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Business Efficiency and Earnings Quality of Commercial Banks in Nigeria

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Abstract

In the face of increasing concerns over the earnings quality of commercial banks in Nigeria, the need to examine the effect of business efficiency on earnings quality is important. This study examined the effect of financial efficiency, operational efficiency and resource efficiency on earnings quality of 12 listed commercial banks in Nigeria. Firm size and inflation were introduced as control variables. In line with the ex post facto research design that was adopted for the study, quantitative financial information was extracted from the financial reports for the sampled banks for the period of 11 years (2012-2022) based on which relevant ratios were computed. The result of the multiple regression analysis revealed that financial efficiency and operational efficiency did not significantly affect earnings quality. Resource efficiency was however found to have a significant effect on earnings quality. It was recommended that banks should continue to monitor and improve their financial efficiency, streamline operational processes and optimize the allocation of their resources. It was concluded that while traditional measures of efficiency may not directly influence earnings quality, prudent resource management remains crucial for the long-term success of commercial banks in Nigeria.

***Keywords**: Business, Efficiency, Operational, Resource, Earnings, Performance*

Introduction

The dynamism and competitiveness of the Nigerian business environment heightens the quest for sustained profitability and shareholders' value creation across various sectors including the banking sub-sector. In cognizance of this, business efficiency and earnings quality have been identified as two related aspects of firm performance that are essential to this endeavor. Business efficiency refers to the effectiveness and productivity of firm operations in terms of financial efficiency, operational efficiency and resource efficiency, among others (Gaio et al., 2023).

Financial efficiency measures how successful a firm is at turning expenses into revenue. A firm may be deemed financially inefficient if its expense surpasses the revenue generated as a result of the expenses incurred (Smith, 2023). For a firm to be financially efficient, it must engage some strategies and mechanisms that are tailored towards prudent financial management that ensures the long run sustainability of the business model (Chen and Lee, 2021).

Operational efficiency encompasses the strategic and prudent utilization of an organization's financial resources in alignment with established operational guidelines (Bhullar, 2017). According to Handoyo et al (2023), this concept emphasizes the minimization of waste across time, labor, and materials. Operational efficiency also serves as a vital metric that measures the efficiency of profit generation relative to operational cost. This is why it is believed to be a cornerstone of effective resource management and sustainable business practices.

Resource efficiency pertains to the optimization of resources throughout a company's operational activities. According to Leung et al. (2014), maximizing resource utilization is a key strategy for enhancing productivity along the value chain. Advocates of resource efficiency argue that it represents a method for augmenting economic value by taking into account the cyclical nature of resources. Rademaekers (2011) suggests that escalating regulatory demands on businesses could serve as a catalyst for the adoption of resource efficiency practices. Resource efficiency seems to be part of a multifaceted approach towards bolstering the performance and long-term sustainability of firms.

In every firm including commercial banks, high-quality earnings can indicate operational effectiveness and good management practices, which will further support investor confidence and market valuation (Handoyo et al., 2023). This is because accuracy and dependability of its financial reporting is reflected in the quality of its earnings. In the context of commercial banks, both factors are critical determinants of the banks ability to generate value for stakeholders and maintain long-term financial sustainability (Smith, 2023).

Traditionally, there is always a typical tendency of prioritizing profitability above all else whenever business performance gauging is considered. However, according to Dhillion and Vachhrajani (2012), there is need for business firms to prioritize efficiency above mere profitability in the assessment of their periodic performance. This is because profitability is determined by how efficiently firms utilize available resources (assets) to maximize its productivity. That is why some researchers opine that changes in a firm efficiency in the current period can predict changes in the future profitability of such a firm (Leal et al., 2016).

The complex relationship between some business efficiency viewpoints and corporate profitability has been highlighted by a few relatively older researches (Leung et al., 2014). A few research studies emphasized how investor perceptions and corporate performance are

impacted by business efficiency (Handoyo et al., 2023). The premise of these studies is that more accurate and trustworthy financial reporting can result from efficient resource allocation and cost management techniques, which will improve the caliber of earnings (Smith, 2023).

