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## **COST STRUCTURE AND FINANCIAL PERFORMANCE OF LISTED CONSUMER GOODS COMPANIES IN NIGERIA**

By

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### **Abstract:**

*This study investigated the effect of cost structure on the financial performance of listed consumer goods companies in Nigeria. The study specifically examined the effect of operating cost, cost of goods sold, and finance cost on return on equity. The study adopted an ex post facto research design and utilized secondary data sourced from the audited annual financial reports of ten purposively selected consumer goods companies listed on the Nigerian Exchange Group for a ten-year period spanning 2015 to 2024. Data were analyzed using descriptive statistics, correlation analysis, unit root tests, and panel regression estimation. The Hausman specification test confirmed the random effect model as the appropriate estimator. The findings revealed that operating cost had a positive but statistically insignificant effect on return on equity ( $\beta = 1.35E-09$ ,  $p = 0.4567$ ). Similarly, cost of goods sold exhibited a positive but insignificant relationship with return on equity ( $\beta = 1.25E-11$ ,  $p = 0.9801$ ). However, finance cost had a negative and statistically significant effect on return on equity ( $\beta = -1.45E-08$ ,  $p = 0.0022$ ). The model was jointly significant ( $F = 3.3763$ ,  $p = 0.0215$ ) with an R-squared of 0.0954. The study concluded that finance cost is the most critical cost component influencing the profitability of consumer goods firms in Nigeria. The study recommended that firms minimize excessive reliance on debt financing, explore cost-effective financing alternatives, and strengthen equity financing and retained earnings utilization to reduce the adverse effect of finance costs on profitability.*

**Keywords:** *Cost Structure, Operating Cost, Cost of Goods Sold, Finance Cost, Return on Equity, Consumer Goods, Nigeria*

### **1.0 INTRODUCTION**

In the contemporary landscape of global finance, the ability of firms to maintain sustainable financial performance amidst volatile markets has become a central theme in both academic and policy discourse. Financial performance is a critical indicator of corporate health, reflecting a firm's ability to generate profit and create value for shareholders. In developing nations, financial performance is constrained by high operational costs, unstable financial markets, and inconsistent governance structures, making cost structure a central determinant of profitability (Sodiq & Abdullah, 2022). The structural analysis of corporate costs has emerged as a critical driver of profitability, efficiency, and strategic decision-making. For firms operating in emerging markets like Nigeria, where macroeconomic volatility, inflationary trends, exchange rate fluctuations, and infrastructural deficiencies persist, the strategic management of cost elements is not merely a matter of accounting, but a determinant of corporate survival and competitiveness (Akinleye, Bolaji & Olatunji, 2023).



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Despite the strategic importance of cost structure optimization in driving shareholder value, Nigerian firms continue to struggle with erratic profitability, raising questions about the efficiency of their internal cost configurations with financial performance indicators such as return on equity. One major concern is the disproportionate growth of operating costs relative to revenue generation. The cost of goods sold remains volatile due to inflation and supply chain inefficiencies, while finance costs continue to challenge firms due to high borrowing rates and suboptimal capital structure decisions. Although various studies have examined the capital structure performance nexus globally, there remains limited context-specific research that integrates operating cost, cost of goods sold, and finance cost as granular proxies of cost structure in relation to return on equity in Nigeria. Therefore, this study seeks to fill this gap by empirically analysing the independent effects of these cost components on return on equity among Nigerian consumer goods firms.

The main objective of this study is to determine the impact of cost structure on financial performance of listed consumer goods companies in Nigeria. The specific objectives are to:

- i. examine the effect of operating cost on return on equity of listed consumer goods companies in Nigeria;
- ii. determine the impact of cost of goods sold on return on equity of listed consumer goods companies in Nigeria;
- iii. evaluate the influence of finance cost on return on equity of listed consumer goods companies in Nigeria.

## **2.0 LITERATURE REVIEW**

### **Conceptual Review**

#### **Concept of Cost Structure**

The concept of cost structure is foundational in corporate finance and management accounting, describing the composition and proportion of an organization's fixed and variable costs in relation to total operating expenses. It plays a critical role in determining a company's operating leverage, risk exposure, and profitability potential. Arowoshegbe and Idialu (2019) described cost structure as a framework for financial planning and control, helping firms to determine how cost behaviour impacts output, pricing, and investment decisions. In the Nigerian context, Eze, Inyama, and Ezeaku (2020) argue that the failure to manage cost structures effectively has led many Nigerian firms to post declining returns despite increasing revenues. Izedonmi and Okafor (2020) submit that cost structure is no longer a passive accounting category but a strategic tool for driving shareholder value.

