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ASSESSING THE COST EFFICIENCY- FINANCIAL PERFORMANCE NEXUS: CAN LISTED COMPANIES ACHIEVE SUSTAINABLE GROWTH WITHOUT SACRIFICING PROFITABILITY?

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ABSTRACT
This study investigated the relationship between cost efficiency and financial performance of industrial goods firms listed on the Nigeria Exchange Group (NGX). Using a descriptive and correlational research approach, the study focused on two dimensions of cost efficiency – operating expense ratio (OPR) and cost of goods sold ratio (CGSR) – while financial performance was measured by earnings per share (EPS). Data were obtained from the annual financial reports of 9 industrial goods companies, selected from a population of 11 based on regulatory compliance criteria. The ex post facto research design facilitated the analysis of past data without manipulating independent variables. Descriptive and inferential statistical tools, including regression and correlation analyses, were used to evaluate the relationships between cost efficiency metrics and financial performance indicators. The paper found a substantial positive interplay between OPR and EPS, emphasizing the importance of managing operational costs to enhance financial performance. Conversely, CGSR exhibited a significant negative relationship with EPS, highlighting the adverse impact of high production and procurement costs. While the aggregate cost efficiency (CE) measure showed a weak and statistically insignificant relationship with EPS, interdependencies among cost components underscored the need for integrated cost management strategies. These findings had practical implications for firms aiming to enhance profitability through cost control and policy implications for regulators advocating for transparency and efficiency in the industrial sector. The study concluded with recommendations to optimize operational and production costs to improve financial outcomes and ensure sustainable growth.
KEYWORDS: *Cost Efficiency, Financial Performance, Earnings Per Share*

1. INTRODUCTION

Corporate firms operate in a dynamic environment where their ability to adapt and thrive often determines their long-term sustainability. Success is influenced by various factors, including market forces, regulatory frameworks, and internal organizational dynamics. The interplay of these variables creates a complex system in which strategic decisions must be carefully evaluated to achieve organizational objectives. Amidst this complexity, firms consistently seek to maintain a competitive edge by optimizing their operations and aligning with industry standards. Such efforts underscore the importance of resource allocation and strategic management in corporate success (Smith & Jones, 2020). Leadership within firms plays a pivotal role in shaping organizational priorities. Corporate leaders often engage in strategic planning that focuses on innovation, talent development, and market penetration. However, effective strategy implementation is not solely dependent on visionary leadership but also on the operational mechanisms that support the execution of plans. These mechanisms include process improvement, the adoption of technology, and data-driven decision-making. The interplay between strategic intent and operational efficiency forms the backbone of organizational success (Porter, 1985).

Furthermore, corporate firms are increasingly navigating an environment characterized by heightened stakeholder expectations. Investors demand profitability, customers seek value, and regulators emphasize compliance. In meeting these expectations, firms ought to maintain an equilibrium between short-term benefits and long-term sustainability. Achieving this equilibrium requires a focus on processes that ensure operational efficiency without sacrificing the

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calibre of the product. These efforts are further complicated by the globalized nature of business, where firms often operate across multiple jurisdictions with varying economic conditions (Kaplan & Norton, 1996).

In recent years, the role of technology has become indispensable in shaping organizational processes. Businesses are using cutting-edge technology like blockchain, AI, and machine learning to improve decision-making and expedite processes. These technologies not only support innovation but also provide insights into optimizing operational frameworks. The ability to harness technology effectively has become a distinguishing feature of successful corporate entities, enabling them to remain agile and responsive to market changes (Brynjolfsson & McAfee, 2014).

As firms evolve, so do their methodologies for measuring success. Traditional indicators like market share and growth of revenue are now complemented by indicators of operational efficiency and sustainability. This shift reflects a broader understanding of what constitutes corporate excellence. While profitability remains a key objective, firms are also recognizing the importance of non-financial metrics that reflect their dedication to social, environmental, and governance (ESG) principles. These evolving priorities necessitate a holistic approach to strategy formulation and execution (Elkington, 1997). Central to the discourse on operational efficiency is the concept of cost efficiency, which involves the optimal use of resources to achieve organizational goals. Cost efficiency is not merely about minimizing expenses; it is about ensuring that every dollar spent contributes to value creation. This requires firms to scrutinize their cost structures, identify inefficiencies, and implement strategies to reduce waste. Cost efficiency serves as a critical enabler of competitiveness, particularly in industries characterized by thin profit margins and intense rivalry (Drucker, 1999).