However, despite growing recognition of the importance of business efficiency and earnings quality, gaps persist in the understanding of the precise nature of the relationship between perspectives of business efficiency and earnings quality of commercial banks in Nigeria. It has been observed that even though commercial banks report huge profits almost every financial year, the quality of the reported earnings by some of these banks are not sustainable (Gaio et al, 2023). This is evidenced by the incidences of crisis that have rocked and even drowned some of banks in Nigeria. Although there are few studies on the determinants of earnings quality of commercial banks in Nigeria, the researchers are yet to find any of those studies that has examined whether the business efficiency of these banks affect their earnings quality.

The paucity of perspective-based analyses that integrate multiple dimensions of business efficiency in the context of commercial banks in Nigeria, therefore, motivates this study. Beyond a mere computation of some individual efficiency ratios as was done in previous studies, there is a need to establish how financial efficiency, operational efficiency, resource efficiency which are perspectives of business efficiency affect earnings quality, especially for listed commercial banks in Nigeria which are critical players in economic growth and development of Nigeria.

Objectives

The main objective of this study is to examine the effect of business efficiency on the earnings quality of listed commercial banks in Nigeria. The specific objectives are to:

1. examine the effect of financial efficiency on the earnings quality of listed Commercial banks in Nigeria.
2. assess the effect of operational efficiency on the earnings quality of listed Commercial banks in Nigeria.
3. determine the effect of resource efficiency on the earnings quality of listed Commercial banks in Nigeria.

Hypotheses

$H0_1$: Financial efficiency has no significant effect on the earnings quality of listed Commercial banks in Nigeria.

$H0_2$: Operational efficiency has no significant effect on the earnings quality of listed Commercial banks in Nigeria.

$H0_3$: Resource efficiency has no significant effect on the earnings quality of listed Commercial banks in Nigeria.

Review of Related Literature

Business Efficiency

Efficiency refers to the peak level of performance that uses the least amount of inputs to achieve the highest amount of outputs. It highlights the productivity of an asset by indicating how effectively an asset is optimized to maximize results (Smith, 2023). Business efficiency therefore refers to how well a company utilizes its resources to generate outputs. High business efficiency means that a company can produce more goods or services using fewer resources, such as labor, capital or raw materials. Efficient operations can lead to higher profitability and

improved financial performance. Business efficiency encompasses various perspectives, all of which are aimed at improving performance, reducing costs, and maximizing value creation for stakeholders (Handoyo et al, 2023).

Perspectives of Business Efficiency

i. Financial Efficiency

A key perspective in assessing the viability and performance of companies, especially SMEs in Nigeria, is financial efficiency. It evaluates how well a business uses or manages its financial resources to produce earnings and optimize returns for shareholders. To assess the efficacy of capital allocation and financial management, indicators including return on equity (ROE), return on assets (ROA), and return on investment (ROI) are analyzed. According to Smith et al. (2020), financial efficiency is thought to be a key factor in determining a firm's overall performance.

ii. Operational Efficiency

This efficiency perspective concentrates on streamlining internal workflows and processes within the company to cut expenses, minimize waste, and boost output. It entails optimizing resource use, removing bottlenecks, and simplifying processes. According to Jones and Smith (2019), in rising economies such as Nigeria, operational efficiency is a crucial factor in determining the performance of businesses.

iii. Resource Efficiency

The goal of resource efficiency is to maximize the utilization of different resources, such as labor, energy, and raw materials. It entails putting additional money-saving strategies and environmental practices into action. Resource efficiency in the context of this study refers to how effectively Nigerian banks manage and make use of their resources in order to produce revenue and improve financial performance (Chen and Lee, 2021). Cost efficiency ratio is used to quantify resource efficiency in the context of bank operations.

Earnings Quality

This relates to the reliability and sustainability of a company's reported earnings. High earnings quality implies that reported earnings accurately reflect the underlying economic reality of the firm's operations and are less likely to be distorted by accounting manipulations or one-time events. It indicates the transparency and trustworthiness of financial reporting. In determining earnings quality, there are various qualitative and quantitative measures that indicate the characterization and quality of a firm’s reported earnings. These measures are described and conceptualized in literature as earnings metrics, earnings quality measures, earnings characteristics, earnings quality indicators, or earnings quality properties (Chauhan, 2022). However, the indicators of earnings quality can be categorized into two broad classes; the accounting based measures and the non-accounting based measures of earnings quality.

