Digitalisation, Banking Stability and Nigeria's Economic Growth Trajectory

Abstract

The integration of digital technologies in banking operations has become a cornerstone of economic policy to promote financial stability and foster economic growth. This study examines the interplay between digitalisation and banking industry stability and economic growth in Nigeria. Annual time series data spanning from 1981 to 2022, except for the digitalisation (web payment) which covers a shorter period, was collected from the Central Bank of Nigeria's Statistical Bulletin. Using the Least Squares estimator to analyse the multiple regression model, the study found that digitalisation and financial deepening negatively impact economic growth due to digital prematurity and financial shallowness. However, bank stability and bank assets positively influence economic growth. The study concludes that although digitalisation and financial deepening have the potential to enhance growth, as seen in studies of other regions, Nigeria's digital maturity level is too low to propel economic growth effectively. Nonetheless, stability in the Nigerian banking industry and bank assets contribute positively to the country's economic growth trajectory. The study suggests that banks should invest more in digital transformation to foster economic growth. Additionally, banks should provide more credit to the private sector and integrate the unbanked population into formal banking processes to enhance financial deepening, which is a key driver of growth in both aspiring and regional peer countries of Nigeria. Finally, banks should continue to build a strong asset base, not only for regulatory purposes but also to leverage large assets for valuation benefits, collateral for loans, risk exposure diversity, competitive advantage, and growth opportunities.

Keywords: Digitalisation; Bank Stability; Economic Growth;Financial Deepening; Bank Assets.

1. Introduction

Digitalisation, the process of integrating digital technologies into firms' operations, has emerged as a crucial determinant of economic transformation and growth (Kusairi et al., 2023; Lechman&Anacka, 2022; Mura & Donath, 2023). It holds immense potential for rapid economic growth, innovation diffusion, and national competitiveness on a global scale (Arsic, 2020; Lin & Yi, 2024; Stucke&Ezrachi, 2020; Tajudeen et al., 2022; Yang & Du, 2023). As developing countries, including Nigeria, navigate the dynamics and complexities of the 21st-century economic landscape, the integration of digital technologies across sectors becomes essential. This is because digitalisation promotes financial inclusion by expanding access to financial products and services for previously unbanked segments of the population. This expansion is driven by the increasing number of Nigerians participating in web payments, mobile banking, and digital wallets.

The banking sector is one of the economic sectors significantly impacted by digitalisation. According to Enebeli-Uzor and Mukhtar (2024), digitalisation is revolutionising the banking landscape in Nigeria, enhancing efficiency and customer engagement. It enables banks to operate with leaner cost structures, automate service production, and reduce the need for physical branches, contributing to long-term profitability, bank stability, and economic growth.

As the Nigerian economy faces challenges such as price instability, rising unemployment, the exit of multinational corporations, infrastructure decay, digital prematurity, financial system complexities, increasing poverty, and a sluggish growth rate lower than the population growth rate, it has become necessary to re-investigate the possible drivers of economic growth in this digital era. Earlier studies have

overlooked this perspective from a Nigerian viewpoint. Motivated by this gap, as highlighted in the next section of the paper, this study explores the roles of digitalisation, represented by web payments, and banking industry stability on economic growth in Nigeria. To achieve the study's aim, the following research questions are raised.

RQ1: How does digitalisation affect economic growth in Nigeria?

RQ2: Does banking industry stability matters for economic growth to be recorded in Nigeria?

RQ3: What other banking industry indicators could serve as economic growth drivers for Nigeria?

Following this introduction, part two reviews the theory and literature. Part three presents the methodology. Part four discusses the results, and part five concludes the study with policy implications.

2.1 Theoretical Review

To analyse the impact of digitalisation and banking industry stability on economic growth, the study relied on the Solow Growth Theory and the Financial Intermediation Theory.

2.1.1 Solow Residual Growth Theory

The Solow Residual growth model provides theoretical support for the impact of digitalisation on economic growth. Solow (1957) posits that economic growth can be explained by factor inputs such as capital (K) and labour (L). The theory further explains that the residual component of economic growth is sustained by technical progress, digital technology, or digitalisation. According to the Solow Residual theory, long-term

economic growth is driven not only by increases in capital and labour inputs but also by improvements in technology and efficiency. Technological progress allows economies to produce more output with the same inputs or the same output with fewer inputs. Therefore, digital technology is essential for sustaining economic growth over time.

