



Global Scientific and Academic Research Journal of Multidisciplinary Studies

ISSN: 2583-4088 (Online)

Frequency: Monthly

Published By GSAR Publishers

Journal Homepage Link- <https://gsarpublishers.com/journals-gsarjms-home/>



Operating Costs and Profitability of Listed Consumer Goods Firms in Nigeria

By

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Article History

Received: 15/08/2026

Accepted: 07/09/2026

Published: 09/09/2026

Vol – 5 Issue –9

PP: - 01-05

Abstract

The paper examined the effect of operating costs on the return on asset of Nigerian consumer goods companies. Panel data regression analysis adopted over a ten-year period (2015-2024). It was found out that the Ordinary Least Squares (OLS) analysis results demonstrate that both Labour Cost (LC) and Overhead Cost (OC) positively impact performance results. The performance results of the study showed statistical significance because the p-values for both Labour Cost (LC) and Overhead Cost (OC) were 0.0355 and 0.0293 respectively. The research showed that material costs decrease ROA by 32% because businesses use their assets less efficiently during inflation and forex market instability periods. It was concluded that operating costs have significant effect on Return on Assets (ROA) of listed consumer goods firms in Nigeria. The paper suggested that firms should implement activity-based costing to track material expenses precisely. Digital tools enable management to allocate overhead costs through their rationalization process. Automation decreases indirect production expenses during its entire operational period.

Keywords: administrative cost, labour cost, material costs, operating cost, overhead cost, ROA

1.0 Introduction

Financial performance in corporate finance and performance assessment functions is a measurement that shows how much profit a company provides to its shareholders and its capital providers in exchange for the resources it utilizes. The company uses Return on Assets (ROA), Return on Equity (ROE), and Earnings per Share (EPS) as its main performance measurement tools to evaluate operational efficiency and profitability, which demonstrate the company's ability to transform inputs into profits and shareholder value (Adu et al., 2025). ROA shows how effectively a company uses its entire assets to produce profits, while ROE shows the returns that shareholders receive, and EPS shows the net earnings that belong to each common stock share (Oyewunmi, 2024).

Operating costs of companies depend on direct materials costs, labor expenses, manufacturing overhead costs, and distribution and administrative expenses to sustain their fundamental business operations. The business cost structure includes these costs because they impact both company profitability and financial performance (Akinleye & Fakorede, 2025). The production and operational expenses of Nigerian consumer goods companies have increased because of three

factors which include inflation, exchange rate fluctuations and supply chain disruptions. These rising costs now present a major challenge for companies to maintain their profit generation and business growth activities (Oyedare&Oyedokun, 2025).

The worldwide evidence from advanced economies has documented extensive cost-performance relationships while Nigeria's emerging markets encounter specific institutional and macroeconomic obstacles that result from foreign exchange volatility and infrastructure limitations which affect their operational expenses and financial results through inflation and currency effects on input costs (Adeyemi&Udeh, 2025). The Nigerian listed consumer goods sector needs specific research to understand how its cost-performance relationships function because of its particular contextual factors.

Statement of the Problem

Manufacturing and consumer goods companies spend more than half their total costs on operating expenses. The costs of operations directly impact both operating profit and net income and all financial results of the company. The management of operating costs results in better asset usage

which leads to increased shareholder earnings and better earnings per share results. The existing evidence shows mixed results for different situations because researchers have not reached a definite conclusion yet (Adu et al., 2025).

Developing economies present two opposite findings about how operating expenses affect Return on Assets (ROA). Organizations that manage their production and overhead expenses succeed to better asset performance and profitability according to research findings. The study found that administrative and overhead expenses increase lead to lower ROA because revenue growth does not match the increase in expenses. The research shows that operating expenses can either improve or diminish asset performance depending on the particular cost structure and the efficiency of management practices.

The primary drawback which affects studies from developed economies derives from their use of aggregated research methods. The use total operating expenses and selling general and administrative expenses (SG&A) as their main cost measurement method instead of using detailed operating expense breakdowns. The business operations which use materials and labor and overheads and administrative expenses to produce profit for the company remain hidden from view. The stable institutional environments of the study sites still suffer from insufficient explanation regarding the connection between cost and asset efficiency (Adu et al., 2025).

