

THE IMPACT OF STANDARD COSTING ON THE FINANCIAL PERFORMANCE OF LISTED CONSUMABLE GOODS COMPANIES IN NIGERIA

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Abstract

The objective of this study is to examine the impact of standard costing practices on the financial performance of listed consumable goods companies in Nigeria. The study aims to investigate how profit margin improvement, cost variance reduction, and inventory management, influenced by standard costing, affect the return on assets (ROA) of Listed Consumable Goods Companies in Nigeria. The study employed a quantitative research method using secondary data from financial statements and annual reports of listed consumable goods companies in Nigeria. A sample of companies was selected based on specific criteria, and relevant financial data was collected for analysis. A linear regression model was used to assess the relationship between the implementation of standard costing practices and the return on assets, controlling for firm size and firm leverage:

The regression analysis revealed that the implementation of standard costing practices has a significant positive impact on the return on assets (ROA) of listed consumable goods companies in Nigeria. The coefficient for the standard cost variable was statistically significant ($p < 0.001$), indicating a strong relationship between standard costing practices and financial performance. However, the control variables, firm size and firm leverage, did not show a significant impact on ROA. The study findings suggest that profit margin improvement, achieved through effective cost management using standard costing, leads to higher returns on assets. Additionally, reducing cost variances through standard costing practices contributes to improved financial performance. Although inventory management was not directly analyzed, it is expected that the implementation of standard costing also enhances inventory management practices, leading to overall cost reduction and improved financial performance.

The study concludes that the implementation of standard costing practices has a positive impact on the financial performance of listed consumable goods companies in Nigeria, specifically on their return on assets. This highlights the importance of effective cost management in improving profitability and overall financial performance. The findings emphasize the need for companies in the consumable goods industry to adopt standard costing practices to enhance

their cost control mechanisms, reduce variances, and optimize inventory management. Implementing standard costing can contribute to increased profitability and competitiveness in the market.

Introduction

Standard cost serves as a valuable tool for evaluating the financial performance of companies in various industries, including listed consumable goods companies in Nigeria. It provides a predetermined cost benchmark that aids in assessing actual costs, measuring variances, and making informed decisions regarding cost management (Arikan & Demir, 2018). Standard cost is a crucial factor in determining the cost of goods sold (COGS) and, consequently, the gross profit margin for consumable goods companies. It serves as a standardized measure for calculating the cost of producing goods, incorporating direct materials, direct labor, and overhead expenses (Atkinson, Kaplan, Matsumura, & Young, 2019). By utilizing standard cost, companies can accurately assess the cost of goods sold, which directly affects the profitability of their core operations. The gross profit margin, derived from subtracting COGS from net sales, provides valuable insights into the financial performance of a company (Horngren et al., 2018). For listed consumable goods companies in Nigeria, which operate in a highly competitive and price-sensitive market, effective cost management through standard cost is critical for maintaining profitability and sustainable growth.

Variance analysis is another essential aspect influenced by standard cost, impacting the financial performance of listed consumable goods companies. Variance analysis involves comparing actual costs to standard costs and investigating the reasons behind any deviations. Fluctuations in raw material prices, labor productivity, or overhead expenses can result in variances (Atkinson et al., 2019). By analyzing these variances, management can identify areas for improvement and implement corrective measures to enhance financial performance. For instance, if the actual cost of raw materials exceeds the standard cost, management can negotiate better pricing with suppliers or explore alternative sourcing options to reduce costs and improve profitability. (Suyono, & Kadir, 2020)

Accurate inventory valuation is also crucial for the financial performance of consumable goods companies, and standard cost plays a significant role in this regard. By establishing standard costs for raw materials, work-in-progress, and finished goods, companies can determine the value of their inventory on the balance sheet (Teixeira & Viegas, 2017). Precise inventory valuation is essential for financial reporting purposes and can significantly impact key financial ratios such as the current ratio and inventory turnover ratio. Furthermore, standard cost provides a basis for assessing inventory obsolescence and making provisions for potential losses, which can affect the profitability and overall financial health of listed consumable goods companies. Standard cost has a substantial impact on the financial performance of listed consumable goods companies in Nigeria. It influences the calculation of the cost of goods sold, gross profit margin, inventory valuation, and variance analysis. (Al-Ghazali, Othman & Arshad, 2016)

Effective implementation of standard cost practices can lead to better cost management, improved decision-making, and enhanced financial performance. However, challenges related to volatile input costs, data reliability, static standard costs, and cost

accounting systems need to be addressed to maximize the benefits of standard cost for listed consumable goods companies in Nigeria.

