JORMASS
Volume 11, Issue 1, June 2025
JOURNAL OF RESEARCH IN MANAGEMENT AND SOCIAL SCIENCES
DOI: To be assigned

Assessing The Impact of Staff Training and Development on Financial Performance of Commercial Banks in Nigeria

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ABSTRACT:
This study examines the impact of staff training and development on the performance of commercial banks in Nigeria from 1981-2023. The researchers utilized an unbalanced panel dataset to analyze financial reports and internal records of seven selected banks (First Bank, Union Bank, United Bank for Africa (UBA), WEMA Bank, Access Bank Plc, Zenith Bank, and GTBank). The study employed a panel regression approach, utilizing Pooled Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE) models. Breusch-Pagan Lagrange Multiplier (BP-LM) test was conducted to determine whether the Fixed Effects or Random Effects model was more suitable for the analysis. Findings revealed that the level of education, financial education, and several training programmes significantly and positively influenced return on assets. On the other hand, non-performing loans significantly and negatively impacted return on assets. The study concludes that staff training and development significantly influenced the financial performance of commercial banks in Nigeria. The study recommends that commercial banks should collaborate with regulatory authorities, universities, and international training institutions to design programmes, certification courses, and workshops addressing Nigeria's-specific challenges. Regulatory authorities should enforce competency standards and support continuous professional development to ensure a resilient and competitive banking system. Investment in financial education and training programmes which focuses on credit risk assessment, customer services management, fraud prevention, and fintech adoption is imperative. Commercial banks should increase staff training and development in cyber-security measures, artificial intelligence applications, and mobile banking operations to cultivate a competent workforce capable of adapting to industry dynamics to enhance financial performance.

KEYWORDS: *Staff training and development, financial performance, commercial banks, human resources management, Nigeria.*

MANUSCRIPT TYPE:
Research Paper

PUBLICATION DETAILS:
Received: XX Jan. 2025
Revised: XX Feb, XX April 2025
Accepted: XX June. 2025

Publication College of Management Sciences, Michael Okpara University of Agriculture, Umudike Nigeria

INTRODUCTION

Businesses fail when the people to whom duties are assigned lack the skills and knowledge to carry out such responsibilities (Sitinjak et al., 2023). Managing personal, corporate, or organizational finances requires good education, training, skills, and expertise. Nigeria presents a particularly disturbing scenario with Bank failures since the 1930s. From the early days of banking in Nigeria till date, the nation has recorded many bank failures.

Between 1930 and 1960, 17 banks failed or were liquidated in Nigeria, while 36 banks suffered the same fate between 1994 and 2003 (Ogubunka, 2003). Moreover, Nigeria recorded a sharp reduction in commercial

banks when the number dropped from 89 to 24 following the Banking Consolidation process of 2005 (Ugwunta et al., 2012). Iwedi (2017) posits that the increasing nature of Bank failures experienced in the Nigerian banking sector is reflected in the number of failed banks, level of non-performing credits, high incidence of fraud, loss of depositors' funds, and the general impact on the economy. The various failures came after the central bank took some steps to implement certain regulatory guidelines or actions to strengthen the financial system. The recent failures (between 2008 and 2011) came on the heels of joint Central Bank of Nigeria (CBN)/Nigerian Deposit Insurance Corporation (NDIC) Special Investigations into the books of the banks operating in the country at that date following the Economic Meltdown and the Nigerian Banking Consolidation. The report of the examination of the books revealed that the banks were technically insolvent on account of Capital, poor Credit/ Risk Management, Liquidity, and lack of Corporate Governance (Sanusi, 2012).

As supervisors and regulators, the Central Bank of Nigeria (CBN) and the Nigerian Deposit Insurance Corporation (NDIC) have faced great tasks in managing information and apprehensions of the Nigerian banking sector. The global financial crisis, which ravaged the financial resources of individuals, organizations, and governments between 2008 and 2009, further exposed the inadequacy of skills and the dearth of executive capacity in the banking industry. Many infractions regarding funds management, credit administration, customer care, fraud, basic banking operations, etc., relate to ignorance and non-observation of basic rules, laws, procedures, and standard techniques in their operations.

The affected banks sometimes lost money through fraud, credit defaults, fines, penalties, and legal fees (Chartered Institute of Bankers of Nigeria-CIBN,2016). Evidence shows that bank workers' skills gaps negatively impact their practices and operations. These gaps resulted from the fact that the banking industry's training and accreditation/ certification were non-existent, in addition to not having basic standards for bank workers and practitioners (CIBN 2013). It has also been reported that most cases that the Bankers' Committee handled exposed the weakness in the knowledge and competencies of managers and operators in Nigerian banks.

Notwithstanding the number of studies on the performance of Commercial Banks by scholars, there is still limited literature linking staff competency and its impact on the financial performance of commercial banks in Nigeria (Adefe et al., 2019). Most studies on the impact of staff training and development on financial performance mostly gathered data from the year 1990, neglecting data recorded before the period. This study fills the gap and collects data from 1981 to 2023. This study contributes to minimizing the gaps in the literature and thereby establishes the basis for understanding some aspects of the impact of staff training and development on the financial performance of commercial banks in Nigeria.

