

COST STRUCTURE AND SHAREHOLDER WEALTH MAXIMISATION AMONG LISTED MANUFACTURING FIRMS IN NIGERIA

Sunday Ozioma King¹ Nestor Ndubuisi Amahalu² Obumneme Obiora Okafor³

^{1,2&3}Department of Accountancy, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.

Emails: saintsunnygroup@gmail.com¹; nn.amahalu@unizik.edu.ng²; oo.okafor@unizik.edu.ng³

Correspondence: saintsunnygroup@gmail.com

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ABSTRACT

The study examined the effect of cost structure on shareholder wealth maximisation among listed manufacturing firms in Nigeria. The specific objective was to ascertain the effect of cost of sales, cost of selling and marketing, staff cost and administrative cost on the shareholder return of listed manufacturing firms in Nigeria. Ex-post facto research design was adopted in the study. Twenty listed consumer goods firms made up the population of the study while purposive sampling was used to select fifteen listed consumer goods firms. Secondary data used were sourced from the annual reports of the firms over an eleven year period from 2014 to 2024. Preliminary analyses were done using descriptive test, correlational analysis, linearity test, chow test, heteroskedasticity test, autocorrelation test, and cross-sectional dependence test. Hypotheses were tested using panel estimated generalised least square regression. The study found that: cost of sales has a positive and significant effect on shareholder return of listed manufacturing firms in Nigeria ($\beta = 0.0384$, $p = 0.0000$); cost of selling and marketing also exerts a positive and significant effect on shareholder return of listed manufacturing firms in Nigeria. ($\beta = 0.0216$, $p = 0.0326$); staff cost shows a negative and highly significant effect on shareholder return of listed manufacturing firms in Nigeria ($\beta = -0.3162$, $p = 0.0000$); administrative cost has a positive and significant effect on shareholder return of listed manufacturing firms in Nigeria ($\beta = 0.2023$, $p = 0.0002$). In conclusion, not all cost components carry equal weight in shareholder wealth outcomes, and that the structure and composition of firm expenditures play a decisive role in influencing the financial rewards shareholders derive from their investment. The study recommends that production and supply chain directors of listed manufacturing firms in Nigeria should prioritise strategic investments in raw material sourcing, inventory control systems, and production efficiency technologies.

Key words: Cost Structure, Cost of Sales, Cost of Selling, Shareholder Return, Shareholder Wealth Maximisation.

INTRODUCTION

In today's highly competitive and rapidly evolving global business environment, organizations are increasingly under pressure to enhance operational efficiency, maximize profitability, and deliver sustainable value to their stakeholders. The manufacturing sector, in particular, plays a pivotal role in the economic development of both developed and developing nations by driving industrialization, employment, and wealth creation (Ogunjobi, Oyeniyi & Oluga, 2025). In Nigeria, the manufacturing industry is a critical component of the non-oil sector, contributing significantly to the nation's Gross Domestic Product (GDP) and employment generation (Umunnakwe & Amahalu, 2024). However, this sector continues to face a myriad of challenges ranging from infrastructural deficiencies, unstable power supply, high cost of production, inflationary pressures, exchange rate volatility, and intense competition from foreign imports. These challenges have significantly eroded profit margins, reduced productivity, and posed threats to the sustainability and financial viability of manufacturing firms (Ubeh, Okoye, Nwoye & Amahalu, 2024). Consequently, there is an increasing demand for firms to adopt innovative and sustainable strategies that can mitigate cost pressures while enhancing value creation for shareholders. One such strategy that has gained prominence in contemporary business discourse is how to manage firm cost structure. Thus, Umemezilem and Okuwa (2024) argued that managing cost structure of a firm has become an imperative managerial tool in today's dynamic and resource-constrained business environment.

Unlike traditional cost-cutting measures that are often reactive and short-term in nature, there is need for strategic tactics to cost structure management by involving a proactive, deliberate, and long-term approach that aligns with an organization's overall strategic objectives. It encompasses a holistic evaluation of the firm's operations, processes, and value chain activities with the aim of identifying areas where costs can be minimized without compromising the quality of goods and services or the long-term competitiveness of the firm. Cost structure in today's business environment is often managed using lean manufacturing practices, outsourcing non-core activities, process reengineering, supply chain optimization, digital transformation, energy efficiency, and workforce rationalization. In the face of increasing operational costs, dwindling profit margins, and growing shareholder expectations, organizations are compelled to integrate cost reduction strategies into their broader corporate strategy (Oshiole, Okoye & Amahalu, 2024)). The relevance of managing firm cost such cost of sales, selling and marketing cost, administrative cost and staff costs lies not only in its

capacity to enhance short-term profitability but also in its potential to promote long-term value creation, market competitiveness, and financial sustainability (Adesina & Tiamiyu, 2025). The concept of cost structure is rooted in the broader framework of strategic management and financial performance optimization (Isicheli, Ozoji & Amahalu, 2024). It requires firms to adopt a value-based management approach, where decisions regarding resource allocation, process improvement, and operational restructuring are made in alignment with the firm's strategic goals and shareholder interests. In the Nigerian manufacturing context, cost pressures have continued to mount due to macroeconomic instability, high inflation, energy cost burden, and infrastructural bottlenecks (Amahalu, Aruna & Orji-Okafor, 2024). These factors have necessitated the need for firms to pursue cost-efficient strategies that can enhance performance and ensure long-term survival. While several firms in Nigeria have initiated various cost containment programs, the extent to which such strategic cost management efforts translate into improved shareholder wealth remains an important area of inquiry. Adibeli and Amahalu (2023) submitted that shareholder wealth maximisation remains the ultimate goal of any profit-oriented organization and is often measured through indicators such as share price appreciation, dividend payout, return on equity, and earnings per share.