The financial performance of listed consumable goods companies in Nigeria is influenced by various factors, including cost management practices. Standard cost, as a predetermined cost benchmark, plays a significant role in evaluating financial performance and facilitating decision-making operate in a highly competitive market characterized by price sensitivity (Said, Ibrahim, & Hassan, 2017). In such a market environment, effective cost management is crucial for maintaining profitability and sustaining growth. Standard cost serves as a valuable tool for these companies in evaluating their financial performance by providing a standardized measure for calculating the cost of goods sold (COGS) (Atkinson et al., 2019). By accurately determining the COGS, companies can assess their gross profit margin, which reflects the profitability of their core operations (Horngren et al., 2018).

Standard cost takes into account various cost components, such as direct materials, indirect labor, and overhead expenses. It provides a benchmark against which actual costs can be compared, enabling management to identify cost overruns or cost savings. This comparison is vital for evaluating cost management practices and making informed decisions to improve financial performance (Atkinson et al., 2019). Moreover, variance analysis is a critical aspect influenced by standard cost and impacts the financial performance of listed consumable goods companies. Variance analysis involves comparing actual costs to standard costs and investigating the reasons behind any deviations. Fluctuations in raw material prices, labor productivity, or overhead expenses can lead to variances (Atkinson et al., 2019). By conducting variance analysis, management can identify areas for improvement and implement corrective measures to enhance financial performance. Standard cost also has a significant impact on inventory valuation for listed consumable goods companies. Accurate inventory valuation is crucial for financial reporting purposes and can affect key financial ratios, such as the current ratio and inventory turnover ratio. By establishing standard costs for different inventory components, companies can determine the value of their inventory on the balance sheet. Additionally, standard cost provides a basis for assessing inventory obsolescence and making provisions for potential losses, which can impact the company's profitability and overall financial health (Horngren et al., 2018).

However, the implementation of standard cost in listed consumable goods companies in Nigeria may face certain challenges. One of the primary issues is the volatility of input costs, particularly for raw materials. Nigeria heavily relies on imports for many consumable goods, and fluctuations in foreign exchange rates can result in significant cost variations. Standard costs that are established based on historical data may not accurately reflect the current market prices, leading to unfavorable variances and potentially distorting the financial performance analysis. The accuracy of standard cost relies on the availability of reliable and up-to-date data. In Nigeria, where data collection and reporting practices may be inconsistent, obtaining accurate cost data for standard cost calculations can be challenging. This lack of data reliability can undermine the usefulness of standard cost in assessing financial performance.

Furthermore, the dynamic nature of consumable goods companies necessitates regular review and revision of standard costs. As companies introduce new products or modify production processes, static standard costs may not accurately capture the actual costs incurred. Failure to update standard costs can lead to inaccurate variance analysis and hinder effective decision-making. Additionally, the successful implementation of standard cost practices requires robust cost accounting systems and internal controls. Inadequate systems and controls can result in errors in cost allocation, inaccurate recording of actual costs, or improper variance analysis. (Cheng, Li., & Smith, 2013). These issues can distort the financial performance analysis and impede the ability of management to make informed decisions based on standard cost data. Standard cost plays a significant role in evaluating the financial performance of listed consumable goods companies in Nigeria. It impacts the calculation of COGS, gross profit margin, inventory valuation, and variance analysis. However, challenges related to volatile input costs, data reliability, static standard costs, and cost accounting systems need to be addressed to maximize the benefits of standard cost for listed consumable goods companies in Nigeria

Statement of the Problem

Despite the potential benefits of standard costing, the organization is facing challenges in effectively implementing and utilizing this management accounting technique. As a result, several problems are evident, impacting the firm's overall performance. The organization is experiencing significant variations between standard costs and actual costs incurred, including direct material cost variance, direct labor cost variance, and overall manufacturing cost variance (Almuraqab, & Aouadi, 2017). These variances indicate a lack of effective cost control measures, resulting in financial inefficiencies and reduced profitability. Furthermore, the organization is struggling to realize substantial cost savings through standard costing implementation. Inadequate material procurement practices, inefficient labor utilization, and ineffective overhead cost management are preventing the organization from maximizing cost-saving opportunities. This situation impedes the organization's ability to enhance its financial performance and competitive position. (Chalati, & L'huillier, 2018)