2.1.2 Financial Intermediation Theory

The study uses the Financial Intermediation Theory (FIT) to examine whether banking industry stability matters for economic growth. FIT posits that banks and related financial institutions play vital roles in the economy by efficiently channelling resources from surplus units, such as households and firms, to productive sectors and investments. It further suggests that the stability of banks is critical for economic growth because a stable banking industry facilitates credit creation and allocation for productive uses, improves risk management, provides liquidity, and ensures the overall financial health of the economy. This theory was chosen to guide this study as it provides a robust framework for understanding how bank stability contributes to economic growth. Stable banks are essential for efficient resource allocation, risk management, and liquidity provision in the economy. Policymakers and economists often rely on this theory to design policies that strengthen the stability of financial institutions, thereby fostering sustainable economic growth.

2.2 Empirical Literature

2.2.1 Digitalisation and Economic Growth

Studies investigating the impact of digital technology and digitalisation on economic growth globally (Arsić, 2020; Gyürüsi, 2018; Kusairi et al., 2023; Lechman&Anacka,

2022; Mura & Donath, 2023; Myovella et al., 2020; Solomon & van Klyton, 2020; Stroiko et al., 2021) have established varying empirical outcomes.

For instance, there are two strands of literature on how digitalisation impacts economic growth. The first strand of empirical research posits that digitalisation drives economic growth in both developed and developing countries. In this regard, Myovella et al. (2020) conducted a comparative analysis of the impact of digitalisation on economic growth in Sub-Saharan Africa (SSA) and the Organisation for Economic Co-operation and Development (OECD). The study used the Generalized Method of Moments (GMM) to establish that digitalisation positively impacts economic growth in both regions. Similarly, Solomon and van Klyton (2020) examined the relationship between digital technology usage and economic growth in 39 African countries. Their GMM estimator results reveal that individual usage of digital technology is the only component that spurs economic growth in Africa. Within the same discussion, Lechman and Anacka (2022) studied how digitalisation processes impact economic growth using 40 developing economies as their sample. The panel regression outcome supports earlier studies, indicating that digitalisation propels economic growth in developing economies. In line with these findings, other studies have also reported a positive impact of digitalisation on economic growth, including Mura and Donath (2023) for the European Union and Kusairi et al. (2023) for developed economies.

Although the second strand represents a minority view in the literature, it is crucial to state that Arsić (2020) established that the explosive economic growth envisioned through digitalisation by theoreticians is not guaranteed. Arsić's study revealed that

sustained economic growth would rely on entrepreneurial capacities, educational reform, and general healthcare accessibility.

2.2.2 Banking Industry Stability and Economic Growth

Empirical studies have consistently shown that banking industry performance impacts economic growth positively, aligning with the financial intermediation theory (Chinoda&Kapingura, 2023; Ijaz et al., 2020; Jayakumar et al., 2018; Yitayaw et al., 2023; Younsi&Nafla, 2019).

Despite this, there is a lack of empirical evidence on how digitalisation and banking industry stability simultaneously affect economic growth, motivating this study. Globally, few studies have examined the impact of digitalisation and banking industry stability on economic growth (Banna & Alam, 2021; Iddrisu & Chen, 2022; Yussif et al., 2019), a few studies have focused on Nigeria and the sub-Saharan Africa (Amali et al., 2023; Siano et al., 2020; Edo etal., 2019; Abdulquadri et al., 2019).With the radical growth in the adoption of digital technologies in the banking sector and consistent reforms to strengthen the Nigerian banking industry, there is still the need to contribute to this discuss by evaluating the roles of digitalisation and banking industry stability on economic growth in Nigeria.

3. Methodology

3.1 Research Design and Data

The study employs a longitudinal research design based on an ex-post-facto approach to collect annual time series data spanning from 1981 to 2022 from the Central Bank of Nigeria (CBN) database and related sources. Data collection was based on availability

and consistency. Data analysis was carried out using EViews econometric software to estimate the coefficients of the multiple regression model specified in equation 1 below. The variables for which data were collected are described in Table 1 below.