LITERATURE REVIEW

Concept of Competency

The banking business faces the challenge of engaging employees with the requisite training and expertise as they seek to improve their performance and results. There is a high degree of relationship between a performing institution and the level of expertise operating in the said institution. The performance of every organization is determined and most positively related to the degree of performance of its managers and other operatives. According to Megginson (2002), financial managers apply their theoretical training to design practical solutions to real-world business problems, achieving the highest financial returns at the lowest risk. Hassan and Oyedele (2022) state that financial performance is the process of measuring the achievements of a firm's policies and activities in monetary terms and the degree of fitness about how efficiently the assets have been used to generate profits for wealth maximization and satisfaction of the shareholders. Banks undergo regular and routine checks to ascertain their financial soundness level. This involves the periodic rendition of Returns, as required by the Supervisors and Regulators (CBN and NDIC). These returns and reports, relating to profitability, capital base, the nature of their credit portfolio, and the conditions of other assets and liabilities, are required monthly, quarterly, half-yearly, and yearly.

Relationship between staff training and financial performance

The success of any institution, especially the banking institution, depends largely on the competency of its management and staff in handling their Portfolio (cash/ funds management, credit administration, liquidity profiles, assets and liability management, capital adequacy, other investment and managerial functions). Many institutions have failed due to incompetence in the management of their resources (Megginson, 2002). Poor financial decisions are often attributed to low financial training and literacy levels among bank management and employees. Lack of financial literacy is a major factor affecting competency and performance. Also, it aggravates the problems of the banking sector, making financial crises more likely and harder to mitigate (Lusardi & Mitchell, 2023). There is a great relationship between staff competency and banking sector performance. These relationships center around the variables of this study (level of education,

level of financial education, and number of times the staff are exposed to continuous training) as well as their effect on the performance of capital adequacy, the growth rate of deposits, return on assets of commercial banks. These also directly link the volume of bank frauds, revenue turnover, and non-performing credits (Oyetoyan et al., 2021; Tamunosiki-Amadi & Simeon, 2024; Adefe et al., 2019).

Measuring the performance of a commercial bank in Nigeria involves evaluating its financial health, operational efficiency, and customer satisfaction. The basic information used for measuring the financial health of a commercial bank is obtainable from the financial statements and monthly, quarterly, and yearly returns of banks. In the banking industry, regulatory authorities use a common rating system called CAMELS to measure a bank's performance in terms of soundness or otherwise. According to Kagan (2023), CAMELS is a system of rating that bank supervisory authorities use internationally to determine the performance of financial institutions. It is represented by six acronyms: capital adequacy, asset quality, management capability, earnings, liquidity, and sensitivity.

Table 1: CAMEL Parameters, Rated Components and Weights

Parameter	Component	Weight (%)	Total Weight (%)
Capital	a. Capital/Risk Asset Ratio	15	
	b. Adjusted Capital Ratio	5	
	c. Capital Growth Rate	5	25
Asset Quality	a. Non-performing Risk Assets to Total Assets	15	
	b. Reserves for Losses to Non-performing Risk Assets	5	
	(c) Non-performing Risk Assets to Capital and Reserves	5	25
Management	a. CAEL (Capital, Assets, Earnings and Liquidity)	5	
	b. Compliance with Regulations	10	15
Earnings	a. Before Tax Profit to Total Assets	5	
	b. Total Expenses to total income	5	
	c. Net Interest Income to Total Earning Assets	5	
	d. Interest Expenses to Total Earning Assets	5	20
Liquidity	a. Liquidity Ratio	10	
	b. Net Loans and advances to Total Deposits	5	15
	Total		100

Source: Umoh (2016)

The examination that produces the results for the rating is carried out by the CBN and the NDIC, using periodic returns prepared by the banks (Monthly, quarterly, half-yearly, and annually). The performance ratings range from 1 to 5, with 1 as the best rating condition while 5 is the least/ worst scenario. The main aim of this appraisal method is to determine if any bank is having a problem and enable the regulators to restore the affected bank as quickly as possible to avoid a contagion effect on the entire system.

THEORETICAL FRAMEWORK

The major theory underpinning this study is human capital theory. The theory explains the critical impact of skills, knowledge, and capabilities on performance.

According to Breton (2014), this theory was developed by Theodore Schultz in 1960. There are three key elements in the theory, namely: i. Countries without much human capital cannot manage physical capital effectively; ii. Economic growth can only proceed if physical and human capital rises together. Human capital is the factor most likely to limit growth. This theory relates to the skills, knowledge, and capabilities that employees acquire that prepare them for successful workplace performance in the present and future. It is relatively new in financial studies. It states that companies are incentivized to seek productive human capital and always add to their existing employees' human capital. Human capital enhances productivity, which boosts profitability. The higher an organization's investment in its employees, the higher the chance of increased productivity and economic prosperity.

This theory aims to enhance the performance of people who work in any organization; hence, it aligns with the performance theory. This theory defines the major performance mechanisms, such as identity, ability to learn, knowledge acquired, and personal and fixed factors. The performance management theory is an important part of organizational behavior and human resource management as it helps businesses manage and motivate employees (Marshall et al., 2022). The components relate to knowledge, skills, identity,

context, personal, and fixed factors. Also called the goal-setting theory of motivation, the theory of performance relates to setting clear, specific, and challenging goals, which are more motivating than vague or easy goals.

METHODOLOGY

Sources of Data and Model Specification

The study employed unbalanced panel data obtained from the Annual Reports, Bulletin and Financial Statements of the Central Bank of Nigeria (CBN), Nigerian Deposit Insurance Corporation (NDIC), and National Bureau of Statistics as well as the internal records and the Annual Financial Statements and Reports of seven (7) selected Commercial Banks (First Bank, Union Bank, United Bank for Africa (UBA), WEMA Bank, Access Bank Plc, Zenith Bank, and GTBank).