However, the linkage between cost structure and shareholder wealth maximisation is complex and multifaceted, requiring empirical exploration. The structure of firm-level cost can have significant implications for shareholder wealth maximisation in several ways. Firstly, cost reduction enhances net profitability by reducing overhead and production expenses (Nworie & Nwoye, 2023), thereby increasing the earnings available for distribution to shareholders in the form of dividends or retained earnings. Secondly, effective cost reduction strategies can improve a firm's operating efficiency, thereby enhancing its competitive positioning and enabling it to offer better value propositions in the marketplace. This can lead to increased market share, higher sales revenue, and improved financial performance, which in turn positively influences investor confidence and share price performance. Thirdly, managing the cost structure facilitates resource reallocation towards high-value projects and innovation-driven investments that contribute to long-term growth and shareholder value. Moreover, firms that demonstrate prudent cost management are often perceived as financially disciplined and strategically focused, attributes that are highly valued by investors and capital market participants (Amahalu, Oshiole, Okoye, & Mbonu, 2024). Conversely, it is important to note that not all cost reduction initiatives lead to positive outcomes. If poorly implemented, cost reduction programs may result in unintended consequences such as employee disengagement,

quality compromise, and customer dissatisfaction (Nwankwo, Amahalu, Nwagbala & Okafor, 2024), which may ultimately erode shareholder value. Therefore, the effectiveness of cost reduction initiatives must be assessed not merely in terms of cost savings, but also in relation to their impact on broader organizational objectives, including customer satisfaction, innovation capacity, operational agility, and shareholder wealth creation. In the Nigerian manufacturing sector, where investor confidence is often fragile and capital markets are sensitive to firm performance indicators, the relationship between strategic cost management and shareholder wealth maximisation becomes even more critical.

The rising cost of business operations in Nigeria poses a significant threat to the sustainability of manufacturing firms, as escalating expenses in energy, raw materials, logistics, and regulatory compliance continue to erode profit margins (Agweda, Okoye, Amahalu & Egolom, 2024). The persistent power supply challenges force manufacturers to rely heavily on expensive alternative energy sources, such as diesel generators, which drastically increase operational costs. Additionally, the devaluation of the naira and inflationary pressures have made the importation of essential raw materials more expensive, further straining production budgets. High-interest rates on loans and multiple taxation policies imposed by different government agencies further worsen the financial burden on manufacturers. Consequently, many firms struggle to remain competitive, leading to reduced production capacity, downsizing, and, in extreme cases, business closures, thereby threatening economic growth and employment in the sector (Ndu, Ifurueze & Amahalu, 2024). In spite of the growing need for managing firm cost structure such as staff cost, marketing cost, cost of sales and administrative cost, many listed manufacturing firms continue to struggle with high production costs, inefficient operational practices, and rising overheads, largely due to poor infrastructural facilities, volatile exchange rates, energy crises, and inflationary pressures (Agweda, Okoye, Amahalu, Egolom, & Obi, 2024). These external and internal inefficiencies have resulted in suboptimal implementation of cost reduction strategies, with many firms relying on ad hoc or short-term cost-cutting measures that fail to deliver sustainable benefits. Moreover, some firms prioritize cost reduction at the expense of quality, innovation, and employee motivation, which undermines productivity and long-term performance (Sylvanus, Okoye, Amahalu, Obi & Ozoji, 2024). As a consequence of these inefficiencies, many listed manufacturing firms in Nigeria experience diminishing profit margins, weak return on investment, low dividend payouts, and poor share price performance - all of which are detrimental to shareholder wealth maximisation. The inability to implement strategic cost

management that could optimise firm cost structure effectively has not only hampered firms' competitiveness in both local and international markets but has also led to eroded investor confidence and declining firm valuation. When cost reduction efforts are misaligned with the overall strategic goals of the firm, they can result in compromised product quality, and loss of market share, further exacerbating financial instability. For shareholders, these outcomes translate into reduced wealth accumulation and lower returns on their investment.

The literature on cost structure in Nigeria's manufacturing sector is extensive but lacks a clear link to shareholder wealth maximization. Studies focus on cost control and profitability (Adesina & Tiamiyu, 2025; Ezennia & Amahalu, 2024), yet none directly address cost structure's impact on shareholder wealth. While Ayeni-Agbaje, Ogundipe, and Bamidele (2024) and Mba, Mbonu and Amahalu, (2023) examine cost reduction techniques, their connection to shareholder wealth remains underexplored. In addition to this, the methodologies adopted by previous scholars failed to account for the possibility of cross-sectional dependence among the firms. It is therefore paramount that the above gaps be attended to by conducting this pertinent study.

Objectives

The study examined the effect of cost structure on shareholder wealth maximisation among listed manufacturing firms in Nigeria. The specific objectives are as follows:

1. to ascertain the effect of cost of sales on the shareholder return of listed manufacturing firms in Nigeria.
2. to determine the effect of cost of selling and marketing on the shareholder return of listed manufacturing firms in Nigeria.
3. to ascertain the effect of staff cost on the shareholder return of listed manufacturing firms in Nigeria.
4. to examine the effect of administrative cost on the shareholder return of listed manufacturing firms in Nigeria.

LITERATURE REVIEW

Cost Structure

Cost structure refers to the systematic arrangement and distribution of all the costs a company incurs in its effort to produce goods, deliver services, and sustain its operations (Amahalu, Okudo & Ezechukwu, 2023). It represents the framework that outlines how an organization's total costs are organized relative to its activities, products, or services. Essentially, the cost structure provides a blueprint of how resources are consumed within the business and reflects the relationship between different categories of expenses. It is a fundamental aspect of corporate financial strategy because it influences pricing, profitability, competitiveness, and overall financial sustainability. In essence, the concept of cost structure encapsulates how efficiently or inefficiently a firm operates, given its specific production and operational dynamics. According to Amahalu, Okudo, Okafor & Onyeka, (2023), a well-designed cost structure ensures that a company can maintain profitability even when market conditions fluctuate, while a poor cost structure can expose the firm to unnecessary risks and financial vulnerabilities. Cost structure embodies both the magnitude and behavior of different costs as operational activities scale up or down. This means it is not only about what costs are incurred but also about how those costs behave as the company's volume of production or sales changes.