Table 1: Data source and variables description

Variable	Nature of variable	Description	Source
Economic Growth	Dependent	Economic growth variable was measured using RGDP data	CBN www.cbn.gov.ng
Banking Industry Stability	Explanatory	Loan to deposit ratio	CBN www.cbn.gov.ng
Digitalisation	Explanatory	Web payment /transfers	CBN www.cbn.gov.ng
Bank Asset	Control	Value of Assets of Banks	CBN www.cbn.gov.ng
Financial Deepening	Control	Credit to private sector as a ratio of GDP	CBN www.cbn.gov.ng

Source: Author's design

3.2 Model Specification

The model for this study is adapted from earlier research that analysed the impact of digitalisation, measured by web payment (WPAY), on economic growth (Arsić, 2020; Gyürüsi, 2018; Kusairi et al., 2023; Mura and Donath, 2023; Solomon & van Klyton, 2020; Stroiko et al., 2021). It also examines the effect of bank stability on economic growth (Chinoda&Kapingura, 2023; Ijaz et al., 2020; Jayakumar et al., 2018; Yitayaw et al., 2023; Younsi&Nafla, 2019). This study incorporates variations in these models to establish the simultaneous impact of digitalisation and banking industry stability on

economic growth, marking one of the foremost studies (Chiemeke and Imafidor, 2022; Onunkaetal., 2023) for Nigeria.

$$RGDP = \beta_o + \beta_1 WPAY + \beta_2 BSTAB + \beta_3 FINDP + \beta_4 BASSET + e_t \quad [1]$$

Where RGDP represents the dependent variable.

β_o depicts the intercept the model, and $\beta_1 \; to \; \beta_7$ shows the respective coefficients of the model, which respectively accounts for the impact of each of explanatory variables on the dependent variable.

A-priori expectation:

$\beta_o > 0$; $\beta_1 > 0$; $\beta_2 > 0$; $\beta_3 > 0$; $\beta_4 > 0$; $\beta_5 > 0$

The a priori expectation above stipulates that economic growth rate is expected to be positive over time, digitalisation is expected to bear a positive impact on economic growth, similar results are expected of banking sector stability and bank asset.

4.1 Discussion of Results

The study presents the results of econometric analysis, including a summary of descriptive statistics, a correlation test, regression analysis, and post-estimation reports for empirical validity.

Table 2: Summary of Descriptive Statistics

Variable	Mean	Standard Deviation	Skewness	Kurtosis	Jarque-Bera	Prob.
RGDP	68184.46	3639.55	-1.113	3.070	1.860	0.3945
WPAY	142,341.99	27273.33	1.849	2.421	15.568	0.0004
BASSET	33417.91	9876.02	0.745	2.716	0.862	0.6500
FINDP	23.06	1.02	0.002	2.788	0.017	0.9916
BSTAB	60.56	13.62	-0.439	2.299	0.474	0.7891

Source: Author's computation from CBN &World Bank Data

Table 3: Correlation Coefficients

Variable	RGDP	WPAY	BASSET	FINDP	BSTAB
RGDP	1.000				
WPAY	0.271	1.000			
BASSET	0.765	0.744	1.000		
FINDP	0.522	0.106	0.487	1.000	
BSTAB	0.659	-0.006	0.301	0.459	1.000

Source: Author's computation from CBN & World Bank Data

Table 2 shows the descriptive characteristics of economic growth (RGDP), the value of web payment (digitalisation), bank assets, bank stability (measured by loan-deposit ratio), and financial deepening. The mean values indicate the average values of the variables over the period under consideration based on data availability. On average, RGDP for Nigeria stands at NGN68,184.46 billion, the annual average for web payment is NGN142,341.99 trillion, the average value of bank assets is NGN33,417.91 billion, financial deepening has a mean value of 23.06%, and banking industry stability in terms of loan-to-deposit ratio stands at an average of 60.56%.

The standard deviation estimates show that RGDP, WPAY, and BASSET are widely dispersed around their mean values, while financial deepening and banking industry stability indicators have observations close to the average values. This degree of dispersion has implications for the statistical stability of the variables. Firstly, it is reflected in the skewness of the distribution: economic growth shows a long leftward tail of -1.113, web payment, which measures digitalisation, has a long rightward tail of 1.849, and the bank asset variable is positively skewed. Secondly, financial deepening and bank stability, which are less dispersed, show some level of normality with respective skewness statistics of 0.002 and -0.439, which could approximate to zero. Thirdly, the Kurtosis and Jarque-Bera statistics reveal that the digitalisation variable (web payment) is not normally distributed, while all other variables appear to be

independently and normally distributed based on the probability value of the Jarque-Bera estimate. This attainment of the normality assumption is critical to the reliability of the estimates of our model. Thus, since all other variables except web payment met the normality assumption, the study proceeded with estimating the regression model using the least squares method, as it is the most efficient estimator in the class of linearly unbiased estimators (Gujarati & Porter, 2009).