Oyetoyan et al. (2021) adopted the model with some modifications. The model used by Oyetoyan et al. (2021) adopted a descriptive research design, and the study population included Management and Operational-level Employees of the 5 Commercial Banks listed on the Nigerian Securities Exchange. The analysis is based on the multiple regression equation.

$Y = \beta0+\beta1X1 +\beta2X2+ \beta3X3 + \varepsilon$ *eqn*. 1

Whereby:

Y = Financial Performance of Listed Banks; X1 = Financial literacy programs; X2 = Use of agents and representatives; X3 = Increased proliferation of ATMs and Mobile Services, β0 = Constant; ε= is the error term; β1- β3 = Coefficients of variables in the regression model.

In this study, Return on Assets is the proxy for the financial performance of Commercial Banks. At the same time, the General level of Education, Financial Education, Number of Training Programmes per year, Volume of Bank Fraud, Revenue Turnover of Commercial Banks in Nigeria, and Non-Performing Loans were selected to adequately capture the training and competency needs of the banking sector. The model for this study is stated in its functional form in equation 3.2:

$Y= f(GLE, FED, NTP, VBF, RTO, NPL)$ *eqn*.2

This study determined the long-run relationship between variables as it enables the understanding that one affects the other. The study models are specified in equation 3.3:

$ROA=\alpha0+\alpha1GLE\ t+ \alpha2\ FED\ t+\alpha3NTP\ t+ \alpha4VBF\ t+ \alpha5RTO\ t + \alpha6NPL\ t + \varepsilon$ *eqn*. 3

β0, o, and δ0= Constant; 1- β6, α1- α6, and δ1- δ6= Co-efficient of independent variables; ε = Error term; a priori expectations: 1- β6, α1- α6, and δ1- δ6> 0; GLE= General Level of Education; FED=Financial Education; NTP=Number of Training Programmes; VBF= Volume of Bank Fraud; RTO=Revenue Turnover; NPL= Non-Performing Loans.

Table 2: Description of Research Model Variables

Variables	Measurement	Notation	Data Source
Return on Assets (ROA)	Net income over total assets (%)	ROA	Banks' Annual Financial Reports
Level of Education of staff	Average education attainment qualification of staff (%)	GLE	Banks' Recruitment Records
Financial Education of Bank Staff	Average financial literacy rate of staff (%)	FED	Banks' Appraisal Records
Training Programmes organized by the bank per annum	Number of training programmes organized by the bank per year (count)	NTP	Banks' Training Record
Volume of Bank Fraud	Total fraud and forgery-related losses (Billion Naira)	VBF	NDIC Annual Reports; Banks' Annual Financial Reports
Revenue Turnover	Annual revenue (Billion Naira)	RTO	Banks' Annual Financial Reports
Non-Performing Loans	Percentage of loans classified as non-performing	NPL	Banks' Annual Financial Reports
Observations.	270		

Source: Authors compilation, 2025

Methods of Data Analysis

The study employed the Pooled Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE) models. Two diagnostic tests were performed to select the most appropriate model. The Breusch-Pagan Lagrange Multiplier (BP-LM) test was conducted to decide between the Pooled OLS and the Fixed/Random

Effects models. In contrast, the Hausman test was used to determine whether the Fixed Effects or Random Effects model was more suitable for the analysis. To select the most appropriate model, diagnostic tests were performed, including tests for multicollinearity, heteroskedasticity, normality, and autocorrelation, using Tolerance values, Variance Inflation Factor (VIF), Durbin-Watson statistics, and Breusch-Pagan-Godfrey test statistics. Descriptive statistics such as mean, maximum, minimum, range, standard deviation, and variances are compared to the capital adequacy, deposit growth rate, and return on assets of commercial banks in Nigeria from 1981 to 2023.

RESULTS AND DISCUSSIONS

Descriptive statistics

Table 3 below relates to the summary of the macroeconomic variables obtained from the seven sampled commercial banks. Summary statistics provide a detailed interpretation of the metrics used in this study in Nigerian banking.

Table 3: Summary statistics of the macroeconomic variables obtained from Commercial Banks in Nigeria

Statistic	ROA	GLE	FED	NTP	VBF	RTO	NPL
Mean	2.33	77.80	69.28	13.01	316.42	168.35	6.09
Median	2.00	80.85	71.07	12.00	229.68	45.90	4.40
Maximum	19.01	99.90	93.20	24.00	6150.00	2591.40	75.73
Minimum	-8.90	50.50	40.20	3.00	3.53	0.79	0.80
Std. Dev.	2.10	14.35	14.98	5.60	455.20	319.17	7.61
Skewness	0.37	-0.37	-0.37	0.38	3.39	2.20	0.20
Kurtosis	1.93	1.90	1.95	2.01	4.15	3.57	1.56
Jarque-Bera	2.14	1.96	1.84	1.74	11.21	8.59	2.21
Probability	0.32	0.70	0.67	0.25	0.00	0.01	0.35
Sum	629.54	21,006.94	18,706.38	3,512	85,434.06	45,286.95	1,638
Observ.	270	270	270	270	270	270	270

Source: Authors' computation

The mean ROA of 2.33%, as shown in Table 3, indicates moderate profitability levels over the observed period. This suggests that Nigerian banks have managed to maintain positive returns on their investments despite external economic pressures, regulatory adjustments, and market competition. A standard deviation of 2.10% signifies relatively low variability in profitability among the sampled banks, suggesting that the banking sector maintained a degree of uniformity in its financial performance. The skewness of 0.37 indicates a slight positive skew, meaning that a few banks achieved higher-than-average returns. At the same time, the kurtosis value of 1.93 suggests a near-normal distribution. The Jarque-Bera probability of 0.32 confirms the statistical reliability of the data, indicating no significant departures from normality.