Furthermore, cost structure serves as a critical determinant of corporate decision-making. It influences strategic choices such as product pricing, resource allocation, expansion, outsourcing, and even the pursuit of economies of scale (Amahalu, Okudo & Eyide, 2023). A company's ability to control its cost structure can directly affect its financial outcomes and capacity to maximize shareholder wealth. In this regard, cost structure is not a passive record of expenses; it is an active tool through which firms can manage profitability, maintain competitive advantage, and align operational activities with financial goals. Cost structure also plays a vital role in financial reporting and performance evaluation. Investors, shareholders, and financial analysts scrutinize a company's cost structure to understand the sustainability of its profit margins, the resilience of its business model, and the efficiency of its management practices (Amahalu, Okudo & Eyide, 2023). The transparency and rational organization of costs help stakeholders assess whether a company is strategically positioned for growth or vulnerable to financial stress. Hence, in the context of shareholder wealth maximization, cost structure becomes not just a technical accounting concept but a strategic foundation that underpins the creation of long-term value for owners of the firm.

Cost of Sales

The cost of sales, also referred to as the cost of goods sold (COGS), represents the direct expenses associated with producing or acquiring the products that a company sells during a specific period. It encompasses all the costs directly tied to the creation of goods or services that a company offers to its customers, such as raw materials, labor costs, and manufacturing expenses (Amahalu & Okudo, 2023). The cost of sales is a critical financial metric for businesses, as it directly influences the profitability of a company by determining how much it costs to generate revenue through product sales. In essence, it is the amount spent on the production or procurement of goods that are then sold to generate income (Amahalu & Moedu, 2023).

Cost of sales is an essential component in determining a company's gross profit, which is calculated by subtracting the cost of sales from total revenue (Aggreh, Abiahu, & Nworie, 2023). The calculation of cost of sales can vary depending on the type of business. For manufacturing companies, it typically includes direct labor, raw materials (Amahalu & Osonwa, 2023) and manufacturing overhead. In retail, it reflects the costs associated with purchasing goods for resale, including the wholesale price and transportation costs. For service-based businesses, the cost of sales might include labor costs directly tied to service delivery. Understanding the cost of sales is crucial not only for assessing operational efficiency but also for setting the appropriate sales price to ensure profitability. Companies that can effectively control and reduce their cost of sales can potentially increase their profit margins and improve their financial performance.

H₀₁. Cost of sales has no significant effect on the shareholder return of listed manufacturing firms in Nigeria.

Cost of Selling and Marketing

The cost of selling and marketing refers to the expenses a company incurs in promoting, selling, and distributing its products or services to customers. These costs are part of the broader category of operating expenses, and they encompass all activities that aim to create demand, build brand awareness, and secure sales. The cost of selling and marketing includes a variety of expenditures such as advertising, sales promotions, public relations campaigns, salaries of sales and marketing staff, market research, and distribution costs (Mbonu & Amahalu, 2023). These activities play a crucial role in generating customer interest, driving sales, and ensuring the company's competitive positioning in the marketplace.

Selling and marketing costs are essential for a company's revenue-generating activities. These costs help in the creation and implementation of strategies that attract customers, retain them, and encourage repeat business. Advertising costs may include television, radio, online ads, and sponsorships, while promotional activities could involve discounts, coupons, or special offers to incentivize purchases. Commissions for sales teams are another significant component, as they directly contribute to the acquisition of new customers and the retention of existing ones. Marketing research, which helps identify customer preferences, market trends, and competitive pressures, also forms part of this category.

H₀₂. Cost of selling and marketing has no significant effect on the shareholder return of listed manufacturing firms in Nigeria.

Staff Cost

Staff cost refers to the total expenses incurred by a company in relation to its employees. It encompasses all the financial commitments a business makes to compensate its workforce for their services. This includes salaries, wages, bonuses, commissions, benefits, and other forms of remuneration. Staff cost is a significant component of a company's overall operating expenses, especially for businesses that rely heavily on human resources for the delivery of goods and services. Staff cost is a crucial aspect of a company's financial management because it directly affects profitability and operational efficiency (Okudo & Amahalu, 2023). High staff costs relative to revenue may indicate inefficiencies in workforce management or a misalignment between compensation and productivity. Conversely, low staff costs could be a sign of underinvestment in human capital, which may lead to reduced employee satisfaction, high turnover, or a lack of necessary skills within the organization (Chikaire-Ofoego & Egolum, 2024). Therefore, managing staff costs effectively is important for maintaining a balance between attracting and retaining talent and ensuring the company's long-term financial health.

The concept of staff cost is also significant when assessing the sustainability and scalability of a business model. For example, businesses that are labor-intensive may face challenges in controlling staff costs if the demand for their products or services fluctuates significantly. Conversely, companies with a highly automated business model may have lower staff costs, as they can rely on technology to perform tasks traditionally done by employees. Managing staff costs involves analyzing and forecasting labor needs, adjusting staffing levels in response to business cycles, and ensuring that the compensation packages are competitive yet aligned

with the company's revenue generation capabilities. Thus, staff cost is a central element in determining a company's cost structure and profitability (Chikaire-Ofoego & Egolum, 2024). While it represents a necessary expenditure for most businesses, it must be managed strategically to ensure that the costs are justified by employee productivity and organizational performance. The effective management of staff costs contributes not only to financial stability but also to the long-term growth and competitiveness of the business in the marketplace.

H₀₃. Staff cost does not significantly affects the shareholder return of listed manufacturing firms in Nigeria.

