COST LEADERSHIP STRATEGY AND FINANCIAL PERFORMANCE OF LISTED CONSUMER GOODS COMPANIES IN NIGERIA

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ABSTRACT

This study explored the consequence of cost leadership on the financial prosperity of listed consumer goods corporate entities in Nigeria, consistent with resource-based view and attribution theories. A quantitative approach was adopted, utilizing a longitudinal research design. Secondary data was drawn from the annual reports of the companies covering a period starting from 2014 to 2023. The population consisted of twenty-one consumer goods firms listed on the Nigerian Exchange Group, out of which nineteen firms were selected using purposive sampling. The data was subjected to statistical analysis using panel least squares (PLS) regression. The findings showed that both capital expenditure and cost efficiency had a positive, and statistical significant effect on the financial performance of the listed consumer goods companies. However, capital intensity presents a negative, and insignificant effect on financial performance. It is concluded that focusing on enhancing capital expenditure and cost efficiency will lead to successful implementation of cost leadership strategy that impound significant improvement on financial performance of the listed sampled companies. Thus, it is recommended that management should strategically realign their investments in capital-intensive technologies to achieve greater operational efficiency, which could lead to higher returns on equity.

Keywords: Capital Intensity, Cost Efficiency, Cost Leadership, Capital Expenditure, Financial Performance, Strategic Management.

1. INTRODUCTION

The recent downward trend in corporate financial performance have forced many managers to embrace cost management strategies so as to enhance profitability and ensure the company's long-term survival. Obviously, financial performance is tied to operational efficiency and the way capital is utilized. Corporate entities with stable financial performance are able to compete effectively, achieve higher profit margins, thereby attracting more investors. Cost leadership strategy, on the other hand, is one of the main organisational instruments for increasing competitive advantage and performance. Thus, it is a significant element that has propensity to contribute to the performance of an active organisation.

Cost leadership emphasizes becoming the industry's lowest-cost producer without compromising the quality. This strategy is very fundamental for firms aiming to maintain profitability in highly competitive markets, where price competition is strong, and consumers increasingly focus on cost (Bala et al., 2022). By having a cost advantage, companies can offer competitively priced products, attract a larger customer, and strengthen their market control (Sulaiman et al., 2019). Capital intensity plays a critical role in shaping competitive dynamics within industries. This is because, companies with high capital intensity are more likely to achieve economies of scale, resulting to lower per-unit production costs, and improved competitive advantage (Sulaiman et al., 2019). For example, companies that invest heavily in automation and advanced manufacturing technologies can produce goods more efficiently, reducing costs per unit, an essential aspect in industries where cost leadership is a strategic priority (Bala et al., 2022). Automated production lines, operating with minimal human intervention, lead to reduced human errors, thereby boosting output, reinforcing the firm's cost leadership position.

In addition, capital expenditure is very essential for ensuring sustainability and long-term growth. It involves spending on physical assets that provide benefits to the company beyond a single accounting period, such as equipment, infrastructure, and technology (Gamariel & Annet 2021). Capital expenditure can be divided into two main categories: growth and maintenance. Growth capital expenditure focuses on increasing the company's asset base to boost revenue, such as constructing new facilities or purchasing additional equipment. On the other hand, maintenance capital expenditure is aimed at preserving current assets to ensure they remain functional and efficient. Cost management encompasses the planning, estimating, budgeting, and controlling of expenses to ensure that projects are completed within the approved timeframe (Gakuya & Mbugua, 2018). One of the primary challenges organizations faces is managing costs, which stems from the need to accurately value products, assets, liabilities, and services so as to maximize profit. Thus, cost is a critical factor in any organization's operational processes for several reasons.

Furthermore, capital expenditure has propensity to significantly impact company's financial prosperity. Large investments in capital assets, if financed through borrowing, may increase the company's debt, influencing its financial ratios and potentially affecting its credit rating. The Nigerian consumer goods industry is highly dynamic and competitive, presenting companies with significant challenges in maintaining sustainable financial performance. Despite the common goal of maximizing profit and minimizing costs, the industry has experienced uneven development due to economic instability and high production costs over the past few decades (Sani et al., 2023). This has led to the closure of numerous companies within the household products sector, which has resulted to mergers among larger firms as a survival scheme.

Despite this, effective cost management is very vital for maximizing shareholders' wealth and ensuring the continued existence of profit-oriented organizations in such unstable environments. According to Oyedokun et al. (2019), the association

between cost and profit is very germane to determine a business's financial standing. Any rise in turnover may expand production capacity, consequently making cost management important, in order to maintain profitability. Akinleye and Fajuyagbe (2022) emphasize that managing the quality, cost, and performance of products or services is of essence for companies to thrive, given the constant demand from customers for high-quality and affordable products, and from shareholders for high returns on investment (Musa et al., 2022).

Higher costs, according to Aggreh et al. (2023), often lead to increased product prices, which can present antithetic impact on turnover, and eventually affect financial performance, particularly in the Nigerian consumer goods sector that product prices have become escalated and unstable in the past decades. Several empirical inquiries have been conducted, in Nigeria and beyond, to unveil the implication of inventory control, operational efficiency, intellectual capital, cost reduction, capital expenditure, cost control and efficiency, among others on firm performance (Akinleye & Fajuyagbe, 2022; Gamariel & Annet, 2021; Nangih & Onuora, 2020; Nkpodot & Emenyi, 2023; Oyedokun et al., 2019). However, aside studies carried out by Valipour et al. (2012), Birjandi et al. (2014), Njuguna and Waithaka (2020), and Gakuya and Mbugua (2018) to showcase how cost leadership strategy influence performance in Iran and Kenya contexts, such study is yet to be extend to cover the consumer goods listed firms in Nigeria. Given the importance of effective cost management and its influence on financial performance, it is essential to explore how cost leadership strategies impact companies' financial outcomes to reflect Nigerian context in literature, thereby contributing to the body of knowledge. This involves shifting resources from less promising areas to those with higher growth potential and leveraging strong human capital to improve financial performance.