In Table 3, the study presents the result of the correlation matrix, which depicts the degree and direction of the relationship among the variables. This test is important as it helps detect the chances of multicollinearity in the model (Gujarati & Porter, 2009). Clearly, the correlation coefficients indicate that most of the variables are weakly correlated. For instance, web payment has a weak relationship with financial deepening, bank stability, and economic growth. Additionally, bank stability is not significantly related to bank assets and financial deepening. However, a strong positive relationship is observed between economic growth and variables such as bank assets and bank stability. The preliminary analysis reveals that the variables chosen for the study are empirically related, and the relationships among the independent variables are not strong enough to imply multicollinearity.

4.2 **Impact of Digitalisation and Banking Industry Stability on Economic Growth**

The study used web payment as a measure of digitalisation, the ratio of loans to deposits as a proxy for banking industry stability, and real gross domestic product (RGDP) to measure economic growth. Bank assets and financial deepening were introduced as control variables. The results of the multiple regression model are reported in Table 4 below.

Table 4: Regression Results

Independent variable	Coefficient	Standard error	t-statistic	P-value
WPAY	-0.014	0.007	-1.915	0.1281
BSTAB	0.001	0.001	1.000	0.1681
BASSET	0.275	0.081	3.379	0.0278
FINDP	-0.011	0.011	-0.982	0.3815
Adjusted R-squared	0.823			
F-statistic	10.299			0.0221
Durbin-Watson	1.795			

Dependent variable: RGDP

Source: Author' computation using CBN & World Bank Data.

Table 4 shows the regression results of the effect of digitalisation, measured by web payment and banking industry stability, on economic growth. The estimates reveal that digitalisation has a negative impact on economic growth, while banking industry stability has a positive effect on growth. Specifically, the coefficients of web payment (-0.014; p-value = 0.1281) indicate that digitalisation adversely affects economic growth in Nigeria. One reason could be the vulnerability of banks' digital infrastructure, which is not resilient enough to resist unauthorised access to personal information and financial details of customers by cyber criminals. Additionally, poor knowledge of digital and cybersecurity among a large percentage of Nigerian bank account owners could hinder the potential of digitalisation to be a growth enabler, instead becoming a growth drag, as established in this study (Afzal et al., 2024; Arsić, 2020; Oluwasemilore, 2023).

Furthermore, the coefficient for banking industry stability (0.001; p-value = 0.1681) indicates that the stability of banks enhances growth, although the positive impact is not statistically significant. This implies that for economic growth to occur, there must be stability in the banking industry. The stability of banks is crucial as it ensures that requisite funds are mobilised and channelled to productive sectors of the economy for investment purposes (Fatai&Alenoghena, 2024; Ngong et al., 2023). Additionally, banking industry stability is the channel through which foreign capital and remittances flow into the domestic economy to augment domestic investment. A strong and stable banking industry would enhance trust in the financial system, leading to investment in productive sectors that spur economic growth (Appiah et al., 2024; Basha et al., 2023; Enebeli-Uzor & Adam, 2023; Fengju&Wubishet, 2024).

Moreover, bank assets, with a coefficient of 0.275 and a p-value of 0.0278, appear to have a statistically positive impact on economic growth. This implies that a strong asset base of banks would command more investment and trust, as it can offset its liabilities, resulting in economic growth. Thus, the study has established that bank assets matter for bank stability and digitalisation to propel economic growth in Nigeria. This finding lends credence to the current re-capitalisation of Nigerian banks by the Central Bank of Nigeria.