The non-accounting based measures of earnings quality are the market based measures (Lyimo, 2014). The accounting based measures of earnings attributes are accrual quality, persistence, predictability and smoothness. These attributes take cash or earnings as the reference construct and they are measured only on the basis of accounting information

(Chauhan, 2022). Accounting-based earnings attributes are not affected by the twist and twirls of stock market volatility. These set of attributes are situated on the assumption that the function of earnings is actually supposed to be ensuring that cash flows are effectively allocated to reporting periods through the accrual process (Leung et al, 2014). Thus in defining earnings quality emphasis is more often placed on the link between profit making and cash flow generating activity. Earnings are interpreted to of high quality when the association linking profit-generating ability and cash-generating ability is cardinal (Chen and Lee, 2021).

On the other hand, the market based earnings attributes include value relevance of earnings, timeliness and earnings conservatism. Though they are not classified as accounting based earnings, the relationship between accounting earnings and market prices or returns serve as the basis of the measures of these attributes (Ahmadpour and Shahsavari, 2016). Satvaya and Singh (2017) found out that the market based measures are superior to the accounting measures in the aspect of hedge returns. The market based measures earn higher hedge returns compared to the accounting based measures. In terms of these attributes, it is assumed that earnings should be able to reflect economic income (Bhullar, 2017).

It is noteworthy that apart from highlighting any existing manipulation which undermines the veracity of reported earnings, accounting-based earnings attributes also have the ability to indicate a firm's long term prospects (Smith et al, 2020). It is also held that accounting based measures possess more explanatory power with respect to earnings quality appraisal than the market based measures. One of the most popular accounting measures of earnings quality is accruals quality models. In this study, accruals quality was not considered in this study because of the researchers feel that the concept has been over-flocked by previous researches, particularly in connection with earnings management. Hence earnings quality, in this study is measured as the company's net cash from operating activities divided by its net income for the period (Chen and Lee, 2021).

Theoretical Review

The agency theory and signaling theory provide the theoretical foundation for this study.

Agency Theory

Meckling first proposed agency theory in 1976 that essentially focuses on the interaction between agents (managers) and principals (shareholders), and how conflicts of interest between them might impact decision-making and business performance (Jensen and Meckling, 2007). Within the framework of the correlation between efficiency and earnings quality, this theory elucidates the ways in which managerial conduct might impact business choices and reporting procedures, hence impacting earnings quality. The agency theory is therefore relevant to this study as it gives an insight that aids the theoretical understanding of agency dynamics within firms, from the standpoint of business efficiency and quality of their reported earnings.

Signaling Theory

According to the signaling theory, businesses communicate private informations to outside parties using a variety of signals. The theory which was developed by Michael Spence in 1973 sheds light on how companies use signals such as profits quality and financial efficiency to lessen information asymmetry among stakeholders. It reveals that businesses sometimes seek to lower uncertainty and foster trust with investors and other stakeholders by

demonstrating the consistency of their earnings and operational efficiency. Also by integrating insights from signaling theory, the study would offer a more comprehensive understanding of how business efficiency relates to earnings quality within a broader organizational context (Smith et al, 2020).

It is important to note that although both agency theory and signaling theory have their perspectives of theoretical contribution to this study, the agency theory is adopted as the major underlying theoretical foundation for this study. This is because the theory informs the signaling theory perspective. More importantly, it highlights the relationship between commercial banks and its various stakeholders to whom the banks owe the responsibility of meeting their interests and needs through decision relevant earnings reporting.

2.1 Empirical Review

Satvaya and Singh (2017) studied the relationship between business efficiency and business sustainability that examined the proxies for business efficiency which include, gross profit margin, current ratio, inventory turnover ratio and interest coverage ratio. Business sustainability was measured using price earnings ratio, returns on retained earnings and company and industry D/E. Secondary data were collected from 50 Indian companies over a period of 5 years. The data were analyzed using regression analysis. The result of the analysis established the relationship between business efficiency and business sustainability. Researchers concluded that business efficiency significantly influences business sustainability of companies and the economy of India.