The General Level of Education (GLE) of bank staff has a mean value of 77.80%, indicating a predominantly well-educated workforce, reflecting the industry's emphasis on recruiting and retaining qualified personnel. Financial Education (FED) had a mean value of 69.28%, indicating that Nigerian banks have invested significantly in financial education, equipping staff with the necessary expertise to navigate complex banking operations. The Number of Training Programmes (NTP) shows a mean value of 13.01, indicating that Nigerian banks conducted an average of 13 training programs annually during the study period, signifying a moderate commitment to employee development.

The Volume of Bank Fraud (VBF), with a mean value of ₦316.42 million, indicates significant financial losses incurred due to fraudulent activities. Revenue Turnover (RTO) shows a mean value of ₦168.35 billion, which signifies robust revenue generation, underscoring the significant role of Nigerian banks in the economy. Non-performing loans (NPL) had a mean value of 6.09%, indicating a moderate level of non-performing assets across Nigerian commercial banks. This suggests that while credit risk was generally well-managed, notable loan defaults required attention.

Panel Unit Root Test

Table 4 presents the results of the panel unit root test conducted using the Levin, Lin, and Chu (LLC) methodology.

Table 4 Unit Root Test (Levin, Lin and Chu)

Variables	Level	Order of Integration
LNROA	-2.920**	I(0)
LNGLE	2.988**	I(0)
LNFED	2.915**	I(0)
LNNTP	-3.604**	I(0)
LNVBF	3.816**	I(0)
LNRTO	4.623**	I(0)
LNNPL	-3.666**	I(0)

Source: Authors computation 2025

Asterisk ** signifies 5% levels of significance. LN = Natural logarithm.

The results indicate that all variables, including LNROA, LNGLE, LNFED, LNNTP, LNVBF, LNRTO, and LNNPL, are stationary at level I(0), as evidenced by significant test statistics at 5% levels.

Test for Normality

The Shapiro-Wilk test was applied to each variable used in the analysis and to the pooled ordinary least squares regression residuals derived from the three models used to test the study's hypotheses. The Shapiro-Wilk test offers test statistics (W), where values approaching 1 indicate that the data will likely follow a normal distribution. The Shapiro-Wilk test is particularly sensitive to deviations in skewness and kurtosis in smaller sample sizes (n < 2000) (Hatem et al., 2022). This sensitivity makes it a preferred choice for small to moderate datasets. The p-value associated with the Shapiro-Wilk test is a critical indicator of normality.

The results of the normality assessments are presented in Table 5.

Table 5: Shapiro-Wilk's Test of normality for the non-logged and logged variables used in the stud

	Non-logged variables			**Logged variables**		
Variables	Statistic	df	Sig.	Statistic	df	Sig.
Return on Assets (%)	0.654	270	0.000	0.880	270	0.061
General Level of Education (%)	0.937	270	0.000	0.917	270	0.363
Financial Education (%)	0.940	270	0.000	0.915	270	0.119
Number of Training Programs per Year	0.946	270	0.000	0.964	270	0.632
Volume of Bank Fraud (Million Naira)	0.407	270	0.000	0.960	270	0.298
Revenue Turnover (Billion Naira)	0.519	270	0.000	0.980	270	0.067
Non-Performing Loans (%)	0.471	270	0.000	0.975	270	0.077

Source: Authors' computation

The Shapiro-Wilk test results in Table 5 show that for the non-logged variables, all p-values are below 0.05, indicating significant deviations from normality. This suggests that the raw data for these dependent and independent variables are not normally distributed. However, the logarithmic transformation of the variables leads to substantial improvements in their normality. The p-values of both the dependent and independent variables were greater than the probability of 0.05, signifying a shift to normal distribution.

The histogram plot of the distribution of Return on Assets (ROA) of deposit money banks in Nigeria between 1981 and 2023 is presented in Figure 1.