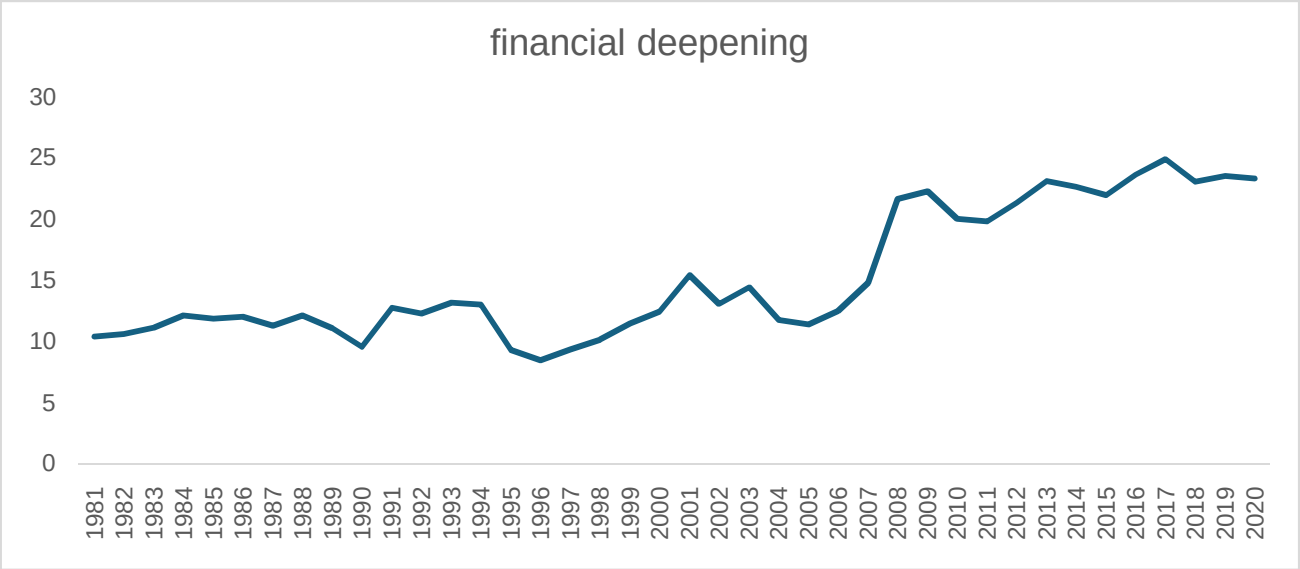

Figure 1: Financial development trend in Nigeria

The study also considered financial deepening, which is measured by the ratio of credit to the private sector to gross national product. This factor is crucial because the private sector is the engine of economic growth (Taddese Bekele &Abebaw Degu, 2023; Vîrjan et al., 2023). The results presented in Table 4 reveal that the current level of financial deepening in Nigeria does not support economic growth. Why? The first reason is derived from the descriptive statistics (Figure 1 and Table 2), where the size of credit to the private sector has fluctuated significantly, averaging 23.06% of total bank credit. This average credit rate is insufficient to drive economic growth in Nigeria, especially since the average bank credit is significantly affected by the exchange rate.

From this discussion, it is evident that digitalisation and financial deepening have not yet developed sufficiently to aid economic growth in Nigeria, this is supported by empirical evidence from earlier studies (Arsić, 2020) and our findings deviated from earlier studies that established a significant impact of digitalisation on economic growth (Donath, 2023; Iddrisu & Chen, 2022; Lechman&Anacka, 2022; Myovella et al., 2020; Solomon & van Klyton, 2020; Stroiko et al., 2021).However, banking industry stability and bank assets

could propel economic growth in Nigeria, and this is supported by earlier studies (Chinoda&Kapingura, 2023; Ijaz et al., 2020; Jayakumar et al., 2018; Yitayaw et al., 2023; Younsi&Nafla, 2019). The adjusted R-squared of the model shows a good fit at 82%. The F-statistic of 10.229 (p-value=0.0221) indicates that, at a 5% significance level, the model is adequate. The Durbin-Watson statistic of 1.795 suggests a possible absence of serial correlation issues in the model.

