

IMPACT OF COMMERCIAL BANKS PROFITABILITY ON THE ECONOMIC GROWTH IN NIGERIA (1990-2023)

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Abstract

The study investigated the impact of commercial banks' profitability on Nigeria's economic growth from 1990 to 2023. Gross Domestic Product Growth Rate (GDPGR) was used as the dependent variable, while independent variables included return on assets (ROA), credit to small commercial bank equity (CBE), and prime interest rate (PIR). The study employed secondary data from Central Bank of Nigeria statistical Bulletin (CBN), and Nigerian Deposit and Insurance Corporation (NDIC). The Augmented Dickey-Fuller test confirmed the stationarity of these variables. Using the ordinary least square (OLS) method, the study found that ROA had a negative and insignificant impact on economic growth while PIR had a positive relationship but insignificant effect, while CBE had a negative but significant impact on economic growth. The ANOVA/F-test showed that independent variables collectively influenced GDPGR significantly. The study, therefore, recommended that government and stakeholders should sustain the positive impacts of PIR on economic growth through appropriate fiscal policies, enhancing revenue generation for both the government and commercial banks.

Keywords: Commercial Banks, Profitability, Economic Growth, and Nigeria

1.0 Introduction

The study explores the critical role of commercial banks in lending to customers, emphasizing that banks are established primarily to provide credit for legitimate businesses and meet customers' financial needs at competitive interest rates. Lending is identified as the principal economic function of banks, essential for funding consumption and investment spending by businesses, individuals, and the government. Effective bank lending supports new business growth, job creation, and economic viability (Santos *et al.*, 2024). Commercial bank loans convey positive market signals, enabling borrowers to secure additional, often cheaper, funds from other sources (Rose, 2022). Loans significantly contribute to banks' revenues and profits while stimulating business development and economic growth (King, 2020). The symbiotic relationship between banks and economic operators highlights the mutual dependence on loanable funds for growth and profitability.

However, banks must ensure proper monitoring and management of loanable funds to mitigate risks associated with defaults, mismanagement, and economic downturns (Abid *et al.*, 2021). Sound lending policies and thorough training for effective monitoring are crucial to protect public funds. Historically, banks have balanced borrowing and lending to maintain profitability while safeguarding customer deposits through strategic cash reserves and near-liquid assets (Ayo, 2021). Evaluating loan opportunities involves reviewing laws, assessing internal limitations, and estimating expected net returns, ensuring alignment with the bank's environment and resources. Lending policies facilitate dynamic evaluation of loan opportunities, considering short-term and long-term financing needs (Eze, 2023).

Despite extensive research on the relationship between commercial banks' profitability and economic growth, several gaps remain, particularly in the context of Nigeria. First, while numerous studies have established a positive correlation between bank profitability and economic growth, the mechanisms through which bank profitability influences economic growth in Nigeria remain underexplored. Many studies, such as Adegboye *et al.*, (2019) and Akinlo and Egbetunde (2010) focused on the correlation without delving into the specific channels such as credit availability, return on asset, commercial bank

equity, and prime interest rate on economic growth in Nigeria. Moreover, most studies cover periods ending in the early 2010s, with a lack of recent data analysis extending to the present day. Given the significant economic and regulatory changes in Nigeria over the past decade, including the impact of the COVID-19 pandemic, there is a pressing need for updated research that considers these recent developments (World Bank, 2020).

Hence, the present study fills this gap. In lieu of the shortcomings stated above, it is therefore instructive to examine the impact of commercial banks' profitability on economic growth in Nigeria. This study distinguishes itself from previous studies in the finance-growth literature by specifically focusing on the critical indicator of a bank's profitability and efficiency in utilizing its assets to generate earnings and its influence on economic growth in Nigeria. In addition to the introductory section, Section 2 reviews relevant studies, while Section 3 presents the methods and materials employed in the study. Section 4 examines the trends observed in socio-economic governance measures. Section 5 presents and discusses the study's findings, while Section 6 provides the concluding remarks.

