducive environment for digital finance, Nigeria can harness its potential to drive sustainable development, economic growth, and social equity. This strategic focus will not only align with the Sustainable Development Goals (SDGs) but also position Nigeria as a leader in digital finance innovation in the African continent.

LIMITATIONS

The study is only restricted to three aspects of economic sustainability – economic growth, financial inclusion and financial stability in Nigeria. Further research could be conducted to cover more aspects of the economy. Also, this study employed the cross-sectional approach. A longitudinal approach should be employed to study the trend over a period of at least two years. Finally, the three (3) dimensions identified as predictors of digital finance may not be sufficient enough in explaining the phenomenon. Hence, there are other factors that may contribute in influencing digital finance impact on sustainable economic development in Nigeria that were not part of this study.

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