Therefore, the aim of the current investigation is to explore the impact of cost leadership on the financial performance of firms listed in the consumer goods sector in Nigeria. Specifically, it examined how cost leadership strategies, including capital intensity, cost efficiency, and capital expenditure, affect financial performance. By addressing these issues, the study provided valuable insights into the role of cost leadership as a strategy for attaining sustainable financial performance in Nigeria's consumer goods industry.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Conceptual Review

2.1.1 Financial Performance

The basic financial framework has long been the foremost approach for assessing performance, with two newer profitability measures emerging: gross profit percentage and return on investment. However, several scholars such as Gamariel & Annet (2021) and Ogaluzor and Omesi (2019) have argued that while financial metrics are vital, they are insufficient for a comprehensive performance evaluation system. Gamariel & Annet (2021). also identified a lack of clear evidence on when and how non-financial metrics boost managerial performance. Firm performance

can be viewed from various perspectives, but this study focuses majorly on the financial aspect of performance.

Financial performance can be examined using various lenses, including liquidity and turnover, which help to assess a firm's capability to meet its financial obligations as they become due without distorting daily business operations (George et al., 2022). Another key aspect of financial performance in the short run is profitability, which focuses on the firm's ability to generate profit from its available resources, such as labour, management, and capital (Gamariel & Annet 2021). Some of the most commonly used accounting and capital market based measures of financial performance are discussed as follow:

Return on Capital Employed (ROCE) is one of the key metric used to assess the efficiency and profitability of an entity's capital investments. It shows whether the business is generating adequate revenue and profit from effective utilization of its capital assets (Sulaiman et al., 2019). ROCE is determined using two main components which are operating profit and capital employed. Operating profit, otherwise referred to as earnings before interest and taxes represents the profit realised from a company's main operations before taxes and interest are taken. It is measured by subtracting operating expenses and the cost of goods sold from total revenues. Capital employed on the other hand is the total capital invested in the company's operations by the shareholders, and other sources, to generate profit. It is measured by subtracting current liabilities from total assets (Sulaiman et al., 2019). However, ROCE tends to ignore future growth potentials, fails to account for cost of capital and not applicable in a capital-intensive industry (Ogaluzor & Omesi, 2019).

Companies with low returns (in this case), return on equity (ROE), are often viewed with caution, as they are at risk of becoming unprofitable if market conditions become worsen. On the other hand, companies with exceptionally huge returns may attract increased competition for their products or services, unless they are protected by patents or other competitive barriers (Sulaiman et al., 2019). Return on equity shows how well the management has effectively utilised shareholders' fund to realise profit. This makes it more accepted as suitable measure of performance since it considers profitability from management efficiency, and shareholders' perspectives; helps in inter and intra company(ies) comparison; reflect the impact of firm leverage, provide support for investment decision, and serves as reflection of potential long-term growth and value creation. However, although it ignores risk, ROE is still a veritable and widely measure of profitability. It is measured as the ratio of net income to equity share value.

Earnings per Share (EPS) is also considered an important performance indicator for publicly traded organisations. Given its significance, it is essential that EPS is reported consistently across relevant companies. Even today, EPS remains the most widely recognized and commonly used benchmark for financial performance. A survey of 400 financial executives conducted in the United States of America revealed that majority regarded earnings as the most important performance metric they report to external stakeholders. EPS also plays a pivotal role in strategic

decision-making, influencing share valuations, management incentive programs, and merger and acquisition discussions. EPS is measured as retained earnings divided by the total number of ordinary shares. It is no surprise that managers pay close attention to EPS, especially when their compensation is tied to the company's EPS performance. Succinctly, the study employed ROE because of its focuses on management efficiency in line with resource-based view theory.

2.1.2.1 Cost Leadership

Cost leadership is a strategy that seeks to establish a competitive advantage by having the bottommost cost of operation in the industry. Most businesses strive to gain a strong competitive advantage, and Porter's (1980) generic strategies are widely recognized as a suitable framework for guiding global businesses in selecting strategies that help achieve their goals and enhance performance (Valipour et al., 2012; Teeratansirikool et al., 2013). It is evident that successful competitors in various industries often adopt a strategy focused on either being a cost leader or a provider of goods with the highest perceived standards. The essence of a cost leadership strategy lies in an organizations ability to offer goods or services at lower prices within a competitive market. Therefore, businesses that pursue a cost leadership strategy at the business level gain a significant advantage, particularly in terms of improved administrative efficiency, increased market control, improved profitability, and higher competitive advantage, among others. However, heightened push for cost leadership strategies could result to reduction in innovations and quality, and price war which could hamper performance in the long run (Datta, 2010). But, cost leadership that is strategically emplaced is expected to enhance performance both in the short and long runs. Among the strategies popularly used are efficient operations, cost control and efficiency, inventory control, capital intensity/technology, and outsourcing. This study considered capital intensity, cost efficiency, and capital investment because of its relevance to the reporting environment and context.