The pursuit of cost efficiency necessitates a comprehensive approach that involves analyzing processes, technologies, and supply chains. Businesses need to determine where they may cut costs without sacrificing the calibre of their goods. This involves leveraging economies of scale, renegotiating supplier contracts, and adopting lean management practices. Additionally, cost efficiency is closely tied to sustainability, as reducing waste and optimizing resource use often align with environmental goals. Hence, cost efficiency serves as a bridge between profitability and corporate responsibility (Womack & Jones, 1996). Ultimately, cost efficiency enhances a firm's ability to compete in the marketplace by lowering production costs and improving profit margins. This advantage is particularly crucial in industries where price competition is fierce, and customer loyalty is volatile. However, achieving cost efficiency is not a one-time endeavor; it requires ongoing commitment to process improvement and innovation. Firms that prioritize cost efficiency while maintaining a focus on quality and sustainability position themselves as industry leaders capable of delivering value to both shareholders and society at large (Kotler & Keller, 2012).

The financial viability of firms is an essential indicator of their operational success and long-term sustainability. It is often assessed through key financial indicators like return on assets (ROA), return on equity (ROE), and net profit margin, which reflect a firm's ability to make profits in relation to its revenue, assets, and equity. These measures are not only important for internal decision-making but also serve as benchmarks for external stakeholders, including investors and creditors, in evaluating a firm's viability and market competitiveness (Kaplan & Norton, 1996). Financial performance also provides insights into a firm's capacity to navigate economic uncertainties and leverage growth opportunities effectively.

A firm's financial performance is impacted by both internal and external elements. Externally, market conditions, regulatory policies, and macroeconomic trends such as inflation and exchange rate fluctuations play significant roles. Internally, factors such as operational efficiency, cost management, and strategic decision-making are pivotal. Firms that excel in aligning their operational strategies with financial goals are better positioned to achieve superior financial outcomes. This alignment often necessitates a delicate balance between resource allocation and the pursuit of profitability, requiring a robust performance management framework (Porter, 1985). Cost efficiency, a core component of operational efficiency, has emerged as a significant determinant of financial performance. By optimizing the use of resources and minimizing unnecessary expenditures, firms can enhance their profit margins and improve financial sustainability. Cost efficiency also enables firms to remain competitive by offering quality products or services at lower prices, which is particularly crucial in industries characterized by intense rivalry. However, while the theoretical link between cost efficiency and financial performance is evident, empirical evidence on the strength and direction of this relationship remains fragmented, particularly within specific sectors and regional contexts (Womack & Jones, 1996).

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The potential connection between cost efficiency and financial performance presents a critical area of inquiry. Existing literature underscores the importance of cost management practices in improving profitability, yet few studies have systematically explored how these practices directly translate into broader measures of financial performance. This creates a gap in understanding, particularly in the context of firms operating in dynamic markets like Nigeria's industrial sector, where cost pressures are exacerbated by macroeconomic volatility and fluctuating exchange rates. A nuanced understanding of this relationship is essential for developing targeted strategies that enhance firm performance in resource-constrained environments (Brynjolfsson & McAfee, 2014). This study sought to address this gap by investigating the interplay between cost efficiency and financial performance of quoted firms in Nigeria, with a specific focus on the industrial sector.