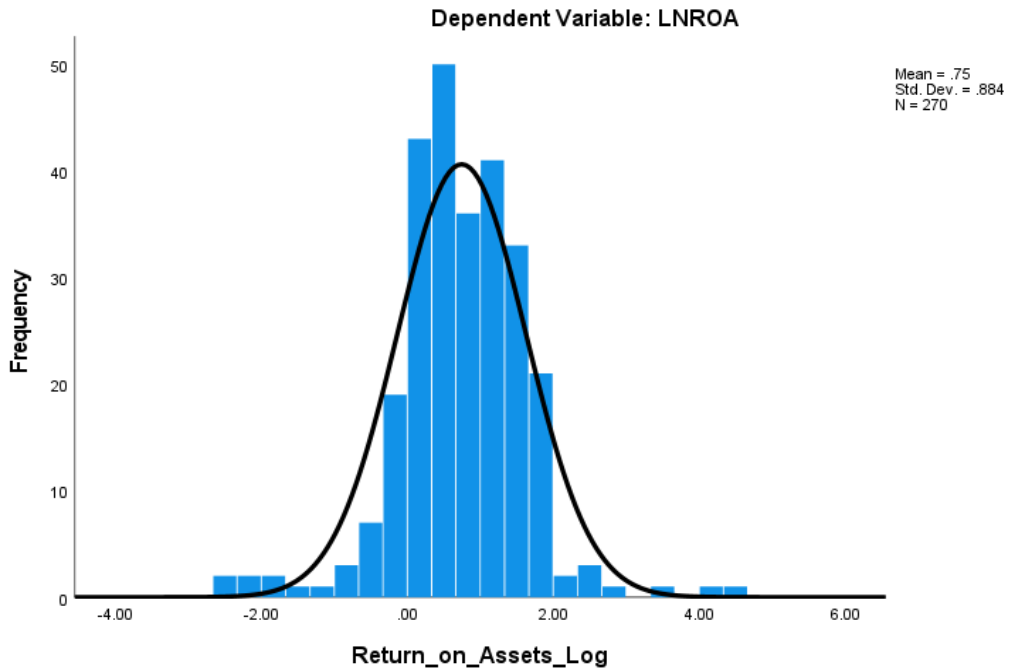

Figure 1: Histogram of Return on Assets (ROA) of Commercial Banks in Nigeria
Source: Authors' computation

Figure 1 shows that the curve cut across almost all the histogram bars, signifying that the observed data are normal after the transformation of the dataset. The plot of the standardized residuals obtained from the pooled ordinary least squares regression of the determinants of ROA is presented in Figure 2. Figure 1 shows that the result of the normality tests for all the residuals obtained from the OLS linear regression of the determinants of Return on Assets (ROA) of commercial banks in Nigeria are normal. The curve cut across all the histogram bars ranging from negative to positive values, signifying that the residuals are perfectly normal.

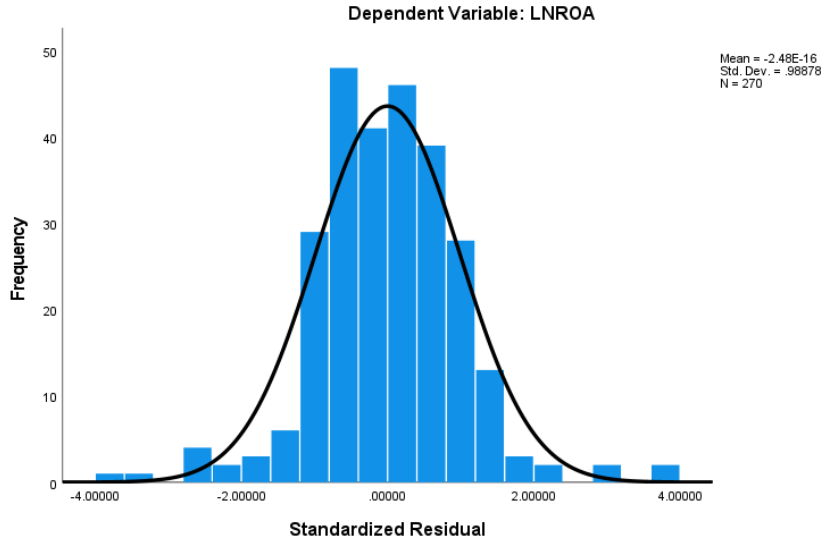

Figure 2: Histogram of Return on Assets (ROA) of Commercial Banks in Nigeria
Source: Authors' computation

The P-P (Probability-Probability) (P-value) of many standardized regression residuals are presented in Figure 2. The Normal P-P Plot of Regression Standardized Residuals assesses the goodness-of-fit for the regression model by comparing the observed cumulative probabilities (X-axis) with the expected cumulative probabilities (Y-axis). Figure 2 shows that the standardized residuals are normally distributed, as evidenced by the plot's alignment of points along the diagonal reference line.

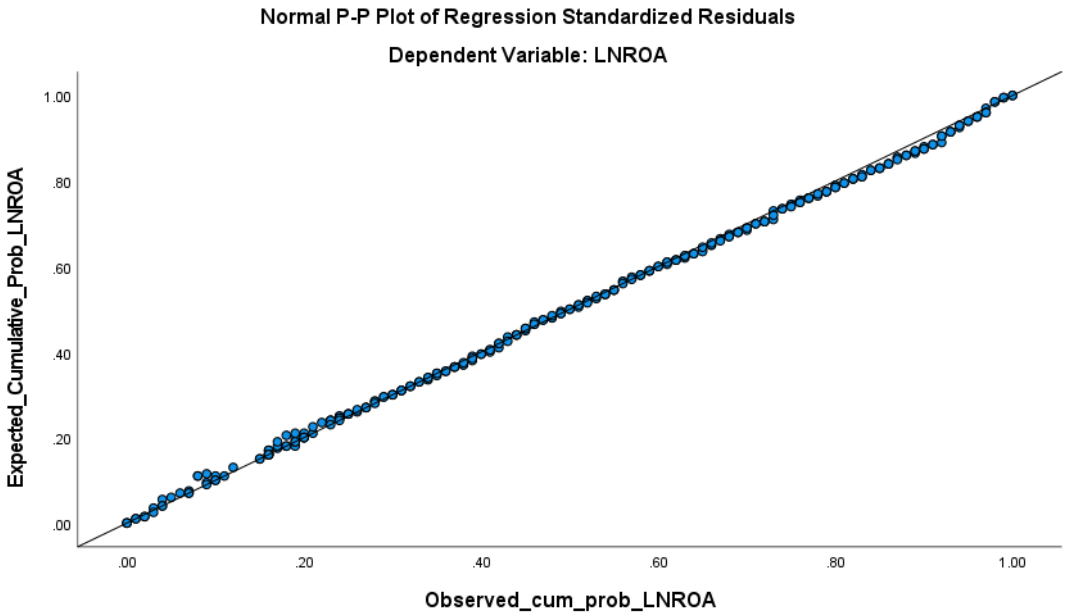

Figure 3: Observed and expected cumulative probabilities for the Return on Assets (ROA) of Commercial Banks in Nigeria
Source: Authors' computation