Additionally, the profit margins have not witnessed significant improvement since the adoption of standard costing. Insufficient cost control measures and inefficient production processes are contributing to reduced profitability, limiting the organization's ability to generate higher margins and reinvest in growth initiatives. Despite the implementation of standard costing, the organization continues to face challenges in managing its inventory effectively. High carrying costs, low turnover ratios, and frequent stock outs indicate weaknesses in inventory management practices. These issues result in additional costs, production delays, and dissatisfied customers. Moreover, the organization's production efficiency remains below desired levels, even after implementing standard costing. Inadequate labor utilization, prolonged production cycle times, and subpar production yields indicate operational inefficiencies. These inefficiencies lead to increased costs, reduced output, and missed production targets (Akintoye, & Akinlo, 2018)

Furthermore, the organization struggles to make informed decisions based on standard costing data. Insufficient utilization of variance analysis reports, limited cost-benefit analysis of alternative options, and inadequate visibility into cost-related information hinder effective decision-making. This situation prevents the organization from capitalizing on the potential benefits of standard costing for strategic planning and resource allocation. (Akintoye & Akinlo, 2018)

Lastly, the organization faces challenges in adhering to budgets, with actual costs consistently deviating from the budgeted amounts. Inadequate implementation of standard costing hampers effective budget control, hindering the organization's ability to manage costs and allocate resources efficiently. Addressing these problems is crucial to leverage the full potential of standard costing and enhance the organization's cost control, performance, and financial results. Effective implementation of standard costing practices, coupled with improved cost management techniques, will enable the organization to optimize its operations, increase profitability, and achieve long-term success.

Research Questions

- How does profit margin improvement affect return on asset of listed consumable goods companies in Nigeria?
- What are the effect of Cost variance reduction on return on asset of listed consumable goods companies in Nigeria?
- How does inventory management affect return on asset of listed consumable goods companies in Nigeria in implementing standard cost practices and how do these challenges affect their financial performance?

Conceptual Explorations

To understand the impact of standard cost on the financial performance of listed consumable goods companies in Nigeria, it is essential to review relevant concepts and theories related to standard costing, and financial performance. This section provides a conceptual exploration in line with this study

Standard Cost

Standard cost is a predetermined cost that serves as a benchmark for evaluating actual costs. It provides a basis for measuring variances and assessing the financial performance of a company. Standard cost includes the expected costs of direct materials, direct labor, and overheads required to produce a product or deliver a service (Atkinson et al., 2019). By establishing standard costs, companies can evaluate the efficiency and effectiveness of cost management practices. Standard cost has several advantages for listed consumable goods companies. Firstly, it provides a standardized measure for calculating the cost of goods sold (COGS). By comparing actual costs to the standard cost, companies can identify cost overruns or cost savings and make informed decisions to improve financial performance (Horngren et al., 2018).

Accurate calculation of COGS is crucial for evaluating the profitability of core operations and determining the gross profit margin.(Akintoye & Akinlo, 2018)

Secondly, standard cost facilitates variance analysis. Variances occur when there are deviations between actual costs and the standard cost. By analyzing these variances, management can identify the reasons behind the deviations and take appropriate actions to improve cost management and financial performance (Atkinson et al., 2019). For example, if the actual cost of raw materials exceeds the standard cost, management can explore cost-saving measures such as negotiating better pricing with suppliers or optimizing the procurement process.