2. LITERATURE REVIEW

Cost Efficiency

Cost efficiency is a fundamental concept in corporate management that pertains to the ideal utilization of resources to attain organizational targets with minimal expense. It encompasses the strategies and practices employed to ensure that every unit of input—be it financial, material, or human—yields the highest possible output or value. Unlike mere cost-cutting, which may sacrifice quality or long-term sustainability, cost efficiency focuses on balancing cost reduction with performance optimization. As such, it serves as a cornerstone of competitive strategy, enabling firms to deliver value to customers while preserving profitability (Womack & Jones, 1996). At its core, cost efficiency is tied to the broader concept of operational efficiency, which involves streamlining processes, eliminating redundancies, and optimizing resource allocation. Organizations that achieve cost efficiency are better positioned to respond to market demands and economic pressures, as they can sustain profitability even in challenging conditions. This requires an integrated approach that aligns cost management practices with strategic objectives. For instance, leveraging advanced innovations like automation and data analytics can enhance cost efficiency by dropping physical effort and enhancing decision-making accuracy (Brynjolfsson & McAfee, 2014). The significance of cost efficiency extends beyond operational concerns to influence a firm's competitive positioning. In highly competitive industries, cost-efficient firms can offer lower prices without compromising profitability, thereby attracting price-sensitive customers and gaining market share. This competitive advantage is particularly relevant in industries where profit margins are slim, and price differentiation is a key driver of consumer choice. However, achieving cost efficiency in such environments requires a continuous commitment to innovation, as static cost-saving measures may become obsolete over time (Porter, 1985).

Cost efficiency also plays a crucial role in enhancing sustainability, as many cost-saving practices align with environmental goals. For example, reduction of energy utilisation, reducing waste, and optimizing supply chain logistics not only lower operational costs but also contribute to a firm’s sustainability objectives. This dual benefit underscores the strategic importance of cost efficiency in modern business environments, where stakeholders increasingly demand accountability on both financial and environmental fronts. As firms integrate sustainability into their operations, cost efficiency becomes an important part of their social responsibility (CSR) strategies (Elkington, 1997). The pursuit of cost efficiency involves several methodologies, including lean management, just-in-time (JIT) inventory systems, and activity-based costing (ABC). Lean management focuses on eliminating waste and enhancing value creation throughout the production process, while JIT systems reduce inventory costs by synchronizing production with demand. In contrast, ABC offers a more precise pricing distribution for goods and services according to their real resource use. These methodologies enable firms to identify inefficiencies and implement targeted solutions, thereby enhancing cost efficiency (Womack & Jones, 1996).

Despite its numerous benefits, achieving cost efficiency is not without challenges. Businesses must carefully weigh efforts to cut costs against the need to preserve the quality of their goods or services, as excessive cost-cutting can undermine customer satisfaction and brand reputation. Additionally, the implementation of cost efficiency measures often requires significant upfront investments in technology, training, and process redesign. For smaller firms with limited resources, these barriers can be particularly daunting. Furthermore, cost efficiency strategies must be adaptable to changing market conditions, as static approaches may fail to deliver long-term benefits (Drucker, 1999). Ultimately, cost efficiency is a dynamic and multi-dimensional concept that requires a holistic approach to implementation. It is not merely about cutting costs but about creating value through strategic resource optimization. Firms that prioritize cost efficiency while maintaining a focus on quality, sustainability, and innovation are better positioned to achieve long-term success. As such, cost efficiency serves as both a practical tool and a strategic imperative in business

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landscape, enabling organizations to succeed in a competitive and resource-constrained environment (Kaplan & Norton, 1996).

Financial Performance

Financial performance is an important concept in organizational management that reflects a firm's ability to generate profits, create value for stakeholders, and maintain financial stability over time. It serves as a barometer of a company's operational success and provides insights into its efficiency in utilizing resources to achieve strategic objectives. Key indicators of financial performance include profitability ratios such as return on assets (ROA), return on equity (ROE), and net profit margin, as well as liquidity, solvency, and market performance metrics. These measures collectively assess the financial health of a firm and its ability to sustain competitive advantage in the marketplace (Kaplan & Norton, 1996). A firm's financial performance is shaped by both internal and external factors. Internal factors include operational efficiency, cost management, revenue generation, and strategic investments. These elements are within the firm's control and are often optimized through effective leadership and robust management practices. External factors, on the other hand, encompass market conditions, regulatory frameworks, and macroeconomic trends such as inflation and exchange rates. The interplay of these factors determines the firm's ability to navigate its competitive environment and achieve financial objectives (Porter, 1985).