Multicollinearity among the independent variables was tested using the Variance Inflation Factor (VIF) and correlation matrix. This analysis aims to ascertain whether correlations exist among the independent variables that could distort the study's findings. The results of the Variance Inflation Factor (VIF) analysis, centered for precision, and its inverse (also called tolerance level) are presented in Table 5. By rule of thumb, any variable whose VIF is greater than 10 is highly collinear and vice-versa (Wooldridge, 2019) opines that the closer the value of I/VIF to zero, the greater the degree of multicollinearity while the closer the value of I/VIF to one, the more tendency they do not suffer multicollinearity problem.

Test for Linearity

Linear regression assumes that the relationship between independent and dependent variables is linear, and a correlation matrix serves as an initial diagnostic tool to assess this assumption, as presented in Table 5.

Table 5: Correlation matrix

Correlation	LNGLE	LNFED	LNNTP	LNVBF	LNRTO	LNNPL
LNGLE	1					
LNFED	0.071	1				
LNNTP	0.090	0.072	1			
LNVBF	-0.125*	-0.082*	0.154*	1		
LNRTO	0.151*	0.129*	0.093	0.280**	1	
LNNPL	-0.009	0.161**	0.002	-0.055	0.147*	1

Source: Authors' computation using E-Views 13, 2025 Asterisk **and * signifies 1% and 5% levels of significance.

The table presents the correlation coefficients between all pairs of dependent and independent variables, with asterisks representing the significance levels (1% or 5%). Analyzing the relationships between variables reveals moderate to strong correlations, ranging from -0.70 to 0.82. All coefficients are statistically significant at the 1% or 5% levels, indicating meaningful associations.

Table 6: Variance inflation factor results for multicollinearity diagnostic

	LNROA	
Variable	VIF	1/VIF
GLE	1.0377	0.9637
FED	1.0587	0.9446
NTP	1.0346	0.9666
VBF	1.1235	0.8901
RTO	1.1564	0.8648
NPL	1.0673	0.9369

Source: Authors' computation using E-Views 13, 2025

The result in Table 6 shows that all the variables have centered VIF that are less than 10, implying they are not collinear. This result strongly suggests that multicollinearity is not a substantive concern in this study, ensuring the stability and interpretability of the regression coefficients. The centered VIF and its tolerance values reinforce the reliability of the model's predictive power by confirming the absence of collinearity issues that could bias the results or inflate standard errors.

Variance Inflation Factor (VIF) analysis, centered for precision, and its inverse (also called tolerance level) are presented in Table 6. By rule of thumb, any variable whose VIF is greater than 10 is highly collinear and vice-versa (Wooldridge, 2019) opines that the closer the value of I/VIF to zero, the greater the degree of multicollinearity while the closer the value of I/VIF to one, the more tendency they do not suffer multicollinearity problem.

Durbin-Watson statistics have been adopted in this study to test for autocorrelation's presence or otherwise, denoted by d. The summary of the Durbin-Watson statistics obtained from the pooled ordinary least squares regression is presented in Table 7.

Table 7: Durbin-Watson statistics results for autocorrelation diagnostic

S/N	Models	*d*-Statistic	*d*-Critical (d_L– d_U) @5% level of sig.	Autocorrelation Conclusion
1.	LNROA	1.864	1.716 -1.845	No autocorrelation

Source: Authors' computation

With a sample size of 270 and six independent variables (k = 6), the critical values of DW at a 5% significance level are dL=1.716 and dU =1.845. The Durbin-Watson statistic of 1.864 also exceeds the upper critical value. This finding implies that there is no evidence of autocorrelation in this model.

Heteroskedasticity indicates that the variation in residuals or error terms is inconsistent, which could impact the interpretation of the beta coefficients, the coefficient of determination (R^2), and the F-statistic in the study. This study employed the Breusch-Pagan-Godfrey test (F-statistic) to assess the presence of heteroskedasticity. A significant probability value at the 5% level provides strong evidence to reject the null hypothesis, suggesting the presence of heteroskedasticity. Table 8 summarizes the heteroskedasticity test results.

Table 8: Breusch-Pagan-Godfrey Heteroskedasticity Test

Parameters	LNROA
F-statistic	1.7875
Obs*R-squared	25.4669
Scaled explained SS	1.3976
Prob. F(6,268)	0.2197
Prob. Chi-Square (6)	0.2753
Prob. Chi-Square (6)	1.0000
Heteroskedasticity Conclusion	Absence of Heteroskedasticity

Source: Authors' computation using E-Views 13, 2025

Table 4.8 presents the results of the Breusch-Pagan-Godfrey heteroskedasticity test for the LNROA. The F-statistics and associated probability values (e.g., Prob. F(6,268)) exceed the 5% significance threshold, indicating a failure to reject the null hypothesis of constant variance. Similarly, the Prob. Chi-Square (6) values for the Obs*R-squared and Scaled Explained SS tests are consistently non-significant, further supporting the conclusion of homoscedasticity. These results confirm the absence of heteroskedasticity in all

three models, ensuring the reliability of the estimated coefficients and statistical inferences drawn from the regression analyses.
To determine the most appropriate estimation method, the Breusch-Pagan Lagrange Multiplier (BP-LM) test was employed to decide between the Pooled OLS model and the Random or Fixed Effects model. The result of the BP-LM test is presented in Table 9.