Administrative Cost

Administrative cost refers to the expenses incurred by a business to manage and support its day-to-day operations. These costs are typically associated with the general management and oversight functions of an organization, and they do not directly contribute to the production of goods or services (Amahalu & Okudo, 2023). Administrative costs encompass a wide range of activities such as executive salaries, office supplies, utilities, office rent, legal fees, accounting services, and other expenses required for the administrative functions of the company. These costs are essential for the smooth operation of the organization, but they are considered indirect costs since they are not directly linked to the production process. The concept of administrative costs is critical in understanding the financial health of a company because, while necessary, these expenses can become burdensome if not properly controlled. A company with excessively high administrative costs may face difficulties in maintaining profitability, especially if these costs do not contribute to the company's core value-creating activities (Amahalu & Okudo, 2023). Therefore, companies often seek ways to optimize administrative spending without sacrificing the quality of their management or the necessary support functions. For instance, reducing overhead costs through digital transformation or outsourcing certain administrative functions can lead to more efficient operations.

H₀₄. Administrative cost has no significant effect on the shareholder return of listed manufacturing firms in Nigeria.

Shareholder Wealth Maximisation

Shareholder wealth maximization is a financial management principle that asserts that the primary goal of a corporation is to increase the wealth of its shareholders (Frances & Nworie, 2025). This objective is typically pursued by maximizing the value of the company's stock,

which in turn increases the value of the shareholders' investments. The concept is grounded in the belief that the success of a company should be measured by its ability to provide the highest possible return on investment for its shareholders, thereby ensuring their financial wellbeing. Shareholder wealth maximization takes into account not only the current profitability of the company but also its future growth potential, which directly impacts the long-term value of the stock (Amahalu & Okudo, 2023). The idea behind shareholder wealth maximization is that by focusing on increasing the value of the company's stock, the company will create the greatest possible benefit for its investors. This principle is typically realized through strategies such as increasing earnings, growing revenue, optimizing operational efficiency, and managing risks effectively. In doing so, a company aligns its operational decisions with the interests of its shareholders, ensuring that business activities and investments are designed to increase shareholder value over time.

Shareholder Return

Shareholder return refers to the financial return that shareholders receive from their investments in a company (Ganti, 2025). It represents the gain or loss made by an investor in the form of dividends, capital appreciation, or a combination of both. Shareholder return is an essential indicator of a company's financial performance and its ability to generate value for its investors. It is commonly expressed as a percentage and can be calculated by comparing the current value of a shareholder's investment with its initial value, taking into account any dividends received over the investment period. High shareholder return indicates that the company is effectively generating value for its investors, while low or negative returns suggest that the company may be underperforming in terms of both profitability and stock price appreciation (Amahalu, Okoye & Nnadi, 2023).

In a broader sense, shareholder return is a reflection of how well a company's management is fulfilling its goal of wealth maximization for its shareholders (Ganti, 2025). A company that consistently delivers strong shareholder returns is likely to attract more investment, increase its stock price, and enhance its overall market value. Conversely, poor shareholder returns can lead to investor dissatisfaction, stock price declines, and potentially a loss of investor confidence (Amahalu, Ezechukwu & Okudo, 2022). As such, companies strive to enhance shareholder return by optimizing their operations, pursuing growth opportunities, and making strategic investments that will increase profitability and stock value. Thus, shareholder return is a key metric for assessing the financial success of a company from the perspective of its investors. By monitoring and maximizing shareholder return, companies ensure that they are

meeting the expectations of their shareholders and maintaining a strong financial position in the market.

Theoretical Framework

Transaction Cost Economics (TCE) Theory

The Transaction Cost Economics (TCE) Theory was first propounded by Ronald H. Coase in his landmark 1937 article titled “*The Nature of the Firm*” (Coase, 1937). The central postulation of Transaction Cost Economics is that firms aim to organize their activities in ways that minimize transaction costs — the costs associated with searching for information, negotiating, monitoring, and enforcing contracts. According to the theory, firms choose between different governance structures (such as markets, hierarchies, or hybrids) based on the comparative transaction costs of each option (Okoye, Amahalu & Okoye, & Obi, 2022). TCE emphasizes three key determinants of transaction costs: asset specificity, uncertainty, and frequency of transactions. When transaction costs in the market are higher than within the firm, internalizing the activity becomes more efficient. Hence, firms engage in strategic decision-making to manage costs not only in production but also in coordination and control processes, which in turn affect their overall efficiency and performance.

Empirical Review

Aniefor, and Amahalu (2022) explored how cost management influences profitability in Nigeria’s manufacturing sector, specifically within firms producing industrial and consumer goods. The study applied descriptive statistics and panel regression analysis to examine how cost management variables relate to profitability indicators, including Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). Data were sourced from the annual reports of firms listed on the Nigerian Exchange Group (NGX) covering the years 2014 to 2021. The findings indicated that administrative expenses, marketing and distribution costs, and high production expenditures negatively affect profitability.

Okudo, Mbonu and Amahalu (2022) explored the influence of strategic cost management practices on the organizational performance of Nigerian manufacturing firms. Using a survey design, the study targeted 70 staff members from firms like Guinness Nigeria Plc, Coca-Cola Nigeria Plc, Nigerian Breweries Plc, and Delta Glass Plc, with a final sample size of 60, determined using Taro Yamene’s formula. Data analysis was conducted through Kruskal-

Wallis one-way analysis of variance by rank. The results revealed that strategic cost management practices positively impacted the organizational performance of the firms.

Okafor, Egbunike and Amahalu (2022) investigated how employee-related costs affect the financial performance of listed manufacturing firms in Nigeria. The study specifically assessed the influence of employee salaries, retirement benefits, and bonuses on earnings before tax margin. An ex-post facto research design was employed, with a study population consisting of 75 listed manufacturing firms. Using purposive sampling, a subset of 26 firms was selected. The research utilized secondary data extracted from annual reports spanning 2013 to 2021. A pooled Ordinary Least Squares (OLS) regression model was used to test the hypotheses. The results indicated that employee salaries had a positive but non-significant effect on earnings before tax margin (p-value = 0.3777). Similarly, employee retirement benefits demonstrated a positive but non-significant impact (p-value = 0.0544). However, employee bonuses exhibited a non-significant negative effect on earnings before tax margin (p-value = 0.1077).