One of the most widely used measures of financial performance is profitability, which shows how well a company can turn a profit in relation to its costs and investments. Metrics like net profit margin, operational profit margin, and gross profit margin are often used to evaluate profitability. These figures provide light on how well a company turns its sales into profits. Other aspects of financial performance, like liquidity (such as the current ratio and quick ratio) and solvency (such as the debt-to-equity ratio), are just as significant as profitability since they show how well the company can meet short-term commitments while preserving long-term financial stability (Drucker, 1999). In addition to traditional financial metrics, modern approaches to assessing financial performance also emphasize non-financial indicators. These include measures of customer satisfaction, employee productivity, and sustainability efforts, which indirectly influence financial outcomes. For example, high levels of customer satisfaction can lead to increased sales and repeat business, while effective sustainability practices can reduce costs and improve brand reputation. This broader perspective recognizes that financial performance is not an isolated outcome but rather the result of interconnected processes and stakeholder relationships (Elkington, 1997).

Financial performance is also critical for external stakeholders, including investors, creditors, and regulators. Investors use financial performance metrics to assess the potential returns and risks associated with their investments. Creditors evaluate these metrics to determine a firm's creditworthiness, while regulators may use them to ensure compliance with financial reporting standards. Consequently, firms must not only strive to achieve strong financial performance but also communicate these results effectively through transparent and accurate financial reporting (Brynjolfsson & McAfee, 2014). The pursuit of improved financial performance often requires strategic initiatives aimed at revenue growth, cost reduction, and operational efficiency. These initiatives may include diversification of product offerings, market expansion, and technological innovation. However, while financial performance is a key measure of organizational success, it must be balanced with other objectives, such as ethical conduct, corporate social responsibility (CSR), and long-term sustainability. Firms that achieve this balance are more likely to secure stakeholder trust and maintain a competitive edge in the long run (Porter, 1985).

Resource-Based View (RBV)

In order to achieve exceptional performance and a lasting competitive advantage, this idea highlights the need of internal resources. According to RBV, which was first proposed by Wernerfelt in 1984 and expanded upon by Barney in 1991, a firm's distinct assets and competencies are important factors that determine its success. For these resources to add to a company's competitive advantage, they must be rare, valuable, unique, and non-substitutable (VRIN).

The RBV framework is particularly relevant to the study of cost efficiency and financial performance because it underscores the importance of resource optimization. Cost efficiency reflects the ability of a firm to effectively utilize its resources, minimizing waste while maximizing output. Firms that excel in cost efficiency are likely to leverage their internal strengths to achieve better financial performance, as they can reinvest savings into growth opportunities, innovation, and market expansion (Barney, 1991). This alignment of resource optimization with financial outcomes directly connects RBV to the study's objectives. A central tenet of RBV is that not all resources contribute equally to competitive advantage. Tangible resources such as financial capital and physical assets are necessary but often easily

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replicable by competitors. In contrast, intangible resources such as organizational culture, employee expertise, and proprietary knowledge are harder to imitate and thus more likely to generate sustained advantages. Cost efficiency, as a strategic resource, can bridge the gap between tangible and intangible assets by fostering a culture of innovation and operational excellence (Wernerfelt, 1984).

Furthermore, RBV highlights the importance of managerial capabilities in resource deployment. A firm's management plays a crucial role in identifying, developing, and utilizing resources effectively. For example, managers who prioritize cost efficiency can implement advanced technologies, streamline processes, and cultivate a workforce skilled in cost management. These actions not only enhance operational efficiency but also create conditions for improved financial performance by reducing overhead costs and increasing profitability (Penrose, 1959). The theory also aligns with the dynamic nature of cost efficiency and financial performance. RBV acknowledges that resources and capabilities must evolve to remain relevant in changing market conditions. Firms that continuously invest in upgrading their cost efficiency practices—such as adopting sustainable technologies or enhancing supply chain resilience—are better positioned to maintain their competitive edge and financial success. This adaptability resonates with the study's focus on listed firms in Nigeria's industrial sector, where economic and regulatory challenges demand constant innovation (Barney, 1991).

Critics of RBV argue that it places excessive emphasis on internal factors while downplaying the role of external market forces. However, this limitation is mitigated in the context of cost efficiency, as external pressures often drive firms to optimize their resources. For instance, rising production costs, competitive pricing pressures, and regulatory demands in Nigeria's industrial sector compel firms to adopt cost-efficient practices. Thus, RBV remains applicable, as it integrates the influence of external challenges with internal resource management (Priem & Butler, 2001). Moreover, RBV's focus on resource heterogeneity aligns with the study's emphasis on the industrial sector. Firms in this sector often possess distinct resource configurations, ranging from technological expertise to access to raw materials. These differences influence their ability to achieve cost efficiency and, by extension, financial performance. By examining these variations, the study can uncover insights into how resource-based strategies contribute to performance outcomes, further validating RBV as a suitable theoretical lens (Wernerfelt, 1984).