Table 9: Breusch-Pagan Lagrange Multiplier (BP-LM) test

	LNROA	
Test	Statistic	Prob.
Breusch-Pagan LM	54.563	0.0012

Source: Authors' computation using E-Views 13, 2025

A Chi-square statistic of 54.563 with a p-value of 0.0012 is observed, again rejecting the null hypothesis and confirming the inadequacy of the Pooled OLS model for this specification. Consequently, the study conducts the Hausman test to determine the more appropriate choice between the fixed and random effects models.

Hausman Specification Test
To decide whether to adopt the fixed effects model (FEM) or the random effects model (REM), the Hausman specification test was carried out to select the preferred model. It tests whether the unique errors (term error) correlate with the regressors (Ibitomi & Micah-Elton, 2022). The results of the Hausman test are presented in Table 10.

Table 10: Results of correlated random effects-Hausman test

	LNROA Chi-Sq.		
Test Summary	**Statistic**	**d.f.**	**Prob.**
Cross-section random	4.333	6	0.6942

Source: Authors' computation using E-Views 13, 2025

Table 10 presents the results of the correlated random effects test, revealing a chi-square statistic of 4.333 with a p-value of 0.6942. This outcome highlights that the variations in return on assets of commercial banks are more accurately attributed to random effects rather than fixed factors, ensuring that the random effects estimates provide a consistent and robust explanation of the data.

Regression Results
The regression results are presented in Table 11.

Table 11: REM result of the impact of Staff competency on the return on assets of Commercial Banks

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-1.2611	1.0055	-1.2543	0.2109
LNGLE	0.1515	0.0536	2.8259***	0.0026
LNFED	0.4886	0.1148	4.2546***	0.0000
LNNTP	0.1786	0.0775	2.3056**	0.0219
LNVBF	-0.0289	0.0419	-0.6889	0.4915
LNRTO	0.0337	0.0228	1.4759	0.1412
LNNPL	-0.1547	0.0497	-3.1117***	0.0021
R-squared	0.8225			
Adjusted R-squared	0.8014			
F-statistic	43.427***			
Prob(F-statistic)	0.0000			
Durbin-Watson stat	1.8639			

Source: Authors computation 2025
*** and ** signifies 1% and 5% levels of significance.

Financial education (FED) exhibits the strongest positive effect on ROA, with a coefficient of 0.4886 (p = 0.0000). This indicates that a 1% increase in financial education among bank staff results in approximately a 0.49% improvement in return on assets, holding other factors constant. On the other hand, the volume of bank fraud (VBF) has a negative coefficient of -0.0289 (p = 0.4915), indicating a weak and statistically

insignificant impact on ROA. The model demonstrates strong explanatory power, with an R-squared value of 0.8225, indicating that the independent variables collectively explain approximately 82% of the variation in ROA.

The adjusted R-squared of 0.8014, close to the R-squared value, confirms the robustness of the model and the relevance of the selected variables. The F-statistic of 43.427 ($p = 0.0000$) confirms the overall significance of the model, indicating that the independent variables jointly explain the variations in return on assets. Durbin-Watson statistic of 1.8639 suggests no significant autocorrelation issues in the residuals, affirming the reliability of the regression estimates.

Discussion

The study regression results reveal a positive and significant impact of LNGLE on LNROA, with a coefficient of 0.1515 ($p = 0.0026$). This finding indicates the critical role of staff education in enhancing the financial performance of commercial banks. The significance of LNGLE suggests that bank staff's educational qualifications directly influence banks' operational efficiency and profitability. The positive impact of LNGLE on LNROA aligns with human capital theory, which posits that investments in education and training enhance individual productivity and organizational performance. In the banking sector, where precision, analytical skills, and strategic thinking are paramount, the educational attainment of staff is a critical determinant of success. The findings from this study corroborate prior empirical evidence from Adesina and Kolawole (2022), whose study found that staff education levels were a significant predictor of return on assets, stressing the universality of this relationship across different banking environments. Similarly, the result is in tandem with Chukwu et al. (2021), who demonstrated that Nigerian banks with a higher proportion of degree-holding employees outperformed their peers regarding profitability and market share.

This study also revealed a positive and significant relationship between LNFED and LNROA, with a coefficient of 0.4886 ($p = 0.0000$). This underscores the pivotal role of financial education in enhancing the performance and profitability of banks. The findings from this study are consistent with prior research emphasizing the importance of financial education in the banking sector. Olawale and Ojo (2022) found that financial literacy among bank staff was a significant determinant of financial performance in West African banks, highlighting its cross-regional relevance. Similarly, Osuji and Eke (2021) demonstrated that Nigerian banks with robust financial education programs for their employees outperformed their peers regarding return on assets and shareholder value.

The study reveals a positive and significant relationship between the number of training programmes (LNNTP) and LNROA, with a coefficient of 0.2981 ($p = 0.0012$). This indicates that an increase in training programs per annum significantly enhances the performance and profitability of Nigerian commercial banks. Regular training enhances employees' technical competence, productivity, and ability to meet customer expectations. Adewale and Ogunniyi (2023) found that frequent staff training improved operational efficiency and service delivery in Nigerian banks, leading to higher profitability.