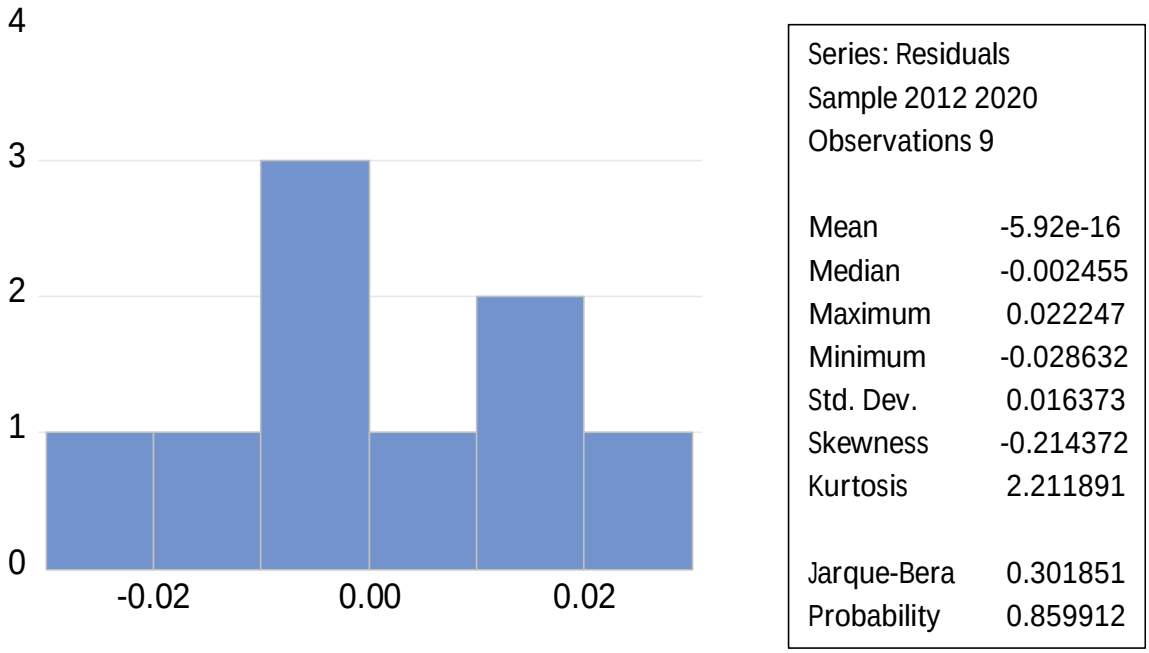

Figure 2: Normality Test

Source: Authors' computation using CBN & World Bank Data

Table 5: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.2541	P-value. F-test	0.7974
Obs*R-squared	1.8234	P-value. Chi-square	0.4018

Source: Authors' computation using World Bank Data.

The post-estimation tests to validate the findings of this study are presented in Figure 2 and Table 5, covering the normality assumption test and the absence of serial correlation. The Jarque-Bera statistic, with an estimate of 0.3018 and a p-value of 0.8599, indicates that at a 5% level of significance, the model satisfies the normality

condition. Moreover, the Breusch-Godfrey test, with F-statistic and Chi-square values of 0.2541 and 1.8234, respectively, and corresponding p-values of 0.7974 and 0.4018, confirms that the models are free from serial correlation. This is further affirmed by the Durbin-Watson estimate.

5. Conclusions and Policy Implications

This study examines the roles of digitalisation and banking industry stability in driving economic growth in Nigeria. Digitalisation is measured using web payment, reflecting the level of digital infrastructure. Banking industry stability is proxied by the loan-deposit ratio(computed as total loan divided by total deposit multiplied by 100), while financial deepening and bank assets are included as control variables.

Using the least square estimator to analyse the multiple regression model as specified in equation 1 above, it was found that banking industry stability and bank assets are significant drivers of economic growth in Nigeria. Conversely, the study established that digitalisation (web payment) and financial deepening have not yet yielded economic growth benefits for Nigeria.

The inability of digitalisation to positively impact economic growth could be attributed to the digital immaturity of the Nigerian financial system, despite banks' efforts to upscale their digital infrastructure with substantial annual investments. Moreover, financial flows through web payments may not be fully directed towards productive activities that contribute to economic growth.

Additionally, financial deepening, indicated by the ratio of credit to the private sector as a proportion of gross domestic product, is weak and unstable, thus not contributing significantly to economic growth. However, the stability of the banking industry and its

assets are meaningfully contributing to economic growth. The study concludes that although digitalisation and financial deepening have the potential to enhance growth, as seen in other regions, Nigeria's digital maturity level is currently too low to propel economic growth. However, the stability of the Nigerian banking industry and its assets do contribute to the country's economic growth trajectory.

Based on these conclusions, the study suggests that stakeholders in the banking industry should allocate more funds towards digital transformation and invest in resilient digital infrastructure to enhance digital maturity. This would ensure that web payments are directed towards productive activities that result in economic growth in Nigeria. Additionally, banks should extend more credit to the private sector and integrate the unbanked population into formal banking processes to enhance financial deepening and inclusion, which are engines of growth in other aspiring and regional peers of Nigeria. Finally, banks should continue to build a strong asset base, not only for regulatory purposes but also to leverage a large asset base for valuation, collateral for loans, risk exposure diversity, competitive advantage, and growth opportunities.