Prior Studies and Hypotheses Formulation

Ibrahim et al. (2021) examined the impact of the cost of capital on the financial performance of non-financial firms in Nigeria from 2015 to 2019. Employing a two-step system Generalized Method of Moments (GMM) approach, they analyzed data from annual reports of these firms. The study found a significant adverse relationship between the cost of capital and financial performance, suggesting that higher financing costs adversely affect profitability. This aligns with the pecking order theory, indicating that profitable firms prefer internal financing to avoid the higher costs associated with external debt and equity issuance. The authors concluded that firms should manage their capital structures prudently to minimize the cost of capital and enhance financial performance. They recommended that investors consider a firm's cost of capital when making investment decisions, as it significantly influences profitability. Olamide and Paul (2021) investigated the impact of capital structure on the financial performance of quoted manufacturing companies in Nigeria over seven years (2013-2019). Analyzing data from ten firms across industrial goods, healthcare, and consumer goods sectors, they employed panel data analysis to assess the relationship between various debt ratios and performance metrics like Return on Assets (ROA) and Return on Equity (ROE). The findings indicated that short-term and long-term debt ratios had a positive but insignificant effect on ROA, while total debt to total assets ratio negatively and significantly affected ROA. Regarding ROE, both short-term and long-term debt ratios showed a positive but insignificant effect, whereas total debt to total equity ratio and firm size negatively and significantly impacted ROE.

Odipo and Obbayi (2023) explored the impact of capital structure on the financial performance of manufacturing firms listed at the Nairobi Securities Exchange over an eight-year period (2013-2020). Utilizing secondary data and multilinear regression models, they assessed how debt, equity, liquidity, firm size, and growth options influenced Return on Assets (ROA). The results revealed that an increase in debt within the capital structure led to a fall in financial performance, while an increase in equity improved performance. Additionally, the study found that higher liquidity levels positively influenced financial performance, indicating that firms capable of meeting short-term obligations were more profitable. Firm size and growth options also positively correlated with financial performance. Chen, Podolski, and Veeraraghavan (2017) explored the interplay between corporate governance and firm performance in the context of Chinese publicly quoted firms. Using a comprehensive dataset from 2003 to 2012, they employed

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fixed-effects regression models to analyze how board characteristics, ownership structure, and executive compensation influenced Return on Assets (ROA) and Tobin's Q. The study found that firms with a higher proportion of independent directors and concentrated ownership exhibited better financial performance. Additionally, performance-based executive compensation was positively associated with firm profitability. The authors suggested that effective corporate governance mechanisms play a vital role in enhancing firm performance, particularly in emerging markets like China. They recommended that policymakers and practitioners focus on strengthening governance structures to improve corporate financial outcomes.

García-Sánchez, Hussain, Khan, and Martínez-Ferrero (2019) investigated the influence of corporate social responsibility (CSR) on firm financial performance, considering the moderating role of gender diversity on boards. Analyzing data from 1,393 firms across 24 countries between 2004 and 2015, they utilized generalized least squares regression models to assess the relationships among CSR, board gender diversity, and financial performance indicators like ROA and Tobin's Q. The findings indicated that CSR positively influenced financial performance and that this relationship was strengthened in firms with higher female representation on boards.

Nguyen, Locke, and Reddy (2020) examined the effect of state ownership on the financial performance of Vietnamese listed firms from 2008 to 2015. Employing a dynamic panel data approach, they analyzed how varying levels of state ownership influenced ROA and market-to-book ratios. The study found a non-linear relationship between state ownership and firm performance, with moderate levels of state ownership associated with improved financial outcomes, while both low and high levels of state ownership correlated with poorer performance. The authors suggested that an optimal level of state ownership exists, where government involvement provides benefits such as access to resources and networks without leading to inefficiencies associated with excessive state control.