Gaio et al. (2023) carried out an analysis of the relationship that exists between earnings quality and investment efficiency in companies selected from 19 European companies across 17 industries from 2010 to 2018. Secondary data collected from the financial reports of the companies were analyzed using correlation and regression analysis. The findings indicate that earnings quality has a positive and significant relationship with investment efficiency. In order words the higher the earnings quality, the more investment efficiency will be enhanced.

Leung et al. (2014) conducted a study on resource efficiency and firm value. The study covered a period from 2005 to 2012. The study centered on 876 public firms from 26 countries. The pooled Ordinary Least Square analysis was carried to test the study hypotheses. The result indicates that significant positive relationship existed between resource efficiency and firm value. It was concluded that risk for creditors as well as benefits for society are lowered when investors' returns and shareholders value are significant. A more in-depth investigation of how resource efficiency influences the value chain was recommended.

Chauhan (2022) employed the Data Envelopment Analysis and Tobit approach to examine the factors that affect social and financial efficiency within the context of Microfinance Institutions (MFI) in India. The study employed the Data Envelopment Analysis and Tobit approach. to measure the efficiency of 38 non-banking financial firms. It was discovered that firm size and firm age had quite significant effect on financial efficiency. The researchers concluded that the MFIs were more efficient financially than they are socially.

Rusdiyanto and Narsa (2020) examined the effect of company size, leverage and return on asset on earnings management of Telecommunication firms in Indonesia. Purposive sampling technique was used to select 25 firms for the study. Quantitative data were extracted from the financial statements of the sampled firms for a period of 5 years (2014-2018). The

data were analyzed using descriptive statistics and multiple regression analysis. The findings revealed that leverage and return on asset had a significant effect on earnings management while company size had no significant effect on earnings management.

Khankandi et al. (2015) carried out a study to determine the relationship between earnings predictability (a measure of earnings quality) and information efficiency of 87 listed Tehran companies. The data of these sampled companies were sourced from their financial statements for the period of 2010 to 2012. The result of the Pearson correlation test showed the absence of a significant relationship between earnings predictability and information efficiency. It was concluded that lack of confidence in the financial data of companies explains the lack of correlation between profit forecasts and efficiency information. Based on this, it was recommended that the task of ensuring information transparency must be accorded due cognizance and compliance.

It is observable that these empirical studies reviewed were focused on one particular perspective of efficiency. They were also conducted in other climes and not Nigeria. None of these studies reviewed centred on commercial banks in Nigeria. These observations create a niche for this study by conducting a multi-perspective study to contribute to the methodology, knowledge and understanding of these important business efficiency variables by examining business efficiency on earnings quality of listed Commercial banks in Nigeria.

Methodology

The expost facto research design is adopted for this study to examine business efficiency on earning quality of selected Commercial banks listed on the Nigerian Exchange Group. Purposive sampling technique was used to select 12 listed commercial banks out of the population of 15 listed commercial banks. The selection of these 12 banks was based on accessibility of their annual reports for the relevant study period. Secondary data were extracted from the annual reports of these sampled banks for a period of 11 years (2012-2022). The pooled data of the 12 sampled banks collected over a period of 11 years gave rise to a total of 132 observations. These 132 observations were subsequently analyzed using pooled ordinary least square technique after relevant computations were done in line with the specified measurements of the study variables. The dependent and independent variables and their measurement/proxy are presented in Table 1.

Table 1: Variable Description and Measurement

Variables	Proxy (Measurement)	Apriori expectation
Dependent		
Earnings Quality	Net cash from operating activities ÷ net income for the period.	
Independent Variables		
Financial Efficiency	Return on Assets (Net Income ÷ Total Assets)	(+)
Operational Efficiency	Operating expense ratio (Operating expense ÷ Total Revenue)	(+)

Resource Efficiency	Cost Efficiency ratio (Total revenue ÷ Total Costs)	(+)
Control Variables		
Firm Size	Log of Total Assets	(-)
Inflation rate	Annual rate as reported by World Bank Data	(-)

Source: Researchers' Compilation (2024)