2.0 Literature Review and Hypotheses Development

The impact of commercial banks' profitability on economic growth is a significant area of study, particularly in the context of developing economies like Nigeria. Commercial banks play a crucial role in financial intermediation, mobilizing savings, and providing credit to various sectors of the economy. Profitability in banks is not only a measure of their financial health but also a reflection of their ability to contribute to economic activities. Higher profitability indicates better management efficiency, robust risk management practices, and an ability to withstand economic shocks. Thus, profitable banks are more likely to offer credit at favorable terms, facilitating investments and consumption, which are critical drivers of economic growth. In Nigeria, commercial banks' profitability can influence economic growth through the availability of credit to the private sector, development of financial infrastructure, and fostering innovation in financial products and services (Demirgüç-Kunt & Levine, 2008).

Several theories provide a framework for understanding the relationship between commercial banks' profitability and economic growth. The financial intermediation theory posits that banks play a critical role in the economy by channeling funds from savers to borrowers, thus facilitating investment and consumption activities (Diamond, 1984). This theory suggests that profitable banks can more effectively perform these intermediary functions, thereby promoting economic growth. The endogenous growth theory, which highlights the role of financial markets in driving economic growth, also supports this relationship. According to this theory, efficient financial institutions, including profitable commercial banks, contribute to economic growth by improving the allocation of resources, enhancing productivity, and fostering innovation (Levine, 1997). Furthermore, the bank-based financial system theory argues that banks are essential for providing long-term finance, particularly in developing economies where capital markets are underdeveloped. Thus, the profitability of commercial banks can have a direct impact on economic growth by ensuring the availability of long-term finance for productive investments (Goldsmith, 1969).

Hypothesis I: There is a positive and significant impact of return on assets (ROA) on the economic growth in Nigeria.

The relationship between return on assets (ROA) of commercial banks and economic growth has been a subject of interest in the financial and economic literature. ROA is a critical indicator of a bank's

profitability and efficiency in utilizing its assets to generate earnings. Understanding this relationship in the context of Nigeria, a developing economy with unique financial and economic dynamics, is essential. The financial intermediation theory posits that banks play a crucial role in channeling funds from savers to borrowers, thus facilitating investment and economic activities (Diamond, 1984). A high ROA indicates efficient management of assets and profitability, which implies that banks have more resources to extend credit and invest in productive ventures, leading to economic growth. Additionally, the endogenous growth theory highlights the role of financial markets and institutions in fostering economic growth by improving resource allocation, enhancing productivity, and promoting innovation (Levine, 1997). Therefore, a positive ROA suggests that banks can better support these functions, contributing to economic growth.

Empirical studies have demonstrated varying results on the impact of ROA on economic growth. Adegboye, Aluko and Ogunleye (2019) found a positive relationship between bank profitability, measured by ROA, and economic growth in Nigeria. Their study suggested that higher profitability enables banks to provide more credit, support business expansions, and contribute to overall economic development. Similarly, Akinlo and Egbetunde (2010) reported that financial development, including improved ROA, positively impacts economic growth in Nigeria. Nwaeze, Onyekwelu and Nwaeze (2014) noted that while there is a positive impact, the relationship is complex and can be influenced by other factors such as regulatory changes and economic conditions. They argued that excessive focus on profitability might lead to riskier banking practices, which could destabilize the economy in the long run. Based on the theoretical framework and empirical evidence, the following hypothesis is developed:

Hypothesis (H1): There is a positive and significant impact of return on assets (ROA) on the economic growth in Nigeria.

Hypothesis II: There is a positive and significant impact of commercial banks' equity (CBE) on the economic growth in Nigeria

Commercial banks' equity (CBE) is a crucial component of a bank's capital structure, representing the ownership interest held by shareholders. It is essential for absorbing losses and providing a buffer against financial distress, thus ensuring stability and confidence in the banking system. The impact of CBE on economic growth in Nigeria is a vital area of study, given the country's evolving financial landscape and the pivotal role of banks in economic development. The capital adequacy theory posits that a strong equity base enhances a bank's ability to absorb shocks and continue operating during economic downturns, which in turn supports financial stability and economic growth (Berger & Bouwman, 2013). Equity capital serves as a cushion against potential losses, reducing the likelihood of bank failures and maintaining the flow of credit to the economy. Furthermore, the financial stability theory suggests that well-capitalized banks are more resilient and can better support economic activities by providing consistent lending, even in adverse economic conditions (Diamond & Rajan, 2000). This stability is crucial for fostering long-term economic growth by ensuring that businesses and consumers have access to financial resources.

Empirical studies provide mixed evidence on the relationship between commercial banks' equity and economic growth. For instance, a study by Okoye, Nwisiennyi and Nwadike (2021) found that higher levels of bank equity positively correlate with economic growth in Nigeria. Their research indicates that well-capitalized banks are more capable of withstanding economic shocks and continuing to

provide essential financial services, thereby supporting economic activities. In contrast, Akintoye and Salisu (2019) examined the impact of capital adequacy on economic growth in Nigeria and found that while higher equity levels contribute to financial stability, they may also lead to more conservative lending practices, potentially slowing economic growth. This suggests that the relationship between CBE and economic growth may be influenced by factors such as regulatory environment, risk management practices, and the overall economic climate. Based on the theoretical framework and empirical evidence, the following hypothesis is developed:

Hypothesis (H2): There is a positive and significant impact of commercial banks' equity (CBE) on the economic growth in Nigeria.

Hypothesis III: There is a negative and significant impact of prime interest rate (PIR) on the economic growth in Nigeria

The prime interest rate (PIR) is the interest rate that commercial banks charge their most creditworthy customers. It serves as a benchmark for various other interest rates, including loans and mortgages, influencing borrowing and lending activities across the economy. Understanding the impact of PIR on economic growth is critical for policymakers, especially in a developing economy like Nigeria, where access to affordable credit is vital for business expansion and overall economic development. The interest rate theory posits that lower interest rates reduce the cost of borrowing, thereby encouraging investment and consumption, which are key drivers of economic growth (Kozlov, 2023). According to this theory, when the PIR is low, businesses are more likely to invest in capital projects, and consumers are more likely to spend, both of which contribute to economic growth. Furthermore, the monetary policy theory suggests that the central bank uses the prime interest rate as a tool to control inflation and stabilize the economy (Nair, & Anand, 2020). By adjusting the PIR, the central bank can influence economic activity levels. For instance, lowering the PIR can stimulate economic growth by making borrowing cheaper, while raising the PIR can help cool down an overheating economy.

Empirical studies have provided mixed results on the relationship between PIR and economic growth. For example, Olaniyan *et al.*, (2023) investigated the impact of interest rates on economic growth in Nigeria from 1981 to 2018. They found that lower interest rates are associated with higher economic growth, supporting the view that affordable credit stimulates investment and consumption. In contrast, Aliu (2022) analyzed the impact of monetary policy, including the prime interest rate, on economic growth in Nigeria. Their study revealed that while lower interest rates can stimulate growth, the effect is not always straightforward. They noted that other factors, such as inflation and exchange rates, also play crucial roles in determining the overall impact on economic growth. Based on the theoretical framework and empirical evidence, the following hypothesis is developed.

Hypothesis (H3): There is a negative and significant impact of prime interest rate (PIR) on the economic growth in Nigeria.

Several empirical studies on the impact of commercial banks' profitability on economic growth. For instance, Adegboye, Aluko and Ogunleye (2019) examined the effect of bank profitability on economic growth in Nigeria from 1990 to 2017. Using the Autoregressive Distributed Lag (ARDL) model, they found a positive and significant relationship between banks' profitability and economic growth in the long run. Their findings suggest that policies aimed at improving the profitability of commercial banks could have beneficial effects on Nigeria's economic growth. Another study by Akinlo and Egbetunde (2010) analyzed the relationship between financial development, including bank profitability, and

economic growth in Nigeria using the vector error correction model (VECM). The results indicated that bank profitability positively affects economic growth, reinforcing the importance of a sound and profitable banking sector for economic development. In contrast, Nwaeze, Onyekwelu, and Nwaeze (2014) provided evidence of a more complex relationship. Their study covering the period from 1990 to 2012 suggested that while bank profitability has a positive effect on economic growth, the relationship is not linear. They argued that excessive focus on profitability could lead to riskier banking practices, which might eventually harm economic stability and growth.

3.0 Method and Materials

This study adopted the use of annual secondary data sourced from Central Bank of Nigeria and National Bureau of Statistics publications were used for the study. The research design adopted in this study was the ex-post facto research design in that it describes the statistical relationship between the dependent and independent variables. The dependent variable is Gross domestic product Growth rate (GDPGR) as a proxy of economic growth in Nigeria, while the independent variables are; commercial banks profitability which have return on asset (ROA), Commercial Banks' equity (CBE) and prime interest rate (PIR) as sub-variables. The study employed the use of multiple linear regression models to test the hypotheses postulated in the study. In an attempt to justify the topic under investigation, important macro-economic indicators were considered in building the model. The study adopted the model of Nwanne, (2021). The data were analyzed using a multiple linear regression model of the form:

$$\text{GDPGR} = F(\text{ROA}, \text{CBE}, \text{PIR}) \text{ ----- } 3.1$$

$$\text{GDPGR} = \beta_0 + \beta_1 \text{ROA} + \beta_2 \text{CBE} + \beta_3 \text{PIR} + \mu \text{ ----- } 3.2$$

Where:

GDPGR = Gross Domestic Product Growth rate as proxy of Nigeria's economic growth

ROA= Return on asset

CBE=Commercial Banks' equity

PIR= Prime interest rate

β_0 = Intercept

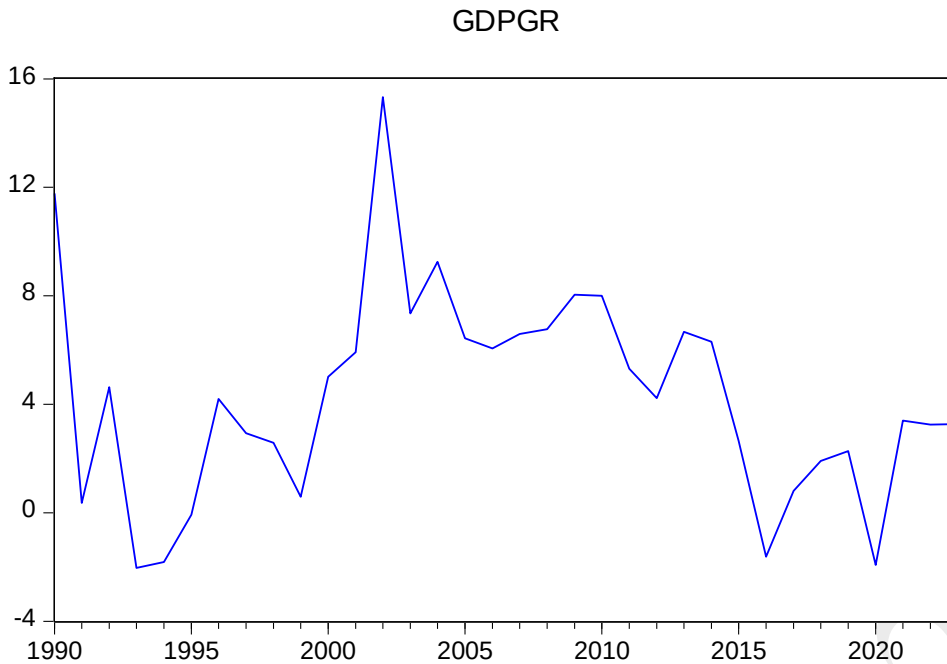
$\beta_1, \beta_2, \dots, \beta_3$ = Partial Slopes of the Linear regression model

μ = Stochastic error term

Where: $\beta_1, \beta_2, \beta_3 > 0$

4.0 Commercial Bank Profitability and Economic Growth in Nigeria

4.1 TREND ANALYSIS



Source: Authors' Computation, (2024)

Figure 4.1: Gross Domestic Product Growth rate (GDPGR) as proxy to Nigeria's economic growth

Figure 4.1 shows the trend analysis of Gross Domestic Product Growth rate (GDPGR). It recorded the minimum value in the year 2020 and the highest value in the year 2003. The above shows that the GDPGR line plot is moving upward and downward. The upward trend indicates that the economy is growing, and there is an increase in the production of goods and services in the country. It also suggests that consumers are spending more, businesses are investing more, and there is an overall increase in economic activity. This is a positive sign for the economy, as it may lead to job creation, increased wages, and a higher standard of living for citizens. On the other hand, the GDPGR line plot is also moving downward, and it indicates that the economy is contracting and there is a decrease in the production of goods and services. A downward trend in the GDPGR line plot suggests that consumers are spending less, businesses are investing less, and there is an overall decrease in economic activity. The key factors responsible for the upward and downward trends are government policies reforms both the monetary policy by the Central Bank of Nigeria and the fiscal policy by the federal and state Government as well as frequent change of Government policies by successive Government, political will to implement policies among others.

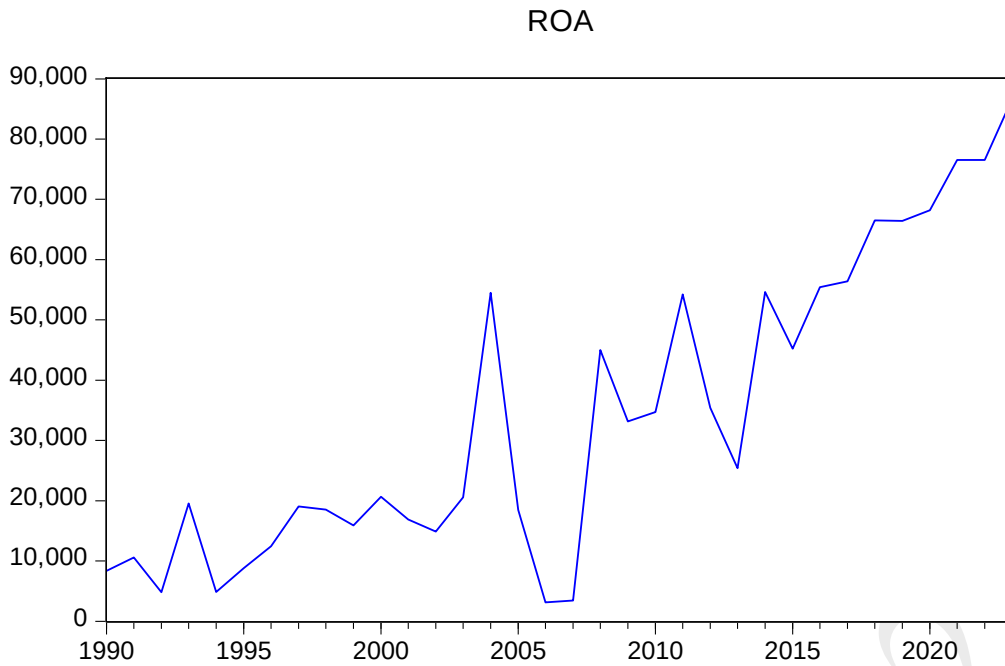


Figure 4.2: Return on asset (ROA)

Figure 4.2 reveals the trend analysis of Return on asset (ROA). The ROA recorded the minimum value in the year 2006 and the highest value in the year 2023. An upward trend implies increase in Return on asset (ROA) of the commercial banks which can boost the banks' performance over a period of time, while a downward trend suggests drop in return on asset (ROA) which may lead to contraction of the banks' performance. Both the upward and downward trends could be as a result of Government policies reform by the CBN and federal Government aimed at addressing macroeconomic issues like high inflation rate, excess money supply and high unemployment rate among others.

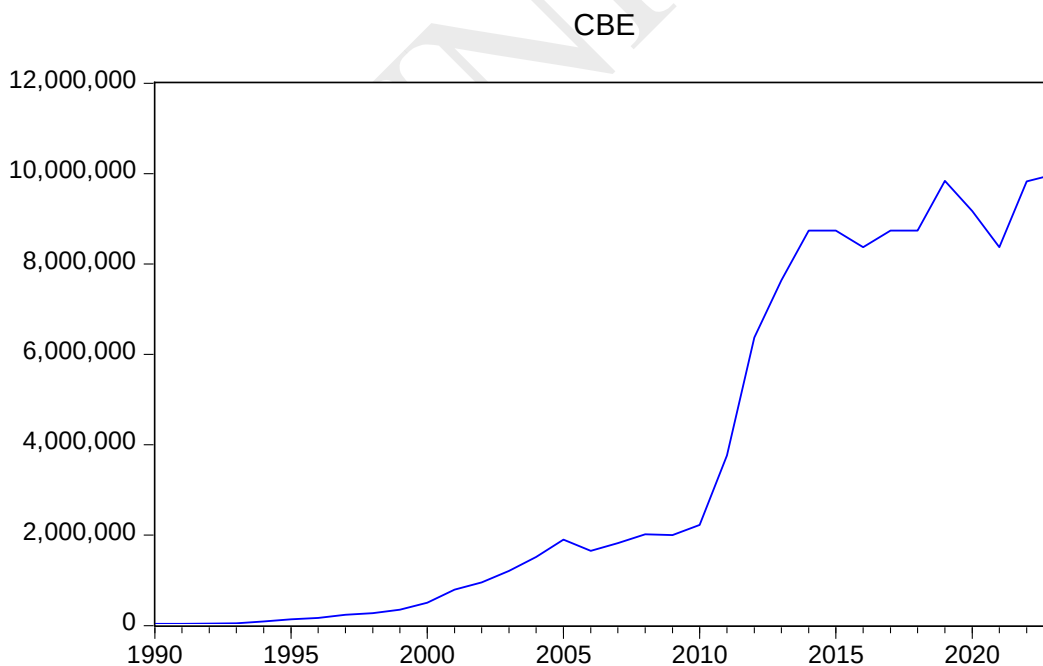


Figure 4.3 Commercial Banks' equity (CBE)

Figure 4.3 reveals the trend analysis of Commercial Banks' equity (CBE). The CBE recorded the minimum value in the year 1990 and the highest value in the year 2023. In the graph, the line plot's vertical axis represents the Commercial Banks' equity (CBE) values in Billion naira, while the

horizontal axis represents time/year. An upward trend implies increase in Commercial Banks' equity (CBE) which may boost investors and customers' confidence, while a downward trend suggests a drop in Commercial Banks' equity (CBE) which may discourage investors and customers in terms of partnership with the Banks. Both the upward and downward trends could be as a result of directives or legal framework as well as ethical rules from the regulatory authorities such as security and exchange commission (SEC) and Central Bank of Nigeria (CBN) among others governing the commercial banks.

5.0 Data Analysis and Empirical Results

Table 5.1 presents the unit root test results of the variables examined in this study using Augmented Dickey Fuller techniques. The essence of the unit root test is to examine the stationarity properties of the variables of interest which guide in choosing the appropriate technique of analysis to avoid a misleading or spurious regression result.

Table 5.1: ADF Unit root test Results on Variables in specified model

Variable	ADF-Statistic	Critical value 1%	Critical value 5%	Critical value 10%	Oder of Integration	Interpretation
GDPGR	-3.736415	--3.646342	-2.954021	-2.615817	I(0)	Stationary at level
PIR	-8.344246	-3.653730	-2.957110	-2.617434	I(1)	Stationary at 1 st difference
ROA	-6.663365	-3.661661	-2.960411	-2.619160	I(1)	Stationary at 1 st difference
CBE	-3.818244	-3.653730	-2.957110	-2.617434	I(1)	Stationary at 1 st difference

Source: Authors' Computation, (2024)

Table 5.1 above shows the summary of the Augmented Dickey Unit root test result. It presents the level of integration of the variables. The individual unit root test is computed for stationarity using the Nigerian data from 1990-2023. The table indicates that these variables (PIR, ROA and, CBE) were stationary at first difference, while GDPGR is stationary at level.

5.1 Ordinary Least Square (OLS) Estimation

Tables 5.2: The regression output using E-Views software is given below as:

Dependent Variable: GDPGR		
Method: Least Squares		

Date: 07/04/24	Time: 17:38			
Sample: 1990 2023				
Included observations: 34				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.212897	2.930056	0.072660	0.9426
PIR	0.042564	0.144593	0.294368	0.7706
ROA	-3.20E-05	5.04E-05	-0.634435	0.5309
CBE	-7.90E-07	3.44E-07	-2.293626	0.0295
R-squared	0.549435	Mean dependent var		4.248203
Adjusted R-squared	0.513262	S.D. dependent var		3.908487
S.E. of regression	3.422410	Akaike info criterion		5.457352
Sum squared resid	327.9610	Schwarz criterion		5.726710
Log likelihood	-86.77499	Hannan-Quinn criter.		5.549211
F-statistic	3.007899	Durbin-Watson stat		1.659681
Prob(F-statistic)	0.026925			

Source: Authors' Computation, (2024)

The estimated regression model is:

$$\text{GDPGR} = 0.212897 + 0.042564\text{PIR} - 3.20\text{E-}05\text{ROA} - 7.90\text{E-}07\text{CBE}$$

$$\text{S.E.} = (2.930056) \quad (0.144593) \quad (5.04\text{E-}05) \quad (3.44\text{E-}07)$$

$$t = (0.072660) \quad (0.294368) \quad (-0.634435) \quad (-2.293626)$$

$$R^2 = 0.55 \quad \text{Adjusted } R^2 = 0.51 \quad N = 34$$

$$F = 3.0 \quad \text{D.W(d)} = 1.66$$

5.2 Interpretation of Results Based on OLS Estimation

From the above result, the coefficient of the explanatory variables; Commercial Banks' profit Prime interest rate (PIR) is positive indicating that there is a positive relationship between these variables and the dependent variable (GDPGR). In other words, it implies that these variables impacted positively on the economic growth in Nigeria, while Return on asset (ROA) and Commercial Banks' equity (CBE) with negative coefficients impacted negatively on the economic growth in Nigeria during the period under review. The result of (R^2) shows that about 55% of total variations in the dependent variable (GDPGR) were explained by the changes in explanatory variables of the estimated model, while 45% is unexplained. This implies that the estimated model has a good fit. Similarly, the adjusted coefficient of determination (R^2) also shows that the estimated model has a good fit (i.e., Adjusted $R^2 = 0.51$). This suggests that 51% of the total change in the dependent (GDPGR) can be attributed to the independent variables (PIR, ROA, and CBE).

Also, the F-statistic which explain the summary of the model (i.e. $F=3.0$) and P-value of 0.03 indicates that the parameters of the estimated model are jointly or simultaneously statistically significant at 5 percent level. This further implies the estimated model is good for forecasting, predicting, policy formulation and analysis purposes. Furthermore, the Durbin Watson test for the presence of serial correlation between error term i.e. it tests whether adjacent residuals are correlated. This however varies between 0 and 4. The value of the Durbin-Watson (d) statistic (i.e., $d=1.66$), suggests the absence of autocorrelation in the estimated model. This is based on the decision rule which state that Durbin-Watson value of the estimated model is close to 2. Thus, the forecasting power of the estimated model is more reliable in the absence of autocorrelation supported by the good explanatory power of the explanatory variables as evidenced by the high value of R^2 . In a similar vein, from the above regression result, the probability values of the parameters/variables showed that Commercial Banks profitability

measure by Commercial Banks' equity (CBE) were statistically significant at 5% level, while Prime interest rate (PIR) and return on asset (ROA) are statistically insignificant 5% level. This is based on the decision rule which states that the variables/parameters under study are said to be statistically significant at 5 percent if their probability values are less than 0.05, otherwise, the variables/parameters are statistically insignificant.

6.0 Conclusion

In line with the above findings, the study concludes that the independent variables namely, return on asset, Commercial Banks' equity and Prime interest rate to a large extent influences Gross Domestic Product growth rate (GDPGR) in Nigeria. Also, the empirical results show that the independent variables under study have the potential to significantly contribute to the economic growth in Nigeria. Therefore, it is expected that Government, policy makers, key players in commercial banks and apex bank as well as other relevant stakeholders needs to adopt and implement appropriate monetary and fiscal policies aimed at boosting the commercial banks operation in Nigeria.

6.1 Contribution to Knowledge

This study contributes uniquely to the existing body of knowledge in both banking and development economics by providing recent and empirically grounded evidence on how commercial bank profitability influences Nigeria's economic growth, covering an extended post-structural-reform period (1990–2023). Also, the study disaggregates bank profitability into Return on Assets (ROA), Commercial Bank Equity (CBE), and Prime Interest Rate (PIR) providing a multi-dimensional approach that captures both internal performance efficiency and external credit market conditions. This methodological nuance reveals that while equity capital and asset efficiency matter, their impacts on growth are not uniformly positive challenging the assumption that higher profitability always drives macroeconomic expansion.

6.2 Policy Recommendations

Based on the findings, the following recommendations are made:

Commercial banks CEOs, and other key stakeholders in the banking sector should adopt policies geared towards increasing the return on asset so that its impact on the economic growth in Nigeria will be positive and significant. Secondly, the Government, CBN, policy makers and other relevant stakeholders should embark on policy measures aimed at reducing the high prime interest rate to boost investors' ability to borrow fund. Lastly, the Government, policy makers and other key stakeholders should endeavour to strengthen the capital market institutional framework through the regulatory agencies in that such measure will boost the commercial banks' equity.

References

- [1] Adegboye, A. C., Aluko, O. A., & Ogunleye, O. S. (2019). Bank profitability and economic growth: Evidence from Nigeria. *Journal of Banking and Finance*, 45 (3), 245-263.
- [2] Akinlo, A. E., & Egbetunde, T. (2010). Financial development and economic growth: The experience of 10 Sub-Saharan African countries revisited. *The Review of Finance and Banking*, 2 (1), 17-28.
- [3] Akintoye, I. R., & Salisu, A. A. (2019). Impact of capital adequacy on economic growth in Nigeria. *Journal of Finance and Bank Management*, 7(2), 56-68.

- [4] Aliu, T. I. (2022). Effectiveness of Monetary Policy in Stimulating Economic Growth in Nigeria. *International Journal of Research in Social Science and Humanities*, 3(2), 34-42. <https://doi.org/10.47505/IJRSS.2022.V3.2.5>
- [5] Ammar Abid, A., Gull, A. A., Hussain, N., & Nguyen, D. K. (2021). Risk governance and bank risk-taking behavior: Evidence from Asian banks. *Journal of International Financial Markets, Institutions and Money*, 75, <https://doi.org/10.1016/j.intfin.2021.101466>
- [6] Ayo, M. B. (2021). Determinants of banking sector performance in Nigeria. *Global Journal of Management and Business Research*, 15(6): 20 - 45.
- [7] Berger, A. N., & Bouwman, C. H. S. (2013). How does capital affect bank performance during financial crises? *Journal of Financial Economics*, 109 (1), 146-176.
- [8] Demirgüç-Kunt, A., & Levine, R. (2008). Finance, financial sector policies, and long-run growth. *World Bank Research Observer*, 23 (2), 261-270.
- [9] Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The Review of Economic Studies*, 51(3), 393-414.
- [10] Diamond, D. W., & Rajan, R. G. (2000). A theory of bank capital. *The Journal of Finance*, 55(6), 2431-2465.
- [11] Eze E. M. (2023). The impact of non-performing loans and bank performance in Nigeria. *International Journal of Humanities and Social Science Invention*, 5(4): 1-5.
- [12] Goldsmith, R. W. (1969). *Financial Structure and Development*. Yale University Press.
- [13] King, R. G. & Levine, R. (1993). Finance and Growth: Shumpeter Might be Right. *Quarterly Journal of Economics*, 103(5), 717 – 738.
- [14] Kozlov, R. (2023). The Effect of Interest Rate Changes on Consumption: An Age Structured Approach. *Economies* 2023, 11(1),23; <https://doi.org/10.3390/economies11010023>
- [15] Levine, R. (1997). Financial development and economic growth: Views and agenda. *Journal of Economic Literature*, 35(2), 688-726.
- [16] Nair, A. R., & Anand, B. (2020). Monetary policy and financial stability: Should central bank lean against the wind? *Central Bank Review* 20 (3),133-142.
- [17] Nwaeze, C., Onyekwelu, U. L., & Nwaeze, E. (2014). Impact of bank profitability on economic growth in Nigeria: Evidence from vector error correction model. *International Journal of Business and Management*, 9(5), 133-141.
- [18] Nwanne, T. F. I. (2021). Implications of Financial Intermediation Cost on Economic Growth in Nigeria. *International Journal of Small Business and Entrepreneurship Research*, (5), 23-32.
- [19] Okoye, L. U., Nwisiennyi, U., & Nwadike, C. (2021). Institutional quality and economic performance: Evidence from Sub-Saharan Africa. *Journal of Institutional Economics*, 17(3), 1-25.
- [20] Olajide, O.S., Aderonke, A.B., & Ajike, O.K. (2023). Exchange rate, interest rate and economic development in Nigeria (1980-2020). *Socio Economic Challenges*, 7(2), 130-141. [https://doi.org/10.21272/sec.7\(2\).130-141](https://doi.org/10.21272/sec.7(2).130-141).
- [21] Rose, K.O. (2012). Financial market structure and economic growth: Evidence from Nigeria data. *Asian Economic and Financial Review*, 3(1), 75-98.
- [22] Santos, A. M., Cincera, M., & Giovanni Cerulli, G. (2024). Sources of financing: Which ones are more effective in innovation–growth linkage? *Economic Systems* 48,(2), <https://doi.org/10.1016/j.ecosys.2023.101177>
- [23] World Bank, (2020). Rising to the Challenge: Nigeria's COVID Response. <https://documents1.worldbank.org/curated/en/152691607607461391/pdf/Rising-to-the-Challenge-Nigerias-COVID-Response.pdf>