#### **Concept of Operating Cost**

Operating costs are the recurring expenses associated with the day-to-day functioning of an organization, encompassing administrative expenses, selling and distribution costs, salaries, utilities, and depreciation. Akinleye, Bolaji, and Olatunji (2023) defined operating costs as all business expenses necessary for the routine running of the firm, excluding non-operational items like financing and investment costs. Ajala (2021) posits that operating costs are divided into variable and fixed components, with the former fluctuating based on production levels and the latter remaining constant regardless of output. Sunmonu, Odeyale, and Kazeem (2024) emphasized that administrative and selling costs, as part of operating expenses, can hinder profitability when not effectively monitored and controlled.

#### **Concept of Cost of Goods Sold**

Cost of goods sold is a fundamental component of corporate cost structure, referring to the direct expenses incurred in the production or acquisition of goods that a company sells during a specific period, including raw materials, direct labor, and manufacturing overheads.



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According to Omodero and Alege (2020), COGS is a critical measure for calculating gross profit and assessing the efficiency of a firm's production process. Edeh, Awojobi, and Okonkwo (2022) define it as the total production or purchase cost of goods actually sold within a reporting period, emphasizing its role in revealing the true cost burden linked to revenue generation. Yusuf and Makinde (2023) highlighted that strategic COGS management can serve as a lever for improving financial performance, especially when firms utilize cost-saving technologies or efficient sourcing methods.

### **Concept of Finance Cost**

Finance cost represents the cost incurred from borrowing funds or financing operations through debt, including interest on loans, overdrafts, bonds, and related charges such as bank fees and lease interest. Ibrahim et al. (2021) note that finance cost negatively impacts the financial performance of firms in Nigeria, as higher debt levels increase financial distress, ultimately reducing firm value. Ajala (2021) observes that finance costs form a significant aspect of the cost structure in Nigerian firms and need strategic management to boost financial returns. Fadare and Adegbe (2020) identify finance cost as one of the critical determinants of net profit margins in Nigerian consumer goods firms.

### **Concept of Return on Equity**

Return on equity is a widely used financial metric that measures the profitability of a company in relation to shareholders' equity, representing the efficiency with which a company uses shareholders' funds to generate profit. Ugbe and Babat (2019) found that investors in North-West Nigeria actively consider ROE when evaluating stock performance and making investment decisions. Olumide et al. (2024) identified that non-performing loans significantly reduce ROE in commercial banks, while Lodikero and Soyinka (2023) established a strong correlation between financial management practices and ROE among listed manufacturing firms in Nigeria.

### **Theoretical Review: Agency Theory**

Agency Theory was originally formulated by Jensen and Meckling in 1976 and is rooted in the principal-agent relationship, where shareholders delegate decision-making authority to managers who are expected to act in their best interest. However, due to the separation of ownership and control, conflicts arise, leading agents to pursue self-serving goals rather than maximizing shareholder wealth. In this context, cost structure becomes a critical channel through which agency conflicts manifest. Managers may inflate operating costs through excessive compensation, overstaffing, or misallocating capital to low-yield projects. Sodiq and Abdullah (2022) assert that agency conflicts significantly affect capital allocation decisions in listed firms, which in turn distort financial performance. Furthermore, weak corporate governance mechanisms in developing countries like Nigeria amplify agency problems, allowing managers to manipulate cost elements for personal gain (Ofoegbu & Akwu, 2021). The relevance of Agency Theory to this study lies in its emphasis on cost monitoring and governance controls. Agency costs can lead to excessive borrowing, reflected in higher finance costs, which depresses return on equity. Ayoola and Odusina (2023) found that board independence and audit committee effectiveness have a significant inverse relationship with finance costs, suggesting that enhanced governance mitigates agency conflicts in cost structure decisions. Despite criticism that the theory presumes agents are always self-interested, it remains a critical theoretical underpinning for this study due to its focus on accountability, transparency, and incentive alignment, factors central to cost structure and financial performance.



## Empirical Review

Fadare and Adegbe (2020) investigated cost management and financial performance of consumer goods companies quoted in Nigeria. The population was 27 firms listed on the Nigerian Stock Exchange, with 10 selected for a 10-year period (2009 to 2018) using purposive sampling. Data were obtained from audited financial statements and analyzed using descriptive and inferential statistics. Results revealed a joint insignificant effect of cost management on net profit margin, with cost of sales and administrative expenses exerting differing levels of influence. The authors concluded that the insignificant effect might be as a result of inconsistent dividend payout, inadequate cost information, and inefficient cost control.