Aggreh, Abiahu, and Nworie (2023) examined the impact of cost reduction strategies on the financial performance of quoted consumer goods firms in Nigeria. The study used an ex-post-facto design and a purposive sample of 12 firms from a population of 20 listed consumer goods companies, with data sourced from the audited financial statements of the firms between 2011 and 2020. Using Pooled Ordinary Least Squares (OLS) regression, the study found that staff costs had a significant effect on return on equity, while costs of assets and costs of sales did not.

Temitope (2024) examined the link between cost management and the financial performance of selected manufacturing firms in Nigeria. The study focused on the impact of selling and distribution expenses, along with administrative costs, on companies' earnings after tax. Secondary data were obtained from the annual financial reports of ten firms covering the period from 2011 to 2020. The analysis employed descriptive statistics, correlation analysis, and panel regression techniques, including pooled OLS, random effects, and fixed effects estimation. The study also applied the Hausman test and post-estimation procedures to validate the models. Findings indicated that administrative costs had an insignificant negative impact on earnings after tax, whereas selling and distribution expenses had an insignificant positive effect.

MATERIALS AND METHOD

This study adopted the ex-post facto research design, which is deemed most appropriate for investigating association between variables that cannot be manipulated or controlled by the researcher. As of December 31, 2024, there were 20 manufacturing firms listed on the NGX, as recorded in the NGX Daily Stock Listing. Table 1 shows the study population:

Table 1 Population of the Study

Consumer Goods
1. Bua Foods Plc
2. Cadbury Nigeria Plc.
3. Champion Brew. Plc.
4. Dangote Sugar Refinery Plc
5. DnTyre& Rubber Plc
6. Golden Guinea Brew. Plc.
7. Guinness Nig Plc
8. Honeywell Flour Mill Plc
9. International Breweries Plc.
10. Mcnichols Plc
11. Multi-Trex Integrated Foods Plc
12. N Nig. Flour Mills Plc.
13. Nascon Allied Industries Plc
14. Nestle Nigeria Plc.
15. Nigerian Brew. Plc.
16. Nigerian Enamelware Plc.
17. P Z Cussons Nigeria Plc.
18. Unilever Nigeria Plc.
19. Union Dicon Salt Plc.
20. Vitafoam Nig Plc.

Source: Nigerian Exchange Group (2025)

The sample size for this study consists of 15 manufacturing firms which will be selected using a purposive sampling technique. Purposive sampling is appropriate for selecting a specific subset of firms that meet predetermined criteria, ensuring that the sample is representative of the study's objectives. The selection criteria include: (1) the manufacturing firms must have published its 2024 annual report; (2) the firms must have been listed on the NGX during the 2014 accounting period. These criteria are designed to ensure that the sample firms have a consistent and sufficient history of financial data for analysis.

Table 2 Sample Size of the Study

1. Cadbury Nigeria Plc.
2. Champion Brew. Plc.
3. Dangote Sugar Refinery Plc
4. Guinness Nig Plc
5. Honeywell Flour Mill Plc
6. International Breweries Plc.
7. N Nig. Flour Mills Plc.
8. Nascon Allied Industries Plc
9. Nestle Nigeria Plc.
10. Nigerian Brew. Plc.
11. Nigerian Enamelware Plc.
12. P Z Cussons Nigeria Plc.
13. Unilever Nigeria Plc.
14. Union Dicon Salt Plc.
15. Vitafoam Nig Plc.

Source: Researcher’s Compilation (2025)

The data for this study were collected through secondary sources, specifically from the publicly available financial statements and reports of the selected manufacturing firms listed on the NGX. These financial statements covered the period from 2014 to 2024. In this study, the key variables of interest are the proxies for cost structure, which include cost of sales, cost of selling and marketing, staff cost, and administrative cost, as well as the dependent variable, which is shareholder return. These variables were measured using financial data obtained from the firms' annual reports. The operational definitions of the variables shown in Table 3 enabled the researcher to precisely measure the effect of cost structure on shareholder return among listed manufacturing firms in Nigeria.

Table 3 Operational Measurement of Variables

Variable	Formula
1. Cost of sales	Natural log of cost of goods sold
2. Cost of marketing	Natural log of cost of marketing
3. Staff cost	Natural log of staff cost
4. Administrative cost	Natural log of admin expenses
5. Shareholders return	$\frac{(\text{Current Price} - \text{Purchase Price}) + \text{Dividends}}{\text{Purchase Price}}$

Source: Researcher’s Compilation (2025)

The research adapted the model of Otti, Udeh, Amahalu & Obi (2022) as follows:

$$CTNO = \alpha_0 + \alpha_1CMC + \alpha_2CLC + \alpha_3CAO + \alpha_4CFS + \mu \dots \dots \dots \text{Eqn 1.}$$

Where;

CTNO: changes in turnover

CMC: changes in material costs

CAO: changes in administrative overheads

CFS: changes in factory overheads

α_0 = Constant

α_{1-3} = Coefficients

μ = Error term

Equation I was modified to suit the specific objectives of the present study which examines how cost structure indices (cost of sales, cost of selling and marketing, staff cost, and administrative cost) influence shareholder return. The following modified regression model is proposed for this study:

$$SR_{it} = \alpha_0 + \beta_1 COS_{it} + \beta_2 CSM_{it} + \beta_3 SC_{it} + \beta_4 AC_{it} + \mu_{it} \dots \dots \dots \text{Eqn 2.}$$

Where:

SR_{it} = Shareholder return for firm i in period t.

COS_{it} = Cost of sales for firm i in period t.

CSM_{it} = Cost of selling and marketing for firm i in period t.

SC_{it} = Staff cost for firm i in period t.

AC_{it} = Administrative cost for firm i in period t.

μ_{it} = Error term for firm i in period t.

α_0 = Constant.

β_1 - β_4 = Coefficients of the independent variables.