2.1.2.2 Capital Intensity

Capital intensity is the extent to which a corporate body relies on capital, such as its machinery and technology, rather than labour in its production processes. It depicts the ratio of fixed or real capital relative to other factors of production such as labour (Sulaiman et al., 2019). A high level capital intensity usually shows noteworthy investments in equipment and technology. In the consumer goods sector, particularly in Nigeria, capital intensity is fundamental for determining both competitive positioning and operational efficiency.

Capital intensity is very crucial because it shapes the competitive dynamics within an industry. Companies with high capital intensity are more probable to attain economies of scale, leading to lower per-unit production costs and a resilient competitive advantage (Sulaiman et al., 2019). As a case, firms that invest heavily in automation, and advanced manufacturing can produce goods more efficiently and at lower costs, which is very essential in industries where cost leadership is a major strategy (Bala et al., 2022). This is because automated systems enable continuous

production with minimal human involvement, thereby reducing errors and boosting output. Thus, the consistency in quality helps to maintain consumer trust, and brand loyalty (Sulaiman et al., 2019).

However, high capital intensity comes with its inherent challenges. The initial investment in technology and machinery can be very huge, requiring substantial upfront capital expenditure (Gakuya & Mbugua, 2018). Furthermore, maintaining and upgrading equipment to stay competitive can be costly. Capital intensity may also affect employment levels, as automation reduces the need for labour, potentially leading to job losses, especially in regions where the consumer goods industry is a key employer (Gakuya & Mbugua, 2018). Thus, it is measured in this study as the proportion of net income to total equity.

Balancing the benefits and challenges of high capital intensity requires strategic planning. Companies need to ensure they have a skilled workforce to operate advanced technologies while maximizing the efficiency gains from automation. When managed effectively, capital intensity can enhance productivity, reduce production costs, improve product quality, and strengthen a company's market position and financial performance. Therefore, the hypothesis is formulated thus:

H_1: Capital intensity has no significant relationship with financial performance.

2.1.2.3 Cost Efficiency

Cost management involves the processes of planning, estimating, budgeting, and controlling costs to ensure that a project or budget is completed within the approved timeframe (Gakuya & Mbugua, 2018). One of the primary challenges organizations faces is managing costs effectively. This issue arises from the need to accurately value company assets, liabilities, products, and services to maximize profits. Cost plays a crucial role in the operational processes of every organization for several reasons. Gakuya and Mbugua (2018) noted that cost is important not only for setting prices, but also for determining profit margins. Since this study views cost efficiency as how the corporate entities utilise its cost to enhance performance, it was measured as the ratio of cost of goods sold to total assets.

According to Gakuya and Mbugua (2018), cost accounting involves determining and accumulating the cost of a product or activity, and it also encompasses the process of accounting for cost incurrence and control. Additionally, it includes the classification, analysis, and interpretation of cost data. As an internal function within organizations, cost accounting aims to provide cost information, statements, and reports that support managerial decision-making (Gamariel & Annet 2021). Consequently, the following hypothesis is formulated in null form:

H_2: Cost efficiency has no significant relationship with financial performance.

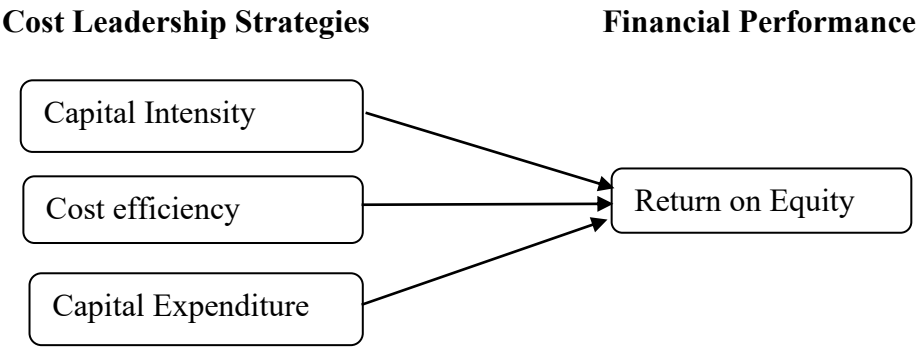
2.1.2.4 Capital Expenditure

Capital expenditure (CapEx) refers to the funds a company invests in acquiring, upgrading, and maintaining physical assets such as property, facilities, and equipment. It is a key element of business operations, particularly for firms aiming

to enhance production capabilities and maintain a competitive edge (Gamariel & Annet 2021). In the industry under investigation, CapEx is essential for expanding production capacity, improving product quality, and ensuring operational efficiency. Companies typically divide CapEx into two main categories: growth and maintenance. Growth CapEx focuses on expanding the company's asset base to increase revenue, such as building new factories or purchasing advanced machinery, while maintenance CapEx is directed at preserving and optimizing existing assets to ensure smooth operations. Both types of expenditures are critical for long-term growth and sustainability, as they help companies stay competitive in an ever-changing market (Gamariel & Annet 2021).