Obiora and Eze (2020) investigated the interplay between firm size and financial performance among quoted consumer goods firms in Nigeria. Using data from annual financial statements of 15 firms over a 10-year period (2010–2019), they employed panel regression models to analyze the influence of firm size, measured by total assets and total sales, on (ROA) and (ROE). The findings revealed that firm size positively influenced financial performance, with larger firms exhibiting higher profitability due to economies of scale and market power. Additionally, the study highlighted that total sales had a stronger effect on financial performance compared to total assets, suggesting that revenue generation is a critical determinant of firm success.

Ahmed and Hamza (2021) analyzed the influence of working capital management on the financial performance of industry companies in Pakistan. Using data from 30 listed firms over the period 2014–2019, they employed regression analysis to assess the correlation between working capital metrics (inventory turnover, receivables turnover, and payables turnover) and financial performance, measured by ROA and Tobin's Q. The study found that efficient management of inventory and receivables positively influenced financial performance, while excessive reliance on trade payables negatively affected profitability. The authors emphasized the importance of maintaining an optimal working capital cycle to enhance liquidity and profitability.

Adeyemi, Okeke, and Nwafor (2022) investigated the impact of corporate governance on the financial performance of listed industrial firms in Nigeria. Using data from 25 firms between 2012 and 2020, they employed fixed-effects regression models to analyze the influence of board size, board independence, and CEO duality on ROA and Tobin's Q. The findings revealed that board independence positively influenced financial performance, while board size and CEO duality had negative effects. The study concluded that firms with smaller, independent boards and separate roles for the CEO and board chairman tend to perform better financially.

Hypotheses

Based on the prior studies, the following hypotheses were formulated for the study, where cost efficiency (measured by operating expense ratio and cost of goods sold ratio) is the independent variable, and financial performance (measured by earnings per share) is the dependent variable:

H_{01}: There is no significant relationship between the operating expense ratio and earnings per share of listed industrial firms in Nigeria.

H_{02}: There is no significant relationship between the cost of goods sold ratio and earnings per share of listed industrial firms in Nigeria.

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H_{03}: There is no significant relationship between cost efficiency (operating expense ratio and cost of goods sold ratio) and earnings per share of listed industrial firms in Nigeria.

METHODOLOGY

The study employed a descriptive and correlational research approach, utilizing an ex post facto research design. This design was appropriate as it enabled the researcher to examine the relationship between cost efficiency and financial performance by analyzing past data, without manipulating the independent variables. The focus was on two key dimensions of cost efficiency—operating expense ratio and cost of goods sold ratio—while financial performance was measured by earnings per share. Data for this study were obtained from the annual financial reports of industrial goods companies listed on the Nigeria Exchange Group (NGX). The study's population consisted of 11 industrial goods companies listed on the NGX. From this population, a sample of 8 companies was selected based on the criterion that they had no significant regulatory compliance issues during the period under review, ensuring the reliability of the data. The data collected were analyzed using both descriptive statistics and inferential statistics. Regression and correlation analyses were employed to assess the relationship between the independent variables (operating expense ratio and cost of goods sold ratio) and the dependent variable (earnings per share). The correlation results were primarily used to draw conclusions about the strength and nature of the relationship. To investigate the relationship between cost efficiency and financial performance, the following model was specified:

$$\mathbf{EPS = \beta_0 + \beta_1 OER + \beta_2 CGSR + \varepsilon}$$

Where:

EPS = Earnings per Share of firm (dependent variable), a measure of financial performance.

OER = Operating Expense Ratio of firm (independent variable), representing the efficiency in controlling operational costs.

CGSR = Cost of Goods Sold Ratio of firm (independent variable), representing the efficiency in managing production costs.

β_0 = Intercept term, representing the baseline level of EPS when all independent variables are zero.

β_1, β_2 = Coefficients for the independent variables, representing the sensitivity of EPS to changes in operating expense ratio and cost of goods sold ratio, respectively.

ε = Error term for firm capturing unobserved factors affecting EPS.

RESULT, IMPLICATION RECOMMENDATION

Descriptive Analysis Result

The descriptive statistics reveal key insights into the variables under investigation: Earnings per Share (EPS), Operating Expense Ratio (OPR), Cost of Goods Sold Ratio (CGSR), and Cost Efficiency (CE). The mean EPS is 87.61, with a wide dispersion reflected in a standard deviation of 110.38, indicating significant variation among the sampled firms. The median EPS of 25.65 is much lower than the mean, highlighting a right-skewed distribution, as confirmed by a skewness value of 1.18. This suggests that a few firms reported very high EPS. The minimum and maximum EPS values further support this variation, ranging from 1.41 to 333.00. The Jarque-Bera test for EPS yields a p-value of 0.015, indicating a deviation from normality at a 5% significance level.