Model Specification

The data collected were analyzed using descriptive statistics while the multiple regression analysis technique was used to test the hypothesis. All the analyses were done with the aid of SPSS software. The basic form of the study model was specified thus:
EQL = f (FNEF, OPEF, RSEF)
Where:
EQL - Earnings quality
FNEF - Financial efficiency
OPEF - Operational efficiency
RSEF - Resource efficiency
With the introduction of firm size (FSIZE) and Inflation rate (INFL) as control variables, the econometric model is restated as follows:
$EQL = \alpha_0 + \alpha_1 FNEF + \alpha_2 OPEF + \alpha_3 RSEF + \alpha_4 INFL + \alpha_5 FSIZE + e$
Where:
α_0 = Intercept of the model
$\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6$ = Coefficients of the independent and control variables in the model

Results and Discussion of Findings

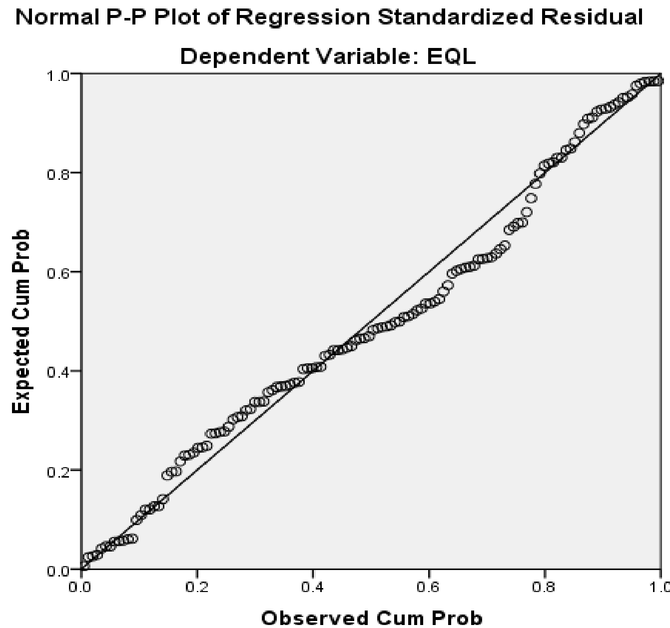
Table 2: Descriptive Statistics of the Variables

	Mean	Std. Deviation	Observations
EQL	1.951	3.112	132
FNEF	.0167	.0126	132
OPEF	.0467	.0303	132
RSEF	1.180	.1102	132
FSIZE	14.492	1.046	132
INFL	.1300	.0358	132

Source: Researcher's SPSS Analysis (2024).

Table 2 denotes that 132 observations were made during the study. The mean of the variables ranged between .0167 and 14.492. The mean of firm size (14.492) was higher than that of the other variables put together. The reason for this was because of the high range of values that were observed for the FSIZE variable. Also, Earnings quality (EQL) had the highest standard deviation of 3.112. This standard deviation indicates that the dispersion in the dataset for earnings quality was higher than that of the other variables, including FSIZE which had the highest mean.

Figure 1: Normality Probability Plots



The shape of the Normality Probability Plot suggests that the distribution is fairly normal and reasonably suitable for the multiple regression analysis.

Table 3 : Multicollinearity test

	Tolerance	VIF	Observations
EQL			
FNEF	.654	1.529	132
OPEF	.913	1.095	132
RSEF	.573	1.745	132
FSIZE	.641	1.560	132
INFL	.781	1.281	132

Source: Researcher's SPSS Analysis (2024).

Multi-collinearity test is based on the value of Tolerance and the Variance Inflation Factor (VIF) of all the variables for the 132 observations. The VIF of 1.529, 1.095, 1.745, 1.560, and 1.281 were obtained for FNEF, OPEF, RSEF, FSIZE, and INFL respectively. All these VIF were below 10 (Pallant, 2005 in Gaio et al, 2023). The Tolerance values range between 57.3% and 91.3% which is quite high. These results indicate that the multi-collinearity assumption for regression has not been violated.

Test of Hypotheses

$H0_1$: Financial efficiency has no significant effect on the earnings quality of listed Commercial banks in Nigeria.