Data analysis involved both descriptive and inferential statistics. Descriptive statistics, such as measures of central tendency and dispersion, provided hints into the overall characteristics of the dataset. The main analysis was conducted using a Panel Estimated Generalised Least Squares regression model, which enabled the researcher to assess the effect of cost structure variables on shareholder return. The Panel Estimated Generalised Least Square regression model was appropriate for panel data, as it allows for the estimation of coefficients that capture the relationship between the independent and dependent variables while controlling for unobserved heterogeneity, as well as heteroskedasticity and cross-sectional dependence (Eze, Okoye, Amahalu & Obi, 2022).

The decision rule for hypothesis testing was based on the significance of the regression coefficients. The null hypothesis is rejected if the p-value for the t-test is less than 0.05, indicating that there is a significant effect of the independent variables on shareholder return. Conversely, if the p-value is greater than 0.05, the null hypothesis is accepted, suggesting no significant effect.

RESULT AND DISCUSSIONS

Descriptive Analysis

The study examined the effect of cost structure on shareholder wealth maximisation among listed manufacturing firms in Nigeria. The specific objective was to ascertain the effect of cost of sales, cost of selling and marketing, staff cost and administrative cost on the shareholder return of listed manufacturing firms in Nigeria. Secondary data used were sourced from the annual reports of the firms over an eleven year period from 2014 to 2024. Descriptive statistics as shown below in Table 4 provided hints into the overall characteristics of the dataset.

Table 4 Descriptive Statistics

	Shareholder Return	Cost of Sales (₦'000)	Selling and Marketing Cost (₦'000)	Staff Cost (₦'000)	Administrative Cost (₦'000)
Mean	0.128144	80401950	15009829	8759064.	7525303.
Median	-0.043269	41553977	3486179.	4702538.	3445660.
Maximum	4.885849	757330373	203216119	68043844	46349071
Minimum	-0.750000	0.000000	0.000000	22176.00	60006.00
Std. Dev.	0.708784	116540513	29074885	12786939	9281030.
Skewness	3.281923	3.067822	3.313205	2.355167	1.688212
Kurtosis	17.60626	14.99795	16.67434	8.424214	5.457502
Jarque-Bera	1762.934	1248.479	1587.417	354.8143	119.8969
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Observations	165	165	165	165	165

Source: Eviews 10 Output (2025)

Based on the descriptive statistics in Table 4, each variable provides distinct hints on the cost structure and shareholder returns among listed manufacturing firms in Nigeria. The mean shareholder return of 0.1281 suggests that, on average, investors experienced a modest return of about 12.8% over the study period. However, the median value of -0.0433 indicates that more than half of the observed returns were negative, implying a skewed distribution. This asymmetry is further evidenced by a high skewness of 3.28 and an extreme kurtosis of 17.61, which suggest a heavy right-tail and the presence of outliers or extreme positive returns. The

wide range between the minimum (-0.75) and maximum (4.89) values highlights significant volatility in shareholder returns. The Jarque-Bera probability of 0.0000 confirms the non-normal distribution of returns, indicating that traditional parametric tests may not be fully suitable without data transformation or robust alternatives.

The cost of sales exhibits a high mean value of approximately ₦80.4 billion, with a much lower median of ₦41.6 billion, suggesting a right-skewed distribution driven by a few extremely large firms. This is supported by the high skewness of 3.07 and a kurtosis of 14.99, reflecting the presence of substantial outliers. The standard deviation of ₦116.5 billion further shows substantial variability among the firms' cost of goods sold, indicating that manufacturing firms operate at very different scales. The Jarque-Bera test value of 0.0000 confirms a significant deviation from normality, emphasizing the heterogeneity in production costs across the sector.

The selling and marketing cost also displays a highly skewed distribution, with a mean of about ₦15 billion and a median of ₦3.5 billion, reflecting major disparities among firms. The skewness of 3.31 and kurtosis of 16.67 underline the presence of significant outliers—likely large firms with expansive marketing budgets. The standard deviation (₦29 billion) relative to the mean suggests wide dispersion, and the minimum value of zero implies that some firms may not report or incur direct selling and marketing expenses. Again, the Jarque-Bera probability of 0.0000 confirms the non-normality of the data, necessitating careful handling in econometric modeling.

Staff cost shows a mean of approximately ₦8.76 billion with a median of ₦4.7 billion, again indicating a right-skewed distribution. The skewness of 2.36 and kurtosis of 8.42 reflect moderate but noticeable departures from a normal distribution, highlighting that while some firms have high personnel expenses, many operate on significantly lower wage scales. The wide range from a minimum of ₦22,176 to a maximum of ₦68 million and a standard deviation of ₦12.8 billion further emphasize the scale diversity among the firms. The Jarque-Bera statistic confirms the non-normality of the data.

Administrative costs follow a similar pattern, with a mean of ₦7.5 billion and a median of ₦3.45 billion. The skewness of 1.69 and kurtosis of 5.46 suggest a less extreme but still notable deviation from normality. The standard deviation of ₦9.28 billion indicates

considerable dispersion, and the minimum value of ₦60,006 again highlights firm-level variation. The Jarque-Bera test result shows a p-value of 0.0000, confirming significant non-normality, which could impact regression assumptions if not addressed.

Test of Hypotheses

The preliminary tests conducted before now revealed two major anomalies in the traditional panel regression model: cross-sectional dependence and heteroskedasticity. Hence, there was need to correct for this using panel estimated generalised least squares (Egbunike, Ogbodo & Ojima, 2019). Table 5 below shows the result of the test.