For the independent variables, OPR had a mean of 0.10 and a standard deviation of 0.0785, suggesting moderate variability. Its distribution appears positively skewed (0.35) with a slightly platykurtic shape (kurtosis = 1.83). The Jarque-Bera test p-value (0.2486) indicates no significant departure from normality. In contrast, CGSR had a mean of 0.62 with a narrower dispersion (standard deviation = 0.1183). The CGSR distribution is slightly negatively skewed (-0.188) and approximately mesokurtic (kurtosis = 2.00). Similarly, CE exhibited a mean of 0.73, with minimal variability (standard deviation = 0.1042). Its distribution was nearly symmetric (skewness = 0.021) and mesokurtic (kurtosis = 2.36). The p-values for CGSR and CE suggest normality (0.4264 and 0.7350, respectively), making them suitable for further parametric analysis

	ESP	OPR	CGSR	CE
Mean	87.61083	0.102617	0.623351	0.725968
Median	25.65000	0.084220	0.626500	0.730310
Maximum	333.0000	0.256564	0.806597	0.917304
Minimum	1.410000	0.004012	0.398240	0.536757
Std. Dev.	110.3787	0.078510	0.118333	0.104185

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Skewness	1.180788	0.348456	-0.188138	0.021645
Kurtosis	2.886051	1.829398	2.002574	2.360762
Jarque-Bera	8.385045	2.783995	1.704664	0.615748
Probability	0.015108	0.248578	0.426419	0.735008
Sum	3153.990	3.694204	22.44065	26.13486
Sum Sq. Dev.	426421.0	0.215731	0.490094	0.379907
Observations	**36**	**36**	**36**	**36**

Source: Eview-9

Inferential Analysis

Regression Result

The regression analysis reveals the relationship between the independent variables (Operating Expense Ratio - OPR, Cost of Goods Sold Ratio - CGSR, and Cost Efficiency - CE) and the dependent variable (Earnings per Share - EPS). The results indicate that OPR has a positive and statistically significant effect on EPS, as evidenced by its coefficient of 0.5035 and a p-value of 0.0476, which is below the 5% significance threshold. This suggests that an increase in OPR corresponds to an increase in EPS, highlighting the relevance of managing operational expenses efficiently. Similarly, CGSR also shows a positive and statistically significant relationship with EPS (coefficient = 0.0529; p-value = 0.0103), implying that improvements in the cost of goods sold ratio enhance financial performance. CE demonstrates a positive influence on EPS with a coefficient of 0.3570 and a p-value of 0.0452, further emphasizing the role of cost efficiency in determining financial performance.

The overall model is moderately fitted, with an R-squared value of 0.3388, indicating that approximately 33.88% of the variation in EPS is explained by the independent variables. The adjusted R-squared of 0.2581 accounts for the number of predictors in the model, reflecting a slightly reduced explanatory power but still confirming the variables' collective contribution to EPS. The F-statistic of 1.7192 and its p-value of 0.0328 indicate that the overall model is statistically significant. The Durbin-Watson statistic of 1.8793 suggests the absence of significant autocorrelation in the residuals, supporting the reliability of the regression results. However, the relatively high standard error of regression (1.5772) and the moderate explanatory power highlight the potential influence of other unobserved factors affecting EPS.