Table 4: Regression Output on the Effect of Financial Efficiency on the Earnings Quality of Banks in Nigeria
Source: Researcher's SPSS Analysis (2024).

Variables	Std. Beta coefficient	t	Sig.	R	R^2	Std. Error	F	Sig.	Durbin Watson
				.288[a]	.083	3.014	3.873	.011[b]	2.091
(Constant)		-.278	.781						
FNEF	-.058	-.642	.522						
FSIZE	.004	.039	.969						
INFL	.271	2.861	.005						

The output of the regression analysis on the relationship between financial efficiency and earnings quality of listed commercial banks in Nigeria is summarized in Table 4. According to the result, the R (.288) shows that a 28.8 % correlation exists between financial efficiency and earnings quality of the banks. The Durbin Watson value of 2.091 suggests that there are no significant autocorrelation problems among the variables. The p value of the F statistic (.011) is less than 0.05. This denotes that the model has a good fit and thus the results generated by it, can be relied upon as a basis for inference on the relationship between financial efficiency and earnings quality of listed commercial banks in Nigeria.

From the results, the R^2 indicates that financial efficiency explains only 8.3% of the variation in the earnings quality of the studied banks. This implies that 91.7 % of variations in the earnings quality of those banks are explained by other variables not included in the model but represented by the stochastic error term. The standardized beta coefficient (-.058) suggests that, if firm size and inflation are controlled for, a 1% increase in financial efficiency could negatively affect earnings quality of banks by up to 5.8%.

Using the t statistic ($t_{0.05} = -.642$) in Table 4 to test the regression coefficient of financial efficiency shows that it is insignificant because the p value of the t (.522) is greater than the 0.05 threshold. Based on this, the null hypothesis is confirmed. Thus, financial efficiency has no significant effect on earnings quality of listed commercial banks in Nigeria. This finding is not consistent with that of Rusdiyanto and Narsa (2020) who observed that ROA, which is the measure of financial efficiency in this study, significantly influences earnings management in Indonesian firms. This contrasting finding may have arisen as a result of country peculiarities or the differences in the nature of activities of banks compared to Telecommunication firms which Rusdiyanto and Narsa (2020).

$H0_2$: Operating efficiency has no significant effect on the earnings quality of listed Commercial banks in Nigeria.

Table 5: Regression Output on the Effect of Operating Efficiency on the Earnings Quality of Banks in Nigeria

Variables	Std. Beta coefficient	t	Sig.	R	R^2	Std. Error	F	Sig.	Durbin Watson
				.283[a]	.080	3.019	3.724	.013[b]	2.078
(Constant)		-.190	.850						
OPEF	.001	.010	.992						
FSIZE	-.014	-.153	.878						
INFL	.288	3.140	.002						

Source: Researcher's SPSS Analysis (2024).

The regression result presented in Table 5, show that operational efficiency (OPEF) correlates with earnings quality (EQL) of listed Commercial banks in Nigeria. In fact, the R indicates a 28.3% correlation between these variables. It is pertinent to note that Dhillion and Vachhrajani (2012), in a related study, had earlier observed that an insignificant positive relationship exists between operational efficiency and profitability. However, the result further reveals that despite this level of correlation between the two variables, the R^2 indicates that only 8% of the variations in earnings is explained by Operating efficiency. This means that, apart from operating efficiency, other variables which were not included in this model, account for a greater percentage (92%) of the variations in the earnings quality of these banks. The F statistic has a value of 3.724 with a p value of .013, as shown in Table 5 Since the p value is less than 0.05 threshold, the model is deemed to be significantly fit and suitable for the purpose of inference on the relationship between the two variables.

Also, from the results, the beta coefficient of OPEF (.001) is very infinitesimal. The implication of this coefficient is that if banks increase their operating efficiency increase by 1%, after controlling for the effect of firm size and inflation, there would almost be no effect on earnings quality (0.1%). The null hypothesis which states that operating efficiency has no significant effect on the earnings quality of listed commercial banks in Nigeria is confirmed. This is because the t statistic of the regression coefficient of operating efficiency in Table 5 ($t_{0.05}$ = .010) is not statistically significant ($p = .992$, $p > 0.05$) at 5%.