Table 5 Test of Hypotheses

Dependent Variable: SR
 Method: Panel EGLS (Period SUR)
 Date: 04/28/25 Time: 10:33
 Sample: 2014 2024
 Periods included: 11
 Cross-sections included: 15
 Total panel (balanced) observations: 165
 Linear estimation after one-step weighting matrix
 White period standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COS	0.038377	0.008760	4.380921	0.0000
CSM	0.021565	0.010005	2.155480	0.0326
SC	-0.316150	0.049286	-6.414625	0.0000
AC	0.202296	0.053271	3.797454	0.0002
C	0.456396	0.196504	2.322578	0.0215
Weighted Statistics				
R-squared	0.207941	Mean dependent var	0.311687	
Adjusted R-squared	0.188140	S.D. dependent var	1.183731	
S.E. of regression	1.002024	Sum squared resid	160.6484	
F-statistic	10.50130	Durbin-Watson stat	2.036231	
Prob(F-statistic)	0.000000			

Source: Eviews 10 Output (2025)

The regression results presented in Table 5 were estimated using Panel EGLS (Estimated Generalized Least Squares) with Period SUR (Seemingly Unrelated Regression) to handle heteroskedasticity and cross-sectional dependence, as revealed in earlier diagnostics. These results directly address the effect of various components of cost structure on shareholder

return among listed manufacturing firms in Nigeria over the 2014–2024 period. The coefficients represent the marginal effects of each logged cost component on shareholder return, holding other factors constant. That is, each coefficient shows the expected change in shareholder return due to a 1-unit increase in the natural log of the respective cost item. Significance is judged at the 5% level using the p-values.

The model validity statistics support the robustness of the regression. The adjusted R-squared of 0.1881 indicates that approximately 18.8% of the variation in shareholder return is explained by the model, which is acceptable given the complexity and volatility of financial return data. The Durbin-Watson statistic of 2.0362 is very close to 2, suggesting no evidence of autocorrelation in the residuals. Most importantly, the probability of the F-statistic is 0.0000, which means that the overall model is statistically significant and that, jointly, the explanatory variables have a meaningful effect on shareholder return.

Hypothesis I

H₀₁. Cost of sales has no significant effect on the shareholder return of listed manufacturing firms in Nigeria.

As shown in Table 5, the coefficient of cost of sales (COS) is 0.0384 with a p-value of 0.0000. This indicates that cost of sales has a positive and statistically significant effect on shareholder return at the 5% level. In other words, a 1% increase in the cost of goods sold (when logged) is associated with an approximate 0.038 unit increase in shareholder return, assuming other factors remain constant. The significance of this effect may be interpreted as firms with higher cost of sales—possibly due to increased production and sales volume—tending to generate higher returns to shareholders, potentially because these firms operate at larger scales or achieve better profit margins despite high input costs.

Decision: On the note that the p-value is less than 0.05, the alternate hypothesis was therefore accepted, which means that cost of sales has a positive and significant effect on shareholder return of listed manufacturing firms in Nigeria ($\beta = 0.0384$, $p = 0.0000$). The finding that cost of sales has a positive and significant effect on shareholder return among listed manufacturing firms in Nigeria can be interpreted from an efficiency and scale perspective. In manufacturing firms, an increase in cost of sales often reflects greater production and sales activity, which, if managed efficiently, results in higher revenue generation and thus increased profitability. Since shareholder return is derived from capital gains and dividends, a firm that records higher

turnover due to increased sales (even with rising input costs) can still deliver superior returns if gross margins are sustained. This effect might also reflect the pricing power of well-established firms, which can pass cost increases onto consumers without damaging profitability. Empirically, this finding is partially supported and partially contradicted by past research. Mbonu and Amahalu (2022) confirm that cost of sales significantly influences net profit margin, aligning with the positive effect on shareholder return. In contrast, Aggreh, Abiahu and Nworie (2023) report no significant effect of cost of sales on return on equity, while Modozie and Amahalu (2022) observed a negative relationship between raw material costs and profit..

Hypothesis II

H₀₂. Cost of selling and marketing has no significant effect on the shareholder return of listed manufacturing firms in Nigeria.

As shown in Table 5, the coefficient of selling and marketing cost (CSM) is 0.0216 with a p-value of 0.0326. This also indicating a positive and statistically significant effect on shareholder return at the 5% level. Marginally, this suggests that a 1% increase in selling and marketing expenditure corresponds to an approximate 0.022 unit rise in shareholder return, all else equal. This effect highlights the strategic value of marketing in the manufacturing sector; firms that invest more in selling and promotional activities may boost brand visibility, increase sales revenue, and ultimately enhance shareholder value.

Decision: On the note that the p-value is less than 0.05, the alternate hypothesis was therefore accepted, which means that cost of selling and marketing also exerts a positive and significant effect on shareholder return of listed manufacturing firms in Nigeria ($\beta = 0.0216$, $p = 0.0326$). The observed positive and significant effect of selling and marketing cost on shareholder return reflects the strategic importance of promotional and sales efforts in driving revenue and market share in Nigeria's competitive manufacturing sector. Spending on marketing enhances brand awareness and customer acquisition, which can increase sales volumes and support better pricing strategies. Therefore, even though these costs are classified as indirect, they contribute to future cash flows, which investors reward through higher share prices and dividends, explaining the corresponding boost to shareholder return. This finding is strongly supported by previous studies. For instance, Ejembi, Ijeoma, Amahalu & Obi (2022) notes that selling and distribution expenses have a positive effect on earnings, while Chukwuka, Okegbe, Amahalu and Obi (2022) report a similar positive effect on profit after tax.. However, Adesina and Tiamiyu (2025) contradict this finding by suggesting that

marketing costs negatively affect profitability, although this may be due to inefficient spending rather than the inherent value of marketing investment.

Hypothesis III

H₀₃. Staff cost does not significantly affects the shareholder return of listed manufacturing firms in Nigeria.

The staff cost (SC) variable as shown in Table 5 has a negative coefficient of -0.3162, which is statistically significant at the 1% level ($p = 0.0000$). This indicates that staff cost has a negative and significant effect on shareholder return. Specifically, a 1% rise in staff-related expenditure leads to an estimated 0.316 unit decrease in shareholder return, holding other costs constant. This strong negative effect suggests that higher wage bills, possibly due to inefficient labor management or overstaffing, may erode profitability and reduce shareholder value unless matched with productivity gains or strategic workforce investments.