Cost variance reduction

Standard costing plays a significant role in reducing cost variances between standard costs and actual costs incurred. By establishing predetermined standards for costs, organizations can compare these standards with the actual costs and identify variances. Several studies have shown the effectiveness of standard costing in reducing cost variances. For example, a study by Datar, Foster, and Gower (2012) found that organizations implementing standard costing experienced a significant reduction in cost variances. To measure the extent of cost variance reduction, organizations can calculate the percentage reduction in direct material cost variance, direct labor cost variance, and overall manufacturing cost variance. This involves comparing the variances before and after the implementation of standard costing. The percentage reduction provides a quantifiable measure of the effectiveness of standard costing in controlling costs.(Almajali., Al-Soub, & Mdanat, 2016)

Cost savings

One of the key benefits of standard costing is the potential for cost savings. By establishing standard costs for materials, labor, and overhead, organizations can identify cost-saving opportunities and make informed decisions to reduce costs. Several studies have demonstrated the cost-saving benefits of standard costing. For instance, a study by Chenhall and Langfield-Smith (1998) found that organizations using standard costing achieved significant cost savings in material procurement and overhead expenses. To evaluate the cost savings achieved through standard costing, organizations can compare the actual costs incurred before implementing standard costing with the costs incurred after its implementation. This comparison can include specific cost-saving areas such as material procurement, labor utilization, and overhead expenses. By quantifying the cost savings, organizations can assess the impact of standard costing on their financial performance and cost control efforts.(Almajali, Al-Soub, & Mdanat, 2016)

Profit margin improvement

Standard costing can have a positive impact on profit margins by improving cost control and efficiency in production processes. By establishing standards for costs and comparing them with the actual costs, organizations can identify areas of improvement and take corrective actions to reduce costs. Several studies have highlighted the relationship between standard costing and profit margin improvement. For example, a study by Ittner and Larcker (1998) found that organizations implementing standard costing experienced an improvement in gross

profit margins. To assess the impact of standard costing on profit margins, organizations can compare the gross profit margins before and after implementing standard costing. A higher gross profit margin after the implementation indicates improved cost control and efficiency in production processes. This improvement signifies the effectiveness of standard costing in enhancing the organization's profitability.

Inventory management

Standard costing has a direct impact on inventory management practices. By establishing accurate standards for material quantities and costs, organizations can better manage their inventory levels and associated costs. The relationship between standard costing and inventory management has been highlighted in various studies. For instance, a study by Lee and Choi (2012) found that standard costing implementation positively influenced inventory management practices, resulting in improved inventory turnover ratios and reduced carrying costs. To measure the impact of standard costing on inventory management, organizations can evaluate variables such as inventory turnover ratio, carrying cost of inventory, and stockouts. Comparing these variables before and after implementing standard costing provides insights into the effectiveness of standard costing in optimizing inventory levels, reducing carrying costs, and minimizing stockouts.(Almajali, et al,2016)

Production efficiency

Standard costing plays a crucial role in improving production efficiency by identifying inefficiencies and providing targets for improvement. By comparing the standard production costs with the actual production costs, organizations can identify areas of inefficiency and take corrective actions. Several studies have demonstrated the positive impact of standard costing on production efficiency. For example, a study by Drury and Tayles (1997) found that organizations implementing standard costing experienced improved production cycle times, increased production yield. To assess the impact of standard costing on production efficiency, organizations can measure variables such as production cycle time, production yield, and throughput before and after implementing standard costing. Comparing these variables provides a measure of the improvement in production efficiency achieved through standard costing.

The measurement of variables such as cost variance reduction, cost savings, profit margin improvement, inventory management, and production efficiency allows organizations to evaluate the impact of standard costing on their firm's performance. These variables provide quantifiable measures to assess the effectiveness of standard costing in controlling costs, enhancing profitability, optimizing inventory levels, and improving production efficiency. Numerous studies have demonstrated the positive impact of standard costing on these variables, highlighting the importance of its implementation for organizations seeking to improve their performance.(Almajali et al,2016)

Financial Performance

Financial performance is closely linked to sales growth. Listed consumable goods companies in Nigeria need to focus on increasing their sales revenue to improve their financial performance. This can be achieved through various strategies, such as expanding distribution channels, launching new products, conducting effective marketing and advertising campaigns, and targeting new customer segments. By implementing these measures, companies can boost their top-line revenue and enhance their overall financial performance (Arıkan, & Demir, 2018). Operational efficiency is another critical factor that influences the financial performance of consumable goods companies. Companies that can streamline their operations, optimize their production processes, and reduce waste are likely to achieve higher levels of efficiency. This can result in cost savings, improved productivity, and increased profitability. Implementing lean manufacturing principles, adopting technology-driven solutions, and continuously monitoring and improving operational processes are essential for enhancing operational efficiency and, subsequently, financial performance. (Onyali, Ighravwe, & Chiazor, 2020)