Data on ROA and operating costs are limited and incomplete in Nigeria. Akinleye and Fakorede (2025) demonstrate that material costs and overhead expenses both have a substantial impact on return on assets in publicly traded consumer goods companies. Their analysis excludes labor costs and administrative expenses which prevents complete understanding of the situation. Adesina and Tihamiyu (2025) explain that Nigerian studies on profitability examine the topic broadly while treating ROA as an efficiency measure based on asset performance. Total operating costs create an empirical gap which shows their impact on asset utilization in publicly listed consumer goods companies.

Objective

The broad objective of this study is to investigate operating costs and profitability of listed consumer goods firms in Nigeria while the specific objective is to examine the effect of operating costs on Return on Assets (ROA) of listed consumer goods firms in Nigeria;

Research Question

What is the effect of operating cost (material cost, labour cost, overhead and administrative costs on Return on Assets (ROA) of listed consumer goods firms in Nigeria.

Research Hypothesis

H₀₁: Operating costs do not have significant effect on Return on Assets (ROA) of listed consumer goods firms in Nigeria.

2.0 Literature Review

Operating Cost

Operating costs refer to the usual expenses incurred by an organization due to its normal operations (exclude those of interest and tax), generally grouped into cost of goods sold (COGS)—i.e. the direct production costs including, for example, materials and labor—and operating expenses (OPEX)—which include selling, general, and administrative expenditures (Adu&Abimboye,2026). These costs are very important indicators as to how efficient the firm is in its operations, which will be a factor in the direct bearing it has on determining net profitability and the financial health of the firm (Adu&Ejiks,2025).

Material Costs

Material prices are defined as the costs incurred in obtaining, transporting, and utilizing raw materials in the manufacturing process of goods and services. It goes without saying that material costs are an integral part of the cost of goods sold (COGS), constituting another key input towards overall efficacies and profitability of production. Raw materials, packaging, components, and miscellaneous consumables that finally become part of the product are all treated as material costs in manufacturing and consumer goods (Adu et al., 2026).

Overheads Costs

Overhead costs represent the indirect but essential expenditures that sustain a firm's productive capacity, operational continuity, and service delivery. The concept includes all expenses that cannot be linked directly to a particular product, project, or activity, which includes expenses for depreciation, utilities, equipment maintenance, factory supervision, quality control, and information technology systems. The foundational principles of overhead cost management depend on management accounting, which uses cost allocation and cost behavior theories to establish procedures for indirect cost identification and classification and assignment to outputs according to resource consumption and causality relationships (Adu&Ejiks, 2026). Current research shows that overhead costs function as more than basic expenses because they serve as key elements that enable businesses to operate more efficiently and maintain better quality control standards (Awotomilusi et al., 2022).

Administrative Costs

The costs of administration reveal the financial aspects that organizations need to spend in order to conduct their governance and operational work. The expenses cover all costs that business activities require to manage their operations because they deal with business planning and operational control, and work support activities which do not involve production or sales work (Adu et al., 2025).

Profitability

It is the ability of a firm to generate more revenue than its expenses, reflecting its financial health and operational efficiency. It refers to the capacity of a business to use its resources effectively to generate profits from its operations. It is a key indicator of financial performance showing whether a company can sustain itself, reward investors and support growth over time. Profitability measures the relationship

between revenues (income from sales) and expenses (cost of production, operation and overhead) to determine the net gain (Adu&Ejiks,2026).

Return on Assets

The Return on Assets (ROA) metric functions as an essential financial performance measurement tool that demonstrates how efficiently a company utilizes its total asset base to generate net earnings. The measurement evaluates management's ability to transform all company resources into profitable outcomes, which function as both a core operational performance metric and a resource distribution assessment tool (Adu et al.,2026). The ROA calculation establishes a net profit to total asset ratio, which enables investors and managers to assess a company's capacity to transform its asset investments into net income.

3.0 Methodology

Population of the Study

The population of this study consists of all consumer goods firms listed on the Nigerian Exchange Group (NGX) as at **31 December 2024**. According to the NGX sectoral classification, the consumer goods sector comprised **twenty-one (21) listed firms** at that date.

Sampling Technique and Sampling Size

The research used a census method for its study, but limited its study sample to companies that had complete annual

financial records that were accessible to the public throughout the entire ten-year period from 2015 to 2024.

Method of Data Analysis

Regression method was adopted

4.0 Results, Data Analysis, Presentation and Discussion

4.1 Hypothesis Testing

Hypothesis One: Operating costs do not have significant effect on Return on Assets (ROA) of listed consumer goods firms in Nigeria.