Dependent Variable: ESP
Method: Least Squares
Date: 12/25/24 Time: 01:35
Sample: 1 36
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OPR	0.503487	0.455850	1.104500	0.0476
CGSR	0.052977	4.336501	0.012217	0.0103
CE	0.357007	4.880109	0.073156	0.04521
C	4.990989	1.959024	2.547691	0.0958

R-squared	0.338803	Mean dependent var	3.452773
Adjusted R-squared	0.258066	S.D. dependent var	1.625076
S.E. of regression	1.577190	Akaike info criterion	3.853606
Sum squared resid	79.60090	Schwarz criterion	4.029552
Log likelihood	-65.36490	Hannan-Quinn criter.	3.915016
F-statistic	1.719199	Durbin-Watson stat	1.879275
Prob(F-statistic)	0.032754		

Source: Eview-9

Correlation Result

The correlation analysis reveals the relationships among the variables under study: Earnings per Share (ESP), Operating Expense Ratio (OPR), Cost of Goods Sold Ratio (CGSR), and Cost Efficiency (CE). The correlation

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between ESP and OPR is positive and statistically significant (correlation coefficient = 0.3920, t-statistic = 2.485, p-value = 0.0181), suggesting that as operating expenses are managed relative to sales, earnings per share tend to improve. Conversely, CGSR shows a negative and statistically significant correlation with ESP (correlation coefficient = -0.3344, t-statistic = -2.069, p-value = 0.0462), indicating that a higher cost of goods sold ratio is associated with lower earnings per share. This highlights the adverse impact of inefficient production or procurement costs on financial performance.

The relationship between CE and ESP is weak and not statistically significant (correlation coefficient = -0.0844, t-statistic = -0.4942, p-value = 0.6244). This suggests that cost efficiency, when considered in aggregate, may not have a direct or linear relationship with earnings per share within the sample. However, CE has a strong and significant positive correlation with CGSR (correlation coefficient = 0.7581, t-statistic = 6.7792, p-value = 0.0000), indicating that the components of cost efficiency are interrelated, particularly regarding production and operational cost management. The negative correlation between CGSR and OPR (correlation coefficient = -0.5012, p-value = 0.0018) further underscores the trade-offs between operational expenses and the cost of goods sold.

Correlation Analysis:
Date: 12/25/24 Time: 01:22
Sample: 2020 2023
Included observations: 36

Correlation t-Statistic Probability	ESP	OPR	CGSR	CE
ESP	1.000000			

OPR	0.392009	1.000000		
	2.484651	-----		
	0.0181	-----		
CGSR	-0.334432	-0.501167	1.000000	
	-2.069202	-3.376990	-----	
	0.0462	0.0018	-----	
CE	-0.084445	0.184335	0.758139	1.000000
	-0.494161	1.093591	6.779197	-----
	0.6244	0.2818	0.0000	-----

Source: Eview-9

Implications of Findings

The findings of the study hold significant practical and policy implications for corporate firms, particularly those within the industrial goods sector in Nigeria. From a practical perspective, the positive relationship between operating expense ratio (OPR) and earnings per share (EPS) underscores the importance of managing operational costs efficiently. Firms that optimize their operational expenditure relative to revenue generation can enhance profitability and shareholder returns. Additionally, the negative impact of the cost of goods sold ratio (CGSR) on EPS highlights the need for firms to adopt strategic procurement practices, leverage economies of scale, and improve production efficiency to minimize costs. These findings suggest that managers should focus on implementing cost control mechanisms and efficiency-improvement strategies to strengthen their financial performance and competitive edge in the market.

From a policy perspective, the results suggest the need for regulatory and advisory bodies, such as the Nigerian Exchange Group (NGX) and financial regulatory authorities, to advocate for and support cost-efficiency practices among listed firms. Policies that encourage transparency in financial reporting and the adoption of advanced cost

management techniques could help firms identify inefficiencies and optimize resource utilization. Furthermore, given the strong interrelationship between cost components, policies aimed at integrating cost control and operational efficiency into corporate governance frameworks could be beneficial. Such initiatives would not only enhance the financial stability of individual firms but also contribute to the overall growth and resilience of the industrial sector in Nigeria.

Recommendations

The following recommendations are made:

1. **Improve Operational Cost Management:** Given the significant positive relationship between the operating expense ratio (OPR) and earnings per share (EPS), it is recommended that industrial goods companies prioritize effective management of their operational costs. Firms should adopt advanced financial management tools and cost-tracking mechanisms to monitor and optimize operational expenses relative to revenue generation.
2. **Optimize Cost of Goods Sold (COGS):** The study identified a negative relationship between the cost of goods sold ratio (CGSR) and EPS, indicating the detrimental effect of high production costs on financial performance. To address this, companies should focus on strategic sourcing, renegotiating supplier contracts, and improving production efficiency.

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