$H0_3$: Resource efficiency does not significantly affect the earnings quality of Commercial banks in Nigeria.

Table 6: Regression Output on the Effect of Resource Efficiency on the Earnings Quality of Banks in Nigeria
Source: Researcher's SPSS Analysis (2024).

Variables	Std. Beta coefficient	t	Sig.	R	R^2	Std. Error	F	Sig.	Durbin Watson
				.333[a]	.111	2.968	5.328	.002[b]	2.171
(Constant)		.514	.608						
RSEF	-.201	-2.104	.037						
FSIZE	.091	.883	.379						
INFL	.244	2.642	.009						

Table 6 contains the regression output on the effect of resource efficiency (RSEF) on earnings quality (EQL). It depicts a correlation (33.3%) between resource efficiency and earnings quality of commercial banks in Nigeria. The model is also statistically fit for the purpose of the study. This is because the F statistic, as shown in Table 6, is significant at 5% ($F = 5.328$, $p = .002$, $p < .005$). This is further strengthened by the value of R^2 (.111). It implies that only 11.1% of the variations in the earnings quality of Nigeria are explained by the level of their resource efficiency while 88.9% is attributable to other variables outside the model.

The beta coefficient for resource efficiency is -.201. This coefficient implies that 1% increase in resource efficiency will affect earnings quality by 20.1 % . The t statistic test of the regression coefficient indicates that it is significant ($t_{0.05} = -2.104$, $p = .037$, $p < 0.05$). Hence, the null hypothesis is rejected. This implies that resource efficiency has a significant positive effect on the earnings quality of listed commercial banks in Nigeria. This finding is similar to that of Leung et al. (2014).

Conclusion and Recommendations

This study focused on the effect of three business efficiency perspectives (financial efficiency, operational efficiency and resource efficiency) on the earnings quality of listed commercial banks in Nigeria. The analyses of the data gave rise to a number of pertinent findings which are pertinent as far as the sustained well-being and relevance of listed commercial banks in Nigeria is concerned.

It was discovered that financial efficiency has no significant effect on the earnings quality of listed commercial banks in Nigeria. This implies that although financial efficiency is important, the quality of earnings reported by listed banks does not really have much to do with whether they are operations are financially efficient or not. This indicates that merely focusing on financial efficiency alone might not be sufficient for improving the earnings quality of listed commercial banks in Nigeria.

The study also revealed that operational efficiency does not exert any significant effect on the earnings quality of these banks. This means that no matter how operationally efficient a bank may be, its earnings quality may not necessarily improve as a result of their good operational efficiency status, if other variables are not given due consideration and attention.

A significant relationship was found between resource efficiency and earnings quality. This is an apparent indication that the efficiency of commercial banks in Nigeria, in terms of resource allocation and utilization is one, very important factors that must not be overlooked if the quality of their reported earnings is to be enhanced. It is concluded that while traditional measures of efficiency (financial efficiency and operational efficiency) may not directly influence earnings quality, the effective allocation and utilization of resources play a pivotal role in determining the earnings quality of listed commercial banks in Nigeria.

Recommendations

Based on the findings of this study, the following recommendations were made:

i. There is still need for continuous monitoring and improvement of financial efficiency of the banks so as to enhance their long-term financial health and resilience.
ii. The banks should streamline their operational processes and reduce wasteful spending. This is necessary because a more efficiently managed operations will, in part, indirectly enhance their earnings quality.
iii. Optimal allocation of resources to areas that that yield the best returns and bring the greatest value to the bank should be considered a priority. These might entail carrying out more regular resource audits, increasing funding for staff training and development, and implementing more novel strategies tailored towards maximizing the utilization of available resources.

Conclusion

The test of the regression coefficient of financial efficiency shows that it is insignificant because the p value of the t (.522) is greater than the 0.05 threshold which shows that financial efficiency has no significant effect on earnings quality of listed commercial banks in Nigeria.