Capital expenditure can significantly impact a company's financial performance. Large investments, especially if financed through borrowing, can increase a company's debt load and affect its financial ratios and credit ratings. However, well-planned CapEx can drive long-term profitability and efficiency by enhancing productivity. In Nigeria's consumer goods sector, companies face economic challenges such as inflation and currency fluctuations (Oyedokun et al., 2019). Nevertheless, CapEx remains crucial for maintaining competitiveness. Investments in advanced technologies and new production facilities help reduce costs and improve product quality. Effective CapEx planning requires strategic alignment with long-term goals, careful market analysis, and consideration of financing options like debt or equity. Several Nigerian companies, such as Dangote Group and Nestle Nigeria, have demonstrated the benefits of strategic CapEx, with investments that improve efficiency, reduce costs, and strengthen their market positions despite economic difficulties (Oyedokun et al., 2019). Thus, CapEx was measured in the study as the ratio of capital expenditure to total sales. Hence, the hypothesis is formulated as follows:

H_3: Capital expenditure has no significant relationship with financial performance.



Source: Authors' Compilation (2024)

Figure 1: Conceptual Structure Showing the Link Between Cost Leadership Strategies and Financial Performance

In order to further showcase the flow of relationship between the dependent and explanatory parameters, conceptual framework in Figure 1 was presented. It reflects that cost leadership strategies such as capital intensity, cost efficiency, and capital expenditure are possible predictors of financial performance of listed consumer goods firms in Nigeria, measured using ROE.

2.2 Theoretical Review

2.2.1 The Resource-Based View Theory

This theory, introduced by Edith Penrose in 1959, focuses on the growth of the firm. Pearce and Musa et al. (2022) describe the resource-based view (RBV) as a method for analysing and categorising a firm's strategic advantages by examining its unique combination of capabilities, skills, assets, and intangible resources. The theory stresses firm-specific factors and their impact on performance. That is, unique and valuable resources of an organisation are capable of earning the firm a competitive advantage, thereby improving performance. Pearce and Musa et al. (2022) portray the firm as a collection of resources that, when put together, create organizational capabilities, allowing the firm to achieve above-average profitability. This theory is found adequate for the study as it provides a method for evaluating a firm's strategic advantages through its distinctive mix of assets, skills, and capabilities.

2.2.2 The Attribution Theory

Attribution Theory was propounded by Heider in 1958. The theory advocates that individuals, groups, and organizations have an intrinsic need to comprehend the reasons behind events or situations. According to Njuguna and Waithaka (2020), by gaining insight into the factors that cause an event, individuals can bend their behaviours and influence the likelihood of future occurrences. Equally, Ogbunankwor and Madumere (2023) argue that people make causal attributions to help them manage and respond to events in their environment. More specifically, Attribution Theory postulates that aftermaths are shaped by situation-specific causal attributions, or factors to which the cause of an outcome is assigned (Ogbunankwor & Madumere, 2023). This theory is relevant to the study as it highlights how individuals, particularly managers, can adjust their behaviours in relation to cost leadership strategies capable of improving the firm performance. That is, when managers of the consumer goods firms understand the consequences of high costs on performance, this influences their responses or behaviour regarding the choice of performance driven cost strategy to embrace.

2.3 Empirical Review

Prior studies conducted a study to evaluate how firm characteristics influence the financial performance of quoted Deposit Money Banks in Nigeria over six years (2010-2015). Utilizing an ex post facto research design, they gathered data from factbooks, annual reports, and accounts of the banks under investigation. To test their hypotheses, they employed the Pearson coefficient of correlation and Ordinary Least Squares (OLS) regression for analysis. The results showed that firm size, serving as a proxy for firm characteristics, positively and significantly affects

financial performance, as measured by Return on Equity (ROE), Return on Assets (ROA), and Return on Capital Employed (ROCE).

Badu and Appiah (2017) examined the connection between board size and firm performance, using a sample of 137 listed companies in Ghana and Nigeria. The findings revealed a statistically significant positive correlation between board size and firm performance, suggesting that allowing corporate board size to be contingent on firm size can improve performance in both countries. Also, Matar and Eneizan (2018) investigated the factors that impact the corporate financial performance of 23 manufacturing firms listed in Jordan over an 11-year period (2005-2015). Data was sourced from the Amman Stock Exchange and annual financial statements. The study discovered that liquidity positively influences ROA, while leverage and firm size negatively affect ROA.

Orjinta and Evelyn (2018) examined the effect of audit committee characteristics on the performance of 50 selected non-financial firms listed on the Nigerian Stock Exchange from 2007 to 2016. Using an ex post facto and cross-sectional research design with secondary data, they discovered a positive and significant association between audit committee size and ROA at a 10% level of significance. Ayako et al. (2015) studied 41 non-financial firms listed on the Nairobi Stock Exchange to analyse performance-influencing factors between 2003 and 2013. Employing a random effects model due to the panel data, the study found that firm leverage negatively and significantly relates to ROA, while board size and board independence emerged as critical determinants of financial performance.

Prior studies investigated the impact of firm size on profitability and market value for firms listed on the Nairobi Stock Exchange (NSE) from 2010 to 2014. The study utilized secondary data, employing panel correlation and multiple regression methods for empirical analysis. Results indicated a positive significant relationship between firm size and profitability, but no statistically significant impact on market value. Prior studies investigated the connexion between cost leadership strategy and financial performance within Pakistan's textile sector. Based on a panel data random effects model, the findings showed that cost leadership strategy significantly and positively impacts the financial performance of the listed textile firms.