5.2 Limitations of the study

Despite the contributions of this study to empirical literature on the impact of digitalisation and banking sector stability on economic growth in Nigeria, the study has the following limitations. First, the use of ordinary least square estimator could be limited as it does not estimate short-run and long-run coefficients unlike the Auto Regressive Distributed Lag (ARDL) estimator. Going forward, the study suggests that ARDL or the Granger Causality techniques be adopted to examine the influence of digitalisation and banking stability on economic growth. These approaches could provide more insights as

to whether a bi-directional or uni-directional causation exists and the direction of causality, as it could have profound policy implications.

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References

Abdulquadri, A., Mogaji, E., Kieu, T. A., & Nguyen, N. P. (2021). Digital transformation in financial services provision: A Nigerian perspective to the adoption of chatbot. Journal of Enterprising Communities: People and Places in the Global Economy, 15(2), 258-281.

Afzal, M., Meraj, M., Kaur, M., & Shamim Ansari, M. (2024). How does cybersecurity awareness help in achieving digital financial inclusion in rural India under escalating cyber fraud scenario?. *Journal of Cyber Security Technology*, 1-39.

Amali, E., Alymkulova, N., &Ejila, S. A. (2023). Banks' credit to the private sector and economic growth in Nigeria: The moderating role of digitalization. Journal of Global Economics and Business, 4(13), 17-35.

Appiah, M., Gyamfi, B. A., Adebayo, T. S., &Bekun, F. V. (2023). Do financial development, foreign direct investment, and economic growth enhance industrial development? Fresh evidence from Sub-Sahara African countries. *Portuguese Economic Journal*, *22*(2), 203-227.

Arsić, M. (2020). Impact of digitalisation on economic growth, productivity and employment. *Economic Themes*, *58*(4), 431-457.

Banna, H., & Alam, M. R. (2021). *Is digital financial inclusion good for bank stability and sustainable economic development? Evidence from emerging Asia* (No. 1242). ADBI Working Paper Series.

Basha, M., Reddy, K., Mubeen, S., Raju, K. H. H., & Jalaja, V. (2023). Does the Performance of Banking Sector Promote Economic Growth? A Time Series Analysis. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(6), 7.

Chiemeke, S. C., &Imafidor, O. M. (2020). An assessment of the impact of digital technology adoption on economic growth and labour productivity in Nigeria. NETNOMICS: *Economic Research and Electronic Networking*, 21(1), 103-128.

Chinoda, T., &Kapingura, F. M. (2023). The impact of digital financial inclusion and bank competition on bank stability in sub-Saharan Africa. *Economies*, *11*(1), 15.

Edo, S., Okodua, H., &Odebiyi, J. (2019). Internet adoption and financial development in Sub-Saharan Africa: Evidence from Nigeria and Kenya. African Development Review, 31(1), 144-160.

Enebeli-Uzor, S., & Adam, M. (2024). Monetary Policy, Digitalisation and Banking Industry Performance in Nigeria. *Journal of Scientific Research and Reports*, *30*(6), 459-468.

Fatai, A. O., &Alenoghena, R. O. (2024). The Role of Deposit Growth in The Productivity of Deposit Money Banks in Nigeria: Case Study of Union and Wema Banks in Lagos State. *International Journal of Research and Scientific Innovation*, *10*(12), 234-246.

Fengju, X., &Wubishet, A. (2024). Analysis of the impacts of financial development on economic growth in East Africa: How do the institutional qualities matter?. *Economic Analysis and Policy*, *82*, 1177-1189.

Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics*. McGraw-hill.

Gyürüsi, I. (2018). Digitalisation for a more sustainable economic growth. *Informatika*, *46*, 39-48.

Iddrisu, A. G., & Chen, B. (2022). Economic growth through digitalization in Africa: does financial sector development play a mediating role? *International Journal of Emerging Markets*.

Ijaz, S., Hassan, A., Tarazi, A., & Fraz, A. (2020). Linking bank competition, financial stability, and economic growth. *Journal of Business Economics and Management*, *21*(1), 200-221.