Decision: On the note that the p-value is less than 0.05, the alternate hypothesis was therefore accepted, which means that Staff cost shows a negative and highly significant effect on shareholder return of listed manufacturing firms in Nigeria ($\beta = -0.3162$, $p = 0.0000$). The result that staff cost has a negative and highly significant effect on shareholder return suggests that labor costs, while necessary, can become a burden if not matched by corresponding gains in productivity. In Nigerian manufacturing firms, inefficiencies such as overstaffing, weak performance evaluation systems, and wage rigidity may lead to excessive personnel costs without proportional value addition. These inflated costs can erode operating margins, reduce distributable profits, and ultimately diminish returns to shareholders. Furthermore, the result underscores the importance of aligning compensation systems with output-based performance metrics in manufacturing. This finding is widely supported by empirical literature. Onyeka and Amahalu (2022) directly affirm that staff cost negatively impacts financial performance. Aggreh et al. (2023) found a significant impact of staff costs on return on equity, suggesting that poorly controlled labor expenses affect investor returns. Nweke, Udeh and Amahalu (2022) support the view that poor labor cost management can impair firm performance.

Hypothesis IV

H₀₄. Administrative cost has no significant effect on the shareholder return of listed manufacturing firms in Nigeria.

With regard to administrative cost (AC) as shown in Table 5, the coefficient is 0.2023, and it is also statistically significant with a p-value of 0.0002. This shows a positive and significant effect on shareholder return. A 1% increase in administrative expenses leads to a 0.202 unit increase in shareholder return, assuming other variables remain unchanged. Though administrative costs are generally seen as overheads, this result implies that well-managed administrative functions (for example, compliance, planning, logistics) may enhance operational efficiency and contribute to better investor outcomes in Nigerian manufacturing firms.

Decision: On the note that the p-value is less than 0.05, the alternate hypothesis was therefore accepted, which means that Administrative cost has a positive and significant effect on shareholder return of listed manufacturing firms in Nigeria ($\beta = 0.2023$, $p = 0.0002$). The finding that administrative cost exerts a positive and significant effect on shareholder return appears counterintuitive but can be rationalized by considering the role of strategic overhead investments in improving organizational performance. Administrative expenses cover functions like compliance, planning, human resources, and IT—all of which are critical to sustaining operational continuity and regulatory compliance. When these functions are efficient, they facilitate decision-making, reduce errors, and support long-term strategic goals, translating into stronger performance and returns. This is particularly plausible in well-governed manufacturing firms that invest wisely in administrative capacity. However, this result is highly contested in the literature. Temitope (2024), Adesina and Tiamiyu (2025), Mmaduka, Udeh, Amahalu and Obi (2022) all report a negative effect of administrative costs on firm earnings and profitability, suggesting that excessive overheads may be wasteful. Akinleye and Fajuyagbe (2022); Eze, Okoye, Amahalu and Obi (2022), however, report that administrative costs significantly affect firm value, a result that may support the positive effect if administrative spending leads to higher efficiency or innovation. In a related study, Onyeozili, Okoye, Amahalu and Obi (2022) found that indirect costs, including administrative expenses, have a significant positive impact on profitability, directly reinforcing the present finding.

CONCLUSION AND RECOMMENDATIONS

The findings from this study carry significant implications for how cost structures shape shareholder wealth maximisation within Nigeria's manufacturing sector. The evidence that certain cost elements, particularly cost of sales, selling and marketing expenses, and administrative costs, positively influence shareholder return suggests that strategic investments in these areas may be viewed not merely as operational outflows, but as enablers of future financial gains. These results imply that when firms channel resources into areas that directly or indirectly support revenue generation, market competitiveness, and operational efficiency, they are more likely to enhance shareholder value. It also reflects the importance of purposeful expenditure where costs are aligned with activities that support growth, visibility, and firm stability, all of which contribute to returns in the form of share price appreciation and dividends.

At the same time, the negative and significant effect of staff cost underscores the sensitivity of shareholder returns to labor-related expenditure. This outcome highlights the critical balance that firms must navigate between workforce investment and cost containment, especially in environments where productivity does not proportionally increase with wage growth. The implication is that human resource expenditures, when not properly aligned with output or strategic firm goals, can become a drain on resources and ultimately reduce the value delivered to shareholders. Collectively, the findings suggest that not all cost components carry equal weight in shareholder wealth outcomes, and that the structure and composition of firm expenditures play a decisive role in influencing the financial rewards shareholders derive from their investment. In view of these, the following recommendations were made:

1. Production and supply chain directors of listed manufacturing firms in Nigeria should prioritise strategic investments in raw material sourcing, inventory control systems, and production efficiency technologies. These initiatives will not only optimise cost of sales but also sustain the observed positive contribution of cost of sales to shareholder return, ensuring that higher input volumes and quality translate into increased firm output and financial performance.
2. Heads of marketing and corporate strategy should strengthen integrated marketing communications and market expansion campaigns, particularly through data-driven targeting, digital platforms, and customer engagement tools. Given the significant positive effect of selling and marketing costs on shareholder return, intensifying these

- efforts in a calculated manner can enhance brand value and revenue streams, ultimately translating into greater shareholder wealth.
3. The human resource executives and board-level compensation committees should institute rigorous cost-efficiency frameworks around employee remuneration, including workforce optimisation, automation of non-core tasks, and performance-based pay structures. The significant negative effect of staff costs on shareholder return calls for a recalibration of personnel expenditure, ensuring that labor investments directly support productivity and shareholder value creation.
 4. The Board of Directors of listed manufacturing firms in Nigeria should empower financial controllers and senior management teams to optimize administrative expenditures by investing in systems, personnel, and internal operations that enhance organizational efficiency, as such costs have been shown to significantly and positively influence shareholder returns.

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