Prior studies explored the links that exist between cost leadership, market orientation, and business performance within manufacturing SMEs. They employed a questionnaire survey method and cross-sectional design, using multiple regression analysis. Their findings showed a significant and positive relationship between cost leadership strategy, market orientation, and SME performance. Swarnapalia, (2015) investigated how bank-specific factors affect the financial performance of licensed banks in Sri Lanka over four years (2009-2012), using ROA and ROE as performance measures. The results revealed that bank size significantly influences financial performance, while liquidity ratio did not contribute significantly to the performance of listed commercial banks in Sri Lanka.

Prior studies observed the effects of cost leadership on the performance of SMEs in Nakuru, Kenya. Using stratified random sampling and questionnaire for primary data collection, they analysed the data with descriptive and inferential statistics. Their study found that product differentiation is a significant factor in SME performance, leading to a recommendation that SMEs should focus more on lowering production costs to maximize profits. Njuguna and Waithaka (2020) evaluated cost leadership strategy and its effect on organizational performance in insurance companies situated in Nyeri County, Kenya. The study applied both primary and secondary data, employing descriptive and inferential statistics for analysis. The findings provided basis for a conclusion that pursuing cost leadership positively influences organizational performance with a recommendation that insurance companies should improve on the adoption of proprietary technologies and innovative distribution channels.

Prior studies investigated the enhancement of organizational performance through the strategic alignment of cost leadership and competitor orientation. They distributed 475 questionnaires to managers of three- to five-star hotels in Malaysia, with a 24% response rate (114 returns). The study found a significant effect of cost leadership strategy on organizational performance. Iqbal and Masood (2022) explored the relationship between financial performance and various factors, including economic indicators, corporate governance, capital structure, and risk management, for 60 listed corporate firms in Pakistan. Utilizing a fixed effect model, the four-year study revealed a possible association between financial performance and corporate governance, economic indicators, and capital structure. They also identified that a bank's performance in Nigeria is influenced solely by firm size and operating expenses.

Another study by Iqbal and Masood (2022) focused on the determinants of financial performance in general insurance companies in Kenya from 2009 to 2012. Adopting a descriptive research design, they employed multiple linear regression with ROA as the dependent variable. Their findings indicated that profitability positively correlates with leverage, equity capital, and management competence, while showing a negative relationship with size and ownership structure. Lastly, Mulwa and Ndede (2022) assessed the effect of capital structure on the financial performance of listed consumer goods companies in Nigeria. The study utilized secondary data from the annual financial reports of seven firms whose accounting year ends on December 31, covering a six-year period (2008–2013). Using an ex post facto research design, the study examined the relationship between independent variables (long-term debt/equity and short-term debt/equity) and the dependent variable (ROE), controlling for variables such as asset tangibility, firm size, growth in sales, and efficiency. The analysis revealed a positive and significant relationship between capital structure and corporate financial performance.

A concise missing link the study made effort to fill as revealed from the empirical review is dearth of empirical investigation that focus on Nigerian consumer goods context, and for period up till 2023. The distinctive nature of the study is further showcased with the use of capital intensive, cost efficiency, and capital expenditure

as surrogates for cost leadership. These are expected to provide ground for enhancing the body of knowledge in the research area.

3. METHODOLOGY

This study utilized a quantitative approach with a longitudinal research design to investigate the relationship between cost leadership and financial performance. Secondary data were collected from the financial statements in the annual reports of listed consumer goods companies over a ten-year period, specifically from 2014 to 2023. The choice of 2014 as the base year aimed to establish a reference point for comparison and to track progress between the variables. Financial statements serve as consistent, reliable, and routine means of communicating financial performance to stakeholders. The study's population included all twenty-one (21) consumer goods companies listed on the Nigeria Exchange Group (NGX) as of December 2023, from which a purposive sampling technique was employed to select nineteen (19) firms in order to obtain balanced panel data. The other two firms were excluded because their shares were not in trade as at 2014, the base year. Panel Least Squares (PLS) regression analysis was applied to the data to enhance the reliability and robustness of the study's inferential results.

3.1 Model Specification

To analyse the hypotheses formulated in an earlier section, the following econometric model as employed by Hashem, et al., (2012) as follows:

$$PERFOM_{it} = \beta_0 + \beta_{1i}STRA_{it} + \beta_{2i}LEV_{it} + \beta_{3i}STRA_{it} * LEV_{it} + \beta_{4i}SIZE_{it} + \beta_{5i}DIV_{it} + \varepsilon_{it} \quad (1)$$

Where;

PERFOM = Performance

STRA = Business Strategy

LEV= Financial Leverage

SIZE = Size of the firm

DIV =Dividend per share

and which is retrospective analysis on company performance was adapted and specified:

$$Fp_{it} = \alpha + \beta_1 CI_{it} + \beta_2 CE_{it} + \beta_3 CExp_{it} + e_{it} \quad (2)$$

Where:

FP = Financial Performance measured as Return on Equity (ROE),

CI = Capital intensity measured as total assets on total sales,

CE = Cost efficiency measured as the cost of goods sold on the total asset,

CExp = Capital Expenditure measured as capital expenditure on total sales.

$\beta_1 - \beta_3$ = Beta coefficients of the parameters based on the indirect relationships;

e_{it} = Stochastic error term,

α = The intercept or Constant term.