The t statistic of the regression coefficient of operating efficiency ($t_{0.05} = .010$) is not statistically significant ($p = .992$, $p > 0.05$) at 5%. The p value is also less than 0.05 threshold, which indicates that the model is deemed to be insignificantly fit and suitable for the purpose of inference on the relationship between the two variables. Thus, operating efficiency has no significant effect on the earnings quality of listed commercial banks in Nigeria.

The t statistic test of the regression coefficient of the third hypothesis indicates that it is significant ($t_{0.05} = -2.104$, $p = .037$, $p < 0.05$). This implies that resource efficiency has a significant positive effect on the earnings quality of listed commercial banks in Nigeria.

It is however important to note that, despite the fact that financial efficiency and operational efficiency appeared not to significantly affect earnings quality of listed commercial banks in Nigeria, these perspectives of efficiency are still important to the sustainability of these banks in the long-term.

References

Ahmadpour. A. & Shahsavari. M. (2016). Earnings management and the effect of earnings quality in relation to bankruptcy level (Firms listed at the Tehran Stock Exchange). *Iranian Journal of Management Studies,* 9 (1), 77-99.

Bhullar. P. S. (2017). Empirical analysis of operating efficiency and firm value: A study of Fast Moving Consumer Goods and Pharmaceutical sector in India. *International Journal of Economics and Financial Issues*, 7 (3), 671-675.

Chauhan. S. (2022). Factors affecting social and financial efficiency of MFIs: DEA and Tobit Approach. *Asia Pacific Journal of Management Research and Innovation*, 18(1-2), 48-59

Chen. C. & Lee. T. (2021). Resource efficiency and business performance: A study of SMEs in emerging markets. *Journal of Business Management*, 30 (2), 45-67.

Dhillion. A. S. & Vachhrajani. H. (2012). Impact of operational efficiency on overall profitability: A case study of GIPCL. Working Paper 136/2012, AMRITA School of Business

Gaio. C., Goncalves. T. C. & Cardoso. J. (2023). Investment efficiency and earnings quality: European evidence. *Journal of Risk Management Financial Management,* 16 (4), 224

Handoyo. S., Suharman. H., Ghani. E. K. & Soedarsono. S. (2023). A business strategy, operational efficiency, ownership structure, and manufacturing performance: The moderating role of market uncertainty and competition intensity and its implication on open innovation.. *Journal of Open Innovation: Technology, Market, and Complexity*, 9 (2), 1-9.

Jensen. M. C. & Meckling. W. H. (2007). Theory of the firm: Managerial behavior, agency costs, and ownership structure. In book: Economic Analysis of the Law: Selected Readings

Jones. L. & Smith. K. (2019). Operational efficiency and SME performance: Evidence from emerging markets. *Journal of Business Research*, 25 (3), 67-89.

Khankandi. A. H., Pakdel, A. & RoknAbadi. A.R. (2015). The relationship between earnings predictability and information efficiency of listed companies in Tehran Stock Exchange. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 4 (6), 151-158.

Leal. L.T., Girao. L.F., Lucena. W.G. & Martins. V.G. (2016). Persistence, value relevance, and accruals quality in extreme earnings and cash flow situations. *Mackenzie Management Review*, 18 (3), 203-231.

Leung. W. S., Barwick-Barrett. M. & Evans. K. P. (2014). Resource efficiency and firm value. Osmosis Investment Management Publication.

Lyimo. G. D. (2014). Assessing the measures of quality of earnings: Evidence from India. *European Journal of Accounting Auditing and Finance Research, 2* (6), 17-28.

Rademaekers. K., Zaki. S. S. & Berg. J. (2011). Study on the competitiveness of the European Companies and resource efficiency. *European Commission Final Report*.

Rusdiyanto. I. & Narsa. M. (2020). The effect of company size, leverage and return on asset on earnings management: A case study of Indonesia

Satvaya. S. & Singh. S. (2017). Relationship between business efficiency and business sustainability. 3rd International Conference on Economic Growth and Sustainable Development: Energy Trends

Smith. A. (2023). The interplay between business efficiency and earnings quality: A review of literature. *Journal of Financial Management*, 45(2), 123-145.

Smith. J., Johnson. A., & Williams. B. (2020). Financial efficiency and firm performance: A Meta-Analysis. *Journal of Finance*, 35 (2), 123-145.