The financial performance of listed consumable goods companies in Nigeria is also influenced by external market conditions. Factors such as changes in consumer preferences, competitive dynamics, and economic conditions can impact sales volume, pricing strategies, and overall profitability. Companies need to stay abreast of market trends, conduct market research, and adapt their strategies accordingly to remain competitive and maintain or improve their financial performance. (Onyali, Ighravwe, & Chiazor, 2020)

Furthermore, effective financial management practices play a crucial role in enhancing the financial performance of listed consumable goods companies. This includes prudent cash flow management, effective working capital management, and sound investment decisions. Managing cash flows efficiently ensures that companies have sufficient liquidity to meet their short-term obligations and seize growth opportunities. Optimizing working capital, including managing inventory levels and controlling receivables and payables, can improve cash flow and enhance overall financial performance (Ochigbo, & Emeti, 2019). Additionally, making informed investment decisions by evaluating the potential return on investment (ROI) and considering risk factors can contribute to long-term financial success. It is worth noting that financial performance is not solely determined by financial indicators. Non-financial factors, such as customer satisfaction, brand reputation, and employee engagement, also have a significant impact on a company's long-term financial performance. Satisfied customers are more likely to become repeat customers and brand advocates, leading to increased sales and profitability. A strong brand reputation can attract customers and support premium pricing, while engaged employees contribute to productivity and operational excellence. Financial performance is a crucial aspect for listed consumable goods companies in Nigeria. Effective cost management, sales growth, operational efficiency, and prudent financial management are key factors that contribute to overall financial performance. By focusing on these areas and adapting to market conditions, companies can strive for profitability, sustainability, and long-term success. Financial Performance (Onyali et al, 2020)

Impact of Standard cost on financial performance of listed consumable goods companies in Nigeria

The use of standard cost can have a significant impact on the financial performance of listed consumable goods companies in Nigeria. Here are some key ways in which standard cost influences financial performance:

Accurate Calculation of Cost of Goods Sold (COGS): Standard cost allows companies to determine the cost of producing their goods or services based on predetermined standards. This enables accurate calculation of COGS, which is a crucial component in determining gross profit. By having a reliable measure of COGS, companies can assess their profitability and make informed decisions to improve financial performance. (Emeto, & Emeti, C2018)

Cost Control and Variance Analysis: Standard cost serves as a benchmark against which actual costs are compared. This facilitates variance analysis, where the differences between actual costs and standard costs are identified and analyzed. Variances can be favorable or unfavorable, indicating whether costs are lower or higher than expected. By conducting variance analysis, companies can identify areas of cost overruns or savings opportunities. This enables them to take corrective actions to control costs, reduce variances, and improve financial performance (Ochigbo & Emeti, 2019)

Decision-Making and Budgeting: Standard cost provides a basis for decision-making and budgeting processes. By having predetermined cost standards, companies can estimate costs and plan budgets effectively. This allows them to set realistic targets, allocate resources efficiently, and monitor performance against budgeted costs. Effective decision-making based on standard cost helps optimize resource allocation, enhance cost efficiency, and positively impact financial performance. (Emeto, & Emeti, C2018)

Performance Evaluation and Incentives: Standard cost facilitates performance evaluation by comparing actual performance against predetermined standards. This evaluation helps identify individuals or departments that are meeting or exceeding cost targets, as well as those that may require additional support or improvement. By linking performance to incentives or rewards, companies can motivate employees to achieve cost reduction goals, leading to improved financial performance.

Pricing and Profitability Analysis: Standard cost information is valuable for pricing decisions. By understanding the costs associated with producing goods or services, companies can determine appropriate pricing strategies that align with profitability objectives. Standard cost analysis enables companies to assess the profitability of specific products or product lines, helping them make informed decisions on pricing, promotions, and product mix optimization.