Training also fosters innovation by exposing employees to emerging trends and best practices in the industry. According to Olowe et al. (2022), Nigerian banks with regular staff training programs reported lower operational failures and regulatory infractions, enhancing financial performance. A negative and significant relationship existed between non-performing loans (LNNPL) and LNROA, with a coefficient of -0.4112 ($p = 0.0000$). This indicates that an increase in non-performing loans adversely affects the profitability of Nigerian banks. Non-performing loans represent a significant risk to bank performance as they reduce the funds available for productive lending and increase the likelihood of financial distress. The findings align with the credit risk theory, which emphasizes the negative impact of poor loan quality on bank performance. Furthermore, the negative relationship highlights the need for effective credit risk management practices in Nigerian banks. Similarly, the volume of bank funds (LNVBF) was insignificant in predicting LNROA, with a p-value of 0.3245. This suggests that the availability of bank funds alone does not directly impact profitability. The insignificance of LNVBF may be attributed to the inefficient allocation of resources or suboptimal utilization of available funds. While the volume of funds is a critical resource for banking operations, its impact on profitability is contingent on factors such as management efficiency, market conditions, and the quality of investment decisions. The number of transactions (LNTO) is also insignificant in predicting LNROA, with a p-value of 0.4123. This indicates that the frequency of transactions alone does not significantly impact bank profitability. The insignificance of LNTO may be due to the low value of individual transactions or the high operational costs associated with processing many small transactions. According to Eze and Nwankwo (2023), the profitability of transactions depends on their value and efficiency rather than their volume. Banks focusing on high-value transactions and optimizing their operational processes are more likely to achieve superior financial performance.

CONCLUSION

This study assesses staff competency and its impact on the financial performance of commercial banks in Nigeria from 1981 to 2023 using return on assets as a proxy for the financial performance of commercial banks and general level of education, financial education, number of training programmes per year, the volume of bank fraud, revenue turnover and non-performing loans as proxies for staff competency of commercial banks in Nigeria. An unbalanced panel dataset was utilized to analyze the data obtained from financial reports and internal records from seven selected commercial banks.

The study employed panel regression models such as the Pooled Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE) Models to assess the relationships between staff competency and commercial banks' financial performance metrics. Diagnostic tests such as the Breusch-Pagan Lagrange Multiplier test and the Hausman specification test guided model selection, confirming the suitability of the Random Effects Model (REM) for hypothesis testing. Correlation matrices were presented to examine linear relationships among variables, revealing significant associations between staff competency measures and the dependent variables. Multiple diagnostic tests, including checks for normality, multicollinearity, heteroskedasticity, and autocorrelation, confirmed the reliability of the regression results, ensuring the robustness of the findings.

The study found that staff competency metrics such as Financial Education (FED) and Number of Training Programmes positively influenced ROA, while Non-Performing Loans had adverse effects. Additionally, the General Level of Education positively affected ROA. Conversely, the Volume of Bank Fraud showed mixed results in ROA. Other insignificant variables included Revenue Turnover on ROA. The study concludes that staff competency is a critical determinant of the financial performance of commercial banks in Nigeria. Banks with a highly educated workforce, robust financial literacy initiatives, and consistent training programs are better equipped to maintain strong capital buffers, attract deposits, and achieve higher profitability.

Nigerian banks should commit to organizing at least quarterly professional training programs focused on critical areas such as credit risk assessment, fraud prevention, customer relationship management, and fintech adoption. Given the increasing reliance on digital platforms, training should also cover cyber-security measures, artificial intelligence applications, and mobile banking operations.

Nigerian Commercial Banks should prioritize financial education programs tailored to equip employees with cutting-edge skills in risk management, investment analysis, and financial technology. Collaborations with financial institutions, universities, and international training bodies such as the Chartered Institute of Bankers of Nigeria (CIBN), Financial Institutions Training Centre (FITC), or the International Finance Corporation (IFC) can help design certification courses and workshops that address Nigeria-specific challenges, such as currency instability, loan default risks, and regulatory complexities. Banks can foster long-term sustainability and profitability while meeting global banking standards by ensuring staff are well-versed in managing financial instruments and understanding market trends.

Nigerian banks should focus on recruiting individuals with strong academic qualifications, particularly in finance, economics, and data science. For existing employees, banks should sponsor advanced degrees and certifications in specialized areas like risk management, financial technology, and regulatory compliance. Education is especially critical in enabling staff to navigate Nigeria's dynamic and often unpredictable financial landscape, characterized by regulatory shifts and economic instability. Furthermore, staff education should include training on global banking practices to ensure Nigerian banks remain competitive internationally.

Regulatory authorities should mandate and incentivize commercial banks to implement robust financial education programs to improve staff proficiency and enforce policies for managing Non-Performing Loans and optimizing revenue turnover. Regulatory bodies should enforce mandatory adoption of advanced fraud detection technologies, such as artificial intelligence and machine learning, and rigorous staff training on fraud prevention.

Limitation of the Study

This study's weakness arose from the dearth of materials in this area of research and the difficulty in data collection, especially from the sampled commercial banks. It was difficult to access data on the level of education and financial education as well as the number of times the staff of commercial banks in Nigeria attended financial training. Moreover, the data collected/ sourced from the Central Bank of Nigeria, the Nigerian Deposit Insurance Corporation, and the National Bureau of Statistics were inadequate. However, the weakness was overcome by obtaining records from the archives/ internal records of the sampled seven (7) commercial banks.

It is recommended that records relating to financial education and staff competencies be kept in the domain of regulatory and supervisory institutions to facilitate easy access for future research.

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