Awotomilusi, Isaiah, Esther, and Yomi (2022) investigated cost structure and financial performance of quoted industrial goods manufacturing companies in Nigeria. Using an ex post facto design, the authors drew a purposive sample of seven quoted firms and extracted ten years of audited financial statements spanning 2011 to 2020. Financial performance was proxied with Return on Assets, while cost structure components served as explanatory variables. The results showed a statistically significant effect of cost structure on ROA, indicating that how costs are composed and managed is consequential for profitability. The authors recommended granular decomposition of cost structure and routine investigation of each cost component.

King, Amahalu, and Okafor (2025) analyzed the effect of cost structure on shareholder wealth maximization among listed manufacturing firms in Nigeria. The study focused on 15 purposively selected consumer goods firms covering 2014 to 2024, using panel estimated generalized least squares regression. The results indicated that cost of sales, cost of selling and marketing, and administrative cost all had positive and significant effects on shareholder return, whereas staff cost exerted a negative and highly significant effect. The study concluded that different cost components have varying effects on shareholder wealth outcomes.

## 3.0 METHODOLOGY

This study adopted an ex post facto research design, which is suitable for investigations where the events have already occurred and cannot be manipulated by the researcher. The population comprised all twenty consumer goods companies listed on the Nigerian Exchange Group. Using purposive sampling, ten companies were selected based on the availability of complete financial data across the study period. The selected firms include Guinness Nigeria Plc, Nestle Nigeria Plc, Nigerian Breweries Plc, Honeywell Flour Mills Plc, Northern Nigeria Flour Mills Plc, Dangote Sugar Refinery Plc, NASCON Allied Industries Plc, McNichols Plc, Unilever Nigeria Plc, and PZ Cussons Nigeria Plc. Secondary data were collected from the audited annual financial reports of the selected firms for a ten-year period spanning 2015 to 2024, yielding 100 firm-year observations. The data extracted comprised cost structure indicators (operating cost, cost of goods sold, and finance cost) as independent variables and return on equity as the dependent variable. The study employed descriptive statistics, correlation analysis, Augmented Dickey-Fuller unit root tests, and panel regression estimation using both fixed effect and random effect models. The Hausman specification test was applied to determine the appropriate model, and ordinary least squares regression modeled the relationships. The model specification is presented below:

### Model Specification

$$ROE_{it} = \alpha_i + \beta_1 OPRC_{it} + \beta_2 COGS_{it} + \beta_3 FINC_{it} + \varepsilon_{it}$$

Where: ROE = Return on Equity; OPRC = Operating Cost; COGS = Cost of Goods Sold; FINC = Finance Cost;  $\alpha$  = Constant Term;  $\beta_1$ - $\beta_3$  = Coefficients of Independent Variables;  $\varepsilon$  = Error Term; i = firm; t = time period.



## 4.0 RESULTS AND DISCUSSION

**Table 1: Descriptive Statistics**

|                     | ROE       | OPRC       | COGS       | FINC       |
|---------------------|-----------|------------|------------|------------|
| <b>Mean</b>         | -0.124052 | 1.06E+08   | 2.34E+08   | 19,205,599 |
| <b>Median</b>       | 0.086170  | 38,435,807 | 87,647,551 | 3,106,371  |
| <b>Maximum</b>      | 2.486971  | 8.13E+08   | 5.33E+09   | 3.93E+08   |
| <b>Minimum</b>      | -25.33779 | 1,364,949  | 993,072    | 0.000000   |
| <b>Std. Dev.</b>    | 2.600314  | 1.68E+08   | 5.69E+08   | 58,550,127 |
| <b>Observations</b> | 100       | 100        | 100        | 100        |

Source: Extracted from EViews Version 13

Table 1 presents the descriptive statistics. Return on equity had a mean value of -0.1241 with a standard deviation of 2.6003, indicating wide variability in profitability across firms. Operating cost averaged  $1.06 \times 10^8$  with substantial dispersion. Cost of goods sold had a mean of  $2.34 \times 10^8$ , implying that production costs represent the largest cost component. Finance cost averaged 19,205,599 with wide spread, suggesting most firms had low financing costs while a few carried extremely high burdens. All variables failed normality tests.