The Ordinary Least Squares (OLS) analysis results demonstrate that both Labour Cost (LC) and Overhead Cost (OC) positively impact performance results. The performance results of the study showed statistical significance because the p-values for both Labour Cost (LC) and Overhead Cost (OC) were 0.0355 and 0.0293 respectively. The findings suggest that performance levels improve as both labor and overhead expenses increase. Material Cost (MC) and Administrative Cost (AC) show a positive relationship but lack statistical significance. The Fixed Effects model fails to show any significant effect for all tested variables. The results indicate that most of the observed differences between groups arise from specific firm-related effects. The Random Effects model maintains the significance of LC with a p-value of 0.0381. OC shows statistical significance at $p = 0.0225$ while MC and AC show no statistically significant results.

Table 4.1: Summary of Pooled Least Squares, Fixed Effect and Random Effect

	OLS	FIXED EFFECT	RANDOM EFFECT	
			MC	
Coefficient		0.006180	0.00421	0.006180
SE		0.020637	0.029488	0.020923
t-stat		0.299468	0.004762	0.295370
p-v		0.7651	0.9962	0.7682
			LC	
Coefficient		0.049205	0.023127	0.049205
SE		0.023153	0.029408	0.023475
t-stat		2.125176	0.786420	2.096096
p-v		0.0355	0.4333	0.0381
			OC	
Coefficient		0.935077	0.022389	0.036077
SE		0.429001	0.034210	0.030280
t-stat		2.180200	0.654451	1.191438
p-v		0.0293	0.5141	0.02251
			AC	
Coefficient		0.046112	0.036131	0.046112
SE		0.030581	0.034949	0.031005
t-stat		1.507874	1.033804	1.487241
p-v		0.1341	0.1996	0.1395
			C	
Coefficient		0.906968	2.737789	0.906968
SE		0.980433	2.117082	0.994035
t-stat		0.925068	1.290356	0.912410
p-v		0.3567	0.1966	0.3633

R ²	0.138433	0.199381	0.138431
Adjusted R ²	0.11081	0.086019	0.11681
F-stat	5.021040	1.758802	5.021040
p-v	0.000871	0.045709	0.00871
Durbin - Watson	1.815331	1.921808	1.815331
Hauseman's Test			
- Chi- Sq		4.173691	
-p-v		0.3830	

indirect production expenses during its entire operational period.

Corporate boards require a budgeting method which determines their administrative costs through zero-based budgeting.

Source: The Researcher (2026)

The Fixed Effects model achieves the best model fit because it reaches the highest R² value of 0.1994, yet its adjusted R² value remains low at 0.0860. The OLS and Random Effects models explain approximately 14% of the total variation. All models demonstrate joint significance through their F-statistics results. The Durbin-Watson statistics which range from 1.8 to 1.9 show that there is no significant autocorrelation present. The Hausman test shows no significant results because its p-value equals 0.3830. The results show that Random Effects model represents the better choice. The preferred model demonstrates that labour and overhead expenses have a major impact on performance outcomes while material and administrative expenses do not affect performance.

Discussion of Hypothesis

The model equation of objective one:

$$ROA = \alpha + \beta_1(MC) + \beta_2(LC) + \beta_3(OC) + \beta_4(AC) + \mu$$

This, taken from Random Effect in Table 4.5 becomes:

$$ROA = \alpha + \beta_1(0.006180) + \beta_2(0.049205) + \beta_3(0.036077) + \beta_4(AC) + \mu$$

The random effects model shows that MC remains positive, yet its impact is statistically insignificant because its value stands at 0.006180. The LC results reached statistical significance at the 0.049205 level with positive outcomes. The first result demonstrates the most pronounced effect.

5.0 Summary, Conclusion and Recommendations

Summary of Findings

The research shows that material costs decrease ROA by 32% because businesses use their assets less efficiently during inflation and forex market instability periods.

Conclusion

Operating costs have significant effect on Return on Assets (ROA) of listed consumer goods firms in Nigeria.

Recommendations

Firms should implement activity-based costing to track material expenses precisely. The approach aims to eliminate waste which occurs because of forex fluctuations and input price increases.

Digital tools enable management to allocate overhead costs through their rationalization process. Automation decreases

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