Jayakumar, M., Pradhan, R. P., Dash, S., Maradana, R. P., & Gaurav, K. (2018). Banking competition, banking stability, and economic growth: Are feedback effects at work?. *Journal of Economics and Business*, *96*, 15-41.

Kusairi, S., Wong, Z. Y., Wahyuningtyas, R., & Sukemi, M. N. (2023). Impact of digitalisation and foreign direct investment on economic growth: Learning from developed countries. *Journal of International Studies*, *16*(1).

Lechman, E., &Anacka, H. (2022). Digitalization process and its impact on economic growth: a panel data study for developing countries. In *Digitalization and Economic Development* (pp. 28-46). Routledge.

Lin, Q., & Yi, L. (2024). How digitalisation empowering firm innovation breaks the game? Based on fuzzy set qualitative comparative analysis. *Technology Analysis & Strategic Management*, *36*(4), 665-678.

Mura, P. O., & Donath, L. E. (2023). Digitalisation and economic growth in the European Union. *Electronics*, *12*(7), 1718.

Myovella, G., Karacuka, M., &Haucap, J. (2020). Digitalization and economic growth: A comparative analysis of Sub-Saharan Africa and OECD economies. *Telecommunications Policy*, *44*(2), 101856.

Ngong, C. A., Onyejiaku, C., Fonchamnyo, D. C., & Onwumere, J. U. J. (2023). Has bank credit really impacted agricultural productivity in the Central African Economic and Monetary Community?. *Asian Journal of Economics and Banking*, *7*(3), 435-453.

Oluwasemilore, I. O. (2023). Challenges of Nigeria's Digital Economy: Way Forward. *UCC Law Journal*, *3*(1), 229-260.

Onunka, O., Alabi, A. M., Okafor, C. M., Obiki-Osafiele, A. N., Onunka, T., &Daraojimba, C. (2023). Cybersecurity in US and Nigeria banking and financial institutions: review and assessing risks and economic impacts. *Advances in Management*, 1.

Siano, A., Raimi, L., Palazzo, M., & Panait, M. C. (2020). Mobile banking: An innovative solution for increasing financial inclusion in Sub-Saharan African Countries: Evidence from Nigeria. Sustainability, 12(23), 10130.

Solomon, E. M., & van Klyton, A. (2020). The impact of digital technology usage on economic growth in Africa. *Utilities policy*, *67*, 101104.

Solow, R. M. (1957). Technical change and the aggregate production function. *The review of Economics and Statistics*, *39*(3), 312-320.

Stroiko, T., Nazarova, L., & Danik, N. (2021). Transformation of economic processes on the basis ofdigitalisation. *Baltic Journal of Economic Studies*, *7*(1), 102-106.

Stucke, M. E., &Ezrachi, A. (2020). Digitalisation and its impact on innovation. *R&I paper series*.

Taddese Bekele, D., & Abebaw Degu, A. (2023). The effect of financial sector development on economic growth of selected sub-Saharan Africa countries. *International Journal of Finance & Economics*, *28*(3), 2834-2842.

Tajudeen, F. P., Nadarajah, D., Jaafar, N. I., & Sulaiman, A. (2022). The impact of digitalisation vision and information technology on organisations' innovation. *European Journal of Innovation Management*, *25*(2), 607-629.

Vîrjan, D., Manole, A. M., Stanef-Puică, M. R., Chenic, A. S., Papuc, C. M., Huru, D., &Bănacu, C. S. (2023). Competitiveness—the engine that boosts economic growth and revives the economy. *Frontiers in Environmental Science*, *11*, 1130173.

Yang, Z., & Du, S. (2023). A configuration perspective of innovation capability in the digitalisation context. *Technology Analysis & Strategic Management*, 1-13.

Yitayaw, M. K., Mogess, Y. K., Feyisa, H. L., Mamo, W. B., & Abdulahi, S. M. (2023). Determinants of bank stability in Ethiopia: A two-step system GMM estimation. *Cogent Economics & Finance*, *11*(1), 2161771.

Younsi, M., &Nafla, A. (2019). Financial stability, monetary policy, and economic growth: Panel data evidence from developed and developing countries. *Journal of the Knowledge Economy*, *10*, 238-260.

Yussif, M. M., Osei-Fosu, A. K., &Buabeng, E. (2019). Digitisation, Financial Development and Economic Growth in Emerging Economies. *ADRRI Journal (Multidisciplinary)*, *28*(8), 59-93.