Table 1: Measurements of Variables

Variables	Description	Measurements	Source
Financial Performance (FP)	This is a subjective measure of how well a firm can make use of its assets from its primary mode of business to generate revenue.	ROE =(Net Income / Total Equity) x 100	(Gakuya & Mbugua, 2018)
Capital Intensity (CPIT)	Refers to the amount of fixed or real capital present in relation to other factors of production	CPIT =Total Assets / Total Sales	(Gakuya & Mbugua, 2018)
Cost Efficiency (COEF)	Cost efficiency refers to how firms effectively utilizes its costs to achieve optimal performance.	COEF = Cost of Goods Sold / Total Assets	(Gakuya & Mbugua, 2018)
Capital Expenditure (CExp)	This connotes funds used by a company to acquire, possess, upgrade, and maintain physical assets.	CExp = Capital Expenditure / Total Sales	(Gakuya & Mbugua, 2018)

Source: Authors' Compilation (2024)

4. DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Descriptive Statistics

The descriptive analysis of variables is reported in Table 2. The results shows that firm performance measured by returns on equity (ROE) on the average is 10.741 with standard deviation of 18.529 and this indicate that most of the companies under review has high variability in returns on equity (ROE). The standard error of mean indicates 1.230. Consumer goods with the minimum returns on equity (ROE) has -20.44 while the maximum returns on equity reported during the period is 49.97 which imply the returns of equity ranges from negative to positive. The total sum of returns on equity (ROE) is 2438.30 and the data is positively skewed and have normal distribution. From Table 2, it is observed that capital intensity (CPIT) for the sampled firms on the average is 0.162 with standard deviation of 0.395. The standard deviation value shows that there is moderate variability in the level of capital intensity across the sampled firms. Also, the standard error of mean implied

that the sample mean is a reflection of the actual population having a small value compared to the mean 0.026. Consumer good firms with the least CPIT has -0.25 while the maximum is 1.60 and the total sum of the CPIT represent 36.856. The data is positively skewed and abnormally distributed.

Furthermore, on Table 2, it is observed that cost efficiency (COEF) for sampled firms on the average is -0.267 with standard deviation of 0.333. The standard deviation value shows that there is moderate variability in the COEF across the sampled consumer good firms. The standard error of mean also implied that the sample mean is a reflection of the actual population having a small value compared to the mean 0.022. Consumer good firms with the least COEF has -1.40 while the maximum COEF is 0.18 implying and the total sum of the cost represent 676.1914. The implication is that the cost efficiency effort of the consumer good firms is poor and the cost expended to accrue revenue is of high percentage in relation to their revenue. The data is positively skewed and abnormally distributed. More so, capital expenditure (CAPE) for sampled firms on the average is 0.1060 with standard deviation of 0.182. The standard deviation value shows that there is moderate variability in the capital expenditure (CAPE) made by the firms under investigation during the period covered. The standard error of mean equally showed that the sample mean is a reflection of the actual population having a small value compared to the mean 0.0121. Consumer goods firms with the least capital expenditure (CAPE) has 0 implying no capital expenditure (CAPE) was made while the maximum capital expenditure (CAPE) is 1.556 and the total sum of the capital expenditure (CAPE) represent 24.188. The data is positively skewed and normally distributed.

Table 2: Descriptive Statistics

Stats	ROE	CPIT	COEF	CAPE
Mean	10.741	0.162	-0.267	0.106
S.D.	18.529	0.395	0.333	0.182
Se(mean)	1.230	0.026	0.022	0.012
Min	-20.44	-0.25	-1.40	0
Max	49.97	1.60	0.18	1.556
Sum	2438.305	36.856	-60.615	24.188
Skewness	0.456	2.280	-1.779	0.344
Kurtosis	2.821	8.123	6.528	2.578

Source: Authors' Computation (2024)

4.2 Correlation Analysis

Table 3 presents the results of a pairwise correlation test, assessing the linear relationship between cost leadership metrics and firm performance. The analysis shows an inverse and statistically insignificant relationship between return on equity (ROE) and cost efficiency (COEF), indicated by a coefficient of -0.1006 and a probability of 0.1298. Additionally, for the sampled companies, the results reveal a

positive correlation between firm performance (measured by ROE) and CPIT, as demonstrated by a coefficient of 0.2823*, suggesting that a 28.23% increase in financial performance may occur with higher capital intensity. Table 4 further highlights a positive linear relationship between capital expenditure (CAPE) and ROE for the sampled listed firms.

However, the coefficient of 0.0918 and a p-value of 0.1671 indicate an insignificant correlation. The overall implication is that various cost leadership measures could enhance financial performance, particularly in terms of ROE, benefiting shareholders. Additionally, the correlation results indicate a negative relationship between different cost leadership metrics, particularly between CPIT and COEF, which shows significant correlation. However, most other relationships are insignificant. The analysis also suggests that multicollinearity is not a concern, as the relationships between independent variables are not notably strong.

Table 3: Correlation Analysis of Cost Leadership and Firm Performance

Variables	Pairwise Correlation	ROE	COEF	CPIT	CAPE
ROE	Coefficient	1.0000			
	Sig.	-			
COEF	Coefficient	-0.1006	1.0000		
	Sig	(0.1298)	-		
CPIT	Coefficient	0.2823*	-0.2733*	1.0000	
	Sig.	(0.0000)	(0.0000)	-	
CAPE	Coefficient	0.0918	-0.0116	-0.1232	1.0000
	Sig.	(0.1671)	(0.8617)	(0.0632)	-

Source: Authors' Computation (2024)

4.3 Estimation Tests

4.3.1 Pre-Estimation Tests

4.3.1.1 Panel Unit Root Test of the Variables

Panel variables often exhibit non-stationarity at the level, which can impact the stability and consistency of model parameters. To assess the stationary conditions of the variables, this study employed the Levin-Lin-Chu unit root test. The null hypothesis of the unit root test posits that all panels contain unit roots, while the alternative hypothesis suggests that at least some panels are stationary. The results of the unit root tests, shown in Table 4, indicate that all variables are integrated of order zero, denoted as I(0), which is significant at the 5% level. Consequently, we reject the null hypothesis and conclude that the series is stationary. Therefore, it is unnecessary to conduct a cointegration test to examine the long-term relationship among the variables. The panel least squares method is suitable for estimating an efficient model that minimizes the risk of spurious results.

Table 4: Panel Unit Root Test

Variable	Levin-Lin-Chu unit-root test	
	z-statistics	**P-value**
ROE	-6.6193	0.0000
CPI	-4.5040	0.0000
COEF	-3.5690	0.0002
CAPE	-76.5562	0.0000

Source: Author's Computations (2024)

4.3.2 Post-Estimation Tests

The model specification was assessed using the Ramsey RESET test, which indicated a probability value of 0.0001. This result suggests the presence of omitted variable bias in the model, implying that additional cost leadership measures could improve predictive accuracy if included. To verify the homoscedasticity assumption—that the variance of residuals remains constant—a heteroscedasticity test was conducted using the Breusch-Pagan/Cook-Weisberg method. The results, presented in Table 5, showed no evidence of heteroscedasticity, as indicated by a probability value of 0.1228, which is greater than the 0.05 threshold. Additionally, the study assessed autocorrelation in the variables using the Wooldridge test for panel data. Autocorrelation indicates the degree to which variable values are correlated over time. The results, also shown in Table 5, yielded a probability of 0.0005, which is significant, leading to the rejection of the null hypothesis that no first-order correlation exists. Furthermore, a cross-sectional dependence test was performed, with results presented in Table 5. The findings indicated that the null hypothesis, which posited no cross-sectional dependence, was rejected, as evidenced by a statistic of 2.084 and a probability value of 0.0371. This provides sufficient evidence to conclude that cost leadership, under fixed-effect conditions, exhibits cross-sectional dependence. To address the observed estimation issues, panel-corrected standard errors (PCSE) were utilized, ensuring that the standard errors are independent-corrected. Additionally, a Hausman test was conducted to determine the suitable model between the fixed-effect and random-effect models. The results favoured the random-effect model, with a probability of 0.9384, indicating that the differences in coefficients are not systematic. Finally, the appropriateness of the random-effect model compared to pooled OLS regression was evaluated using the Breusch-Pagan Lagrangian multiplier test for random effects. The results supported the random-effect model as the most suitable option, with a significant p-value of 0.0000, affirming the null hypothesis.

Table 5: Summary of Post Estimation Test Results

Ramsey RESET test		
Null Hypothesis	F-Statistics	Probability
Ho: model has no omitted variables (P>0.05)	7.51	0.0001
Tolerance and VIF Value		
Null Hypothesis	VIF	Mean VIF
There is no multicollinearity among the variables (1/VIF >0.10)	-	1.07
Breusch-Pagan / Cook-Weisberg test for Heteroscedasticity		
Null Hypothesis	Chi2 Statistics	Probability
Constant variance across the variable's residuals (P>0.05)	2.38	0.1228
Wooldridge test for autocorrelation		
Null Hypothesis	F-Statistics	Probability
No first-order autocorrelation (P>0.05)	18.177	0.0005
Pesaran's test of cross-sectional independence		
Null Hypothesis	Statistics	Probability
There is no cross-sectional dependence (P>0.05)	2.084	0.0371
Hausman Test		
Null Hypothesis	Statistics	Probability
Difference in coefficients not systematic (P>0.05)	0.41	0.9384
Breusch and Pagan Lagrangian multiplier test for random effects		
Null Hypothesis	Statistics	Probability
Difference in coefficients not systematic (P<0.05)	286.18	0.0000

Source: Authors' Computation (2024)

4.3.3 Regression result

The impact of cost leadership, represented by capital intensity (CPIT), cost efficiency (COEF), and capital expenditure (CAPE), on return on equity (ROE) is assessed using the results of the Prais-Winsten regression. This regression, which employs panel-corrected standard errors, was conducted after addressing the statistical issues identified in post-estimation tests. By correcting for cross-sectional dependence, the model is deemed suitable for interpretation. The significance of the model at the 5% level is evidenced by a Wald chi-squared statistic of 18.96 and a p-value of 0.0003. The analysis indicates that cost leadership can explain 12.24% of the variance in financial performance. Overall, the findings suggest that consumer goods firms aiming to be the lowest-cost producers in their industry, without sacrificing quality, will gain a cost advantage that enhances their returns and shareholder wealth.

The regression results reveal that CPIT has a negative and insignificant effect on returns on equity (ROE), with a z-statistic of -0.73 and a probability value of 0.465. This suggests that heavy investments in automation and advanced manufacturing technologies have not led to operational efficiency, negatively impacting financial performance. The negative effect of capital intensity may also stem from strains on the company's financial resources due to an imbalance in capital investment. Conversely, cost efficiency (COEF) exhibits a positive and significant effect on ROE, with a z-statistic of 2.74 and a p-value of 0.006. This implies that as firms expand their production capacity, the costs associated with generating overall revenue may decrease due to economies of scale, leading to cost-competitive products that enhance returns for shareholders.

Additionally, capital expenditure (CAPE) has a positive, and statistical significant effect on ROE, as evidenced by a z-statistic of 3.38 and a probability value of 0.001. This finding shows that when companies allocate funds to acquire and upgrade physical assets – essential resources for business operations – they improve their production capabilities, maintain a competitive edge, and generate additional revenue, ultimately improving financial performance. These results have theoretical implication which suggest that indeed organisations leverage on resources available as it relate to cost leadership strategy to enhance their firm performance, although the postulation is antithetic for the choice of capital intensity. Thus, it is believed that the consumer goods firms would adjust their behaviours regarding the best form of cost strategy so as to enhance its performance in line with attribution theory.

These findings examined the factors affecting the financial performance of listed banks in Nigeria and concluded that operational efficiency significantly determines bank performance. Similarly, Nkpodot and Emenyi (2023) found a positive relationship between cost efficiency and financial performance in listed manufacturing firms in Nigeria. Furthermore, Stie (2021) reported that capital expenditure positively influences the financial performance of Islamic banks in Indonesia.

However, the study's findings contradict those of Nangih and Onuora (2020), which suggested that higher capital intensity correlates with improved profitability in listed oil and gas firms. Additionally, the results differ from those of Prior studies found a negative relationship between capital expenditure and future firm performance as measured by return on assets (ROA) and dividends. Similarly, Jaisinghani et al. (2018) identified a negative and persistent relationship between capital expenditure intensity and firm performance in the Indian automobile industry.

Table 6: Panels Corrected Standard Errors Regression

ROE	Coef.	Indep-corrected Std. Err	z	P>z
CAPEX	14.1602	4.1943	3.38	0.001
CPIT	-0.0007	0.0009	-0.73	0.465
COEF	8.6551	3.1642	2.74	0.006
_cons	3.8522	2.1809	1.77	0.077
Number of obs	= 228	No of groups	= 19	
R-squared	= 0.1224	Rhos	= 0.4450	
Wald chi2(3)	= 18.96	Prob > chi2	= 0.0003	

Source: Authors' Computation (2024)

4.4 Policy Implication of Findings

The study's findings indicate that enhancing operational efficiency and capital expenditure directly correlates with increased returns on equity. This aligns with the attribution theory underpinning the research, which postulates that organizations have innate causal factors that lead to specific outcomes. Additionally, it suggests that organizations can adjust their behaviours and strategies to impact the likelihood of future outcomes, in this case, financial performance.

These insights should inspire the management of the consumer goods companies to improve their competitiveness as cost leaders within the manufacturing sector. Substantial investments in capital expenditures, along with policies aimed at balancing technology acquisition, are very important for consistently delivering high-quality products at lower costs. To counteract the challenges posed by capital intensity, consumer goods firms should establish policies that define optimal capital intensity levels, ensuring

ongoing improvements in performance. Furthermore, management should reduce reliance on capital and increase labour investments in production processes, particularly given that Nigeria's business environment has not yet matured to the point of fully rewarding technological advancements. The current economic climate emphasizes the need for human development across all sectors.

To achieve effective capital expenditure, it is essential for management to thoroughly evaluate all financing options, ensuring the availability of necessary funds for capital investments without compromising good governance or increasing financial risk. Implementing efficiency initiatives can significantly enhance a company's financial performance by promoting aggressive cost-cutting measures, fostering sustainable efficiency programs, and helping management understand the short- and long-term impacts of these initiatives. Specifically, cost-efficiency strategies help businesses to produce standardized, high-volume goods or services at the least possible cost to consumers, in this manner supporting companies in emerging markets like Nigeria to improve their financial performance.

5. CONCLUSION AND RECOMMENDATIONS

Given that economic conditions force consumer goods companies to constantly innovate and adapt to sustain profitability and market relevance, this study examines the impact of cost leadership on the financial performance of listed consumer goods companies in Nigeria. Precisely, it explores how cost leadership strategies such as, capital intensity, cost efficiency, and capital expenditure, affect the profitability and overall financial health of these firms. Understanding the interconnectedness of these key concepts can help business organizations effectively reallocate resources from less promising areas to those with higher growth potential, thus leveraging competitive advantages. By utilizing a longitudinal research design, and secondary data source, the study analysed data from 19 firms. The findings indicate that both cost efficiency and capital expenditure have positive and significant effects on the financial performance of sampled listed firms in Nigeria. These empirical results align with previous research highlighting the positive impact of cost efficiency and capital expenditure, particularly in developing countries.

Based on the findings, the study concludes that to successfully implement a cost leadership strategy that significantly enhances financial performance, firms should concentrate on capital expenditure and cost efficiency, as both factors demonstrate a positive and significant influence. Additionally, it appears that the capital intensity efforts of consumer goods firms are not optimally balanced for maximum effect. Therefore, it is recommended that management should focus on achieving cost leadership in the industry to improve financial performance, specifically:

I. Management of consumer goods firms need to strategically reposition their investment in capital intensified technology so as to

achieve operational efficiency that will result to higher returns on equity, particularly in a developing economy context.

II. To achieve optimal cost efficiency, cost of sale should be reduced to the barest minimum to achieve efficient production that will lead to higher returns of equity

III. Based on the positive influence of capital expenditure, consumer goods firms should increase their resource commitment to property, plant and equipment so as to update and develop their skills in modern manufacturing techniques for maximum returns

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