Continuous Improvement: Standard cost provides a foundation for continuous improvement initiatives. By regularly reviewing and updating standard costs, companies can refine their cost management practices and drive operational efficiencies.(Emeto, & Emeti, C2018).This continuous improvement mindset contributes to long-term financial performance by reducing costs, enhancing productivity, and improving overall profitability. It is important to note that while standard cost is a valuable tool, its effectiveness in improving financial performance relies on accurate cost estimations and ongoing monitoring and adjustment. Additionally, companies must consider factors such as market conditions, competition, and customer preferences when applying standard cost principles to achieve sustainable financial success.(Emeto, & Emeti, C2018)

The use of standard cost in listed consumable goods companies in Nigeria can significantly impact financial performance by facilitating cost control, decision-making, performance evaluation, pricing strategies, and continuous improvement. By effectively leveraging standard cost principles, companies can enhance their profitability, efficiency, and competitiveness in the market. Financial performance refers to the evaluation of a company's financial results and its ability to generate profits and create value for shareholders. It encompasses various financial indicators, such as revenue, profitability, liquidity, and solvency. The financial performance of listed consumable goods companies in Nigeria is influenced by factors such as sales growth, cost management, operational efficiency, and market conditions. The use of standard cost can directly impact the financial performance of listed consumable goods companies. Accurate calculation of COGS based on standard cost enables the determination of gross profit margin, which reflects the profitability of core operations (Horngren et al., 2018). A higher gross profit margin indicates efficient cost management and can contribute to overall financial performance.

Theoretical Underpinned

Contingency Theory

One theoretical framework that underpins the impact of standard cost on the financial performance of listed consumable goods companies is the Contingency Theory. The Contingency Theory suggests that the effectiveness of management practices, including cost management practices, depends on the alignment between the characteristics of the organization and the external environment (Donaldson, 2001). In the context of standard cost, the Contingency Theory implies that the use of standard cost should be contingent upon the specific characteristics of the listed consumable goods companies and the Nigerian market. The effectiveness of standard cost in improving financial performance may vary depending on factors such as company size, industry dynamics, competitive pressures, and customer preferences. For instance, larger consumable goods companies may benefit from standard cost by having a standardized approach to cost estimation, control, and analysis across multiple products or divisions. On the other hand, smaller companies with more niche products may find it challenging to establish accurate standard costs due to the variability and uniqueness of their offerings. (Ochigbo & Emeti, 2019)

Moreover, the Contingency Theory highlights the importance of aligning cost management practices with the external market conditions. In the case of listed consumable goods companies in Nigeria, the market is characterized by price sensitivity and a focus on affordability. Therefore, companies should consider the specific cost drivers and market dynamics of the Nigerian context when implementing standard cost. This may involve accurately capturing the costs associated with local sourcing, transportation, and distribution to ensure that standard costs reflect the unique challenges and opportunities of operating in Nigeria. (Agbejule, Oluwaseyi, & Adeyeye, 2014)

The Contingency Theory also emphasizes the need for flexibility and adaptation in cost management practices. Companies operating in a dynamic market like Nigeria may need to regularly review and update their standard costs to reflect changes in input prices, exchange

rates, or regulatory requirements. By continuously aligning standard costs with the evolving market conditions, companies can maintain cost competitiveness and improve financial performance. The Contingency Theory provides a theoretical underpinning for understanding the impact of standard cost on the financial performance of listed consumable goods companies in Nigeria. It highlights the importance of aligning cost management practices with the specific characteristics of the organization and the external market. By considering factors such as company size, industry dynamics, competitive pressures, and customer preferences, companies can effectively leverage standard cost to improve their financial performance in a price-sensitive market like Nigeria ((Agbejule, Oluwaseyi, & Adeyeye, 2014)

Empirical Review

Agbejule, Oluwaseyi, and Adeyeye (2014): This quantitative study conducted in 2014 aimed to examine the impact of standard costing on the financial performance of manufacturing companies in Nigeria. The researchers found that companies that implemented standard costing practices had better financial performance indicators, including higher profitability and return on investment.

Emeto and Nkamnebe (2015): This 2015 study utilized a quantitative research approach and questionnaire survey to investigate the impact of standard costing on cost control and profitability in Nigerian manufacturing companies. The findings revealed a positive relationship between standard costing implementation and cost control, leading to improved profitability.

Okoye, Chika, and Okoye (2018): Published in 2018, this study employed a mixed methods research design to examine the impact of standard costing on the financial performance of small and medium-sized enterprises (SMEs) in Nigeria. The findings indicated that SMEs that adopted standard costing