**Table 2: Correlation Analysis**

|             | ROE              | OPRC            | COGS            | FINC   |
|-------------|------------------|-----------------|-----------------|--------|
| <b>ROE</b>  | 1.0000           |                 |                 |        |
| <b>OPRC</b> | -0.0082 (0.9354) | 1.0000          |                 |        |
| <b>COGS</b> | -0.0105 (0.9178) | 0.3902 (0.0001) | 1.0000          |        |
| <b>FINC</b> | -0.2798 (0.0048) | 0.2824 (0.0044) | 0.1366 (0.1754) | 1.0000 |

Source: Extracted from EViews Version 13

Table 2 presents the correlation analysis. ROE has weak and insignificant correlations with OPRC (-0.0082,  $p = 0.9354$ ) and COGS (-0.0105,  $p = 0.9178$ ), but a negative and significant relationship with FINC (-0.2798,  $p = 0.0048$ ), suggesting that higher finance costs reduce return on equity. OPRC and COGS are moderately correlated (0.3902,  $p = 0.0001$ ). Finance cost is the only cost component with a significant adverse association with profitability.

**Table 3: Random Effect Model (Dependent Variable: ROE)**

| Variable                  | Coefficient | Std. Error | t-Statistic | Prob.  |
|---------------------------|-------------|------------|-------------|--------|
| <b>C</b>                  | 0.009238    | 0.383309   | 0.024100    | 0.9808 |
| <b>OPRC</b>               | 1.35E-09    | 1.81E-09   | 0.747300    | 0.4567 |
| <b>COGS</b>               | 1.25E-11    | 4.98E-10   | 0.025020    | 0.9801 |
| <b>FINC</b>               | -1.45E-08   | 4.61E-09   | -3.147558   | 0.0022 |
| <b>R-squared</b>          | 0.095441    |            |             |        |
| <b>Adjusted R-squared</b> | 0.067173    |            |             |        |
| <b>F-statistic</b>        | 3.376336    |            |             |        |
| <b>Prob(F-statistic)</b>  | 0.021501    |            |             |        |
| <b>Durbin-Watson</b>      | 1.138649    |            |             |        |

Source: Extracted from EViews Version 13



The Hausman specification test produced a Chi-Square statistic of 1.4233 with a probability value of 0.7001, confirming that the random effect model is the appropriate estimator. Table 3 presents the random effect regression results. For operating cost (OPRC), the coefficient of 1.35E-09 with a probability value of 0.4567 shows that operating cost does not exert a meaningful impact on profitability. The null hypothesis that operating cost has no significant effect on return on equity is therefore accepted. For cost of goods sold (COGS), the coefficient of 1.25E-11 with a probability value of 0.9801 confirms the insignificance of this variable in predicting profitability. The null hypothesis that cost of goods sold has no significant impact on return on equity is therefore accepted.

For finance cost (FINC), the coefficient of -1.45E-08 with a probability value of 0.0022 reveals that a one-unit increase in finance cost leads to a significant reduction in return on equity. The negative sign and highly significant probability value at the 1 percent level demonstrate a strong adverse impact of financial expenses on firm profitability. The null hypothesis is therefore rejected. The R-squared value of 0.0954 indicates that about 9.5 percent of the variation in return on equity is explained by the independent variables, while the F-statistic of 3.3763 ( $p = 0.0215$ ) confirms the model is jointly significant. These findings align with Fadare and Adegbe (2020) and are consistent with King, Amahalu, and Okafor (2025), who reported varying effects of cost components on financial outcomes. The significant negative effect of finance cost corroborates Ibrahim et al. (2021).

## **5.0 CONCLUSION AND RECOMMENDATIONS**

This study investigated the effect of cost structure on the financial performance of listed consumer goods companies in Nigeria, examining the effect of operating cost, cost of goods sold, and finance cost on return on equity using secondary data from ten firms over a ten-year period. The Hausman specification test confirmed the random effect model as the most suitable estimator. With respect to the first objective, the regression results revealed that operating cost had a positive but statistically insignificant effect, implying that changes in operating cost did not produce measurable effects on firm profitability. The second objective demonstrated that cost of goods sold had a positive but extremely small and insignificant effect on return on equity.

The third objective indicated that finance cost had a negative and statistically significant effect at the 1 percent level, confirming that increases in finance costs significantly reduce profitability and that high debt servicing weakens shareholder returns. Overall, the study confirms that while operating and production costs are essential components of firm expenditure, it is the burden of finance cost that significantly explains variations in return on equity of consumer goods firms in Nigeria.

Based on the findings, since operating cost has no significant effect on return on equity, firms should adopt cost management strategies that ensure operational expenditures are effectively streamlined. Because cost of goods sold was found to have no significant impact on profitability, companies should focus on improving production efficiency and value addition rather than reducing costs indiscriminately. Since finance cost significantly reduces return on equity, firms should minimize excessive reliance on debt financing and explore cost-effective financing alternatives. Strengthening equity financing, improving retained earnings utilization, and negotiating favorable interest terms are critical steps. Finally, regulatory bodies should create enabling environments that support cost-efficient operations and sustainable financing options for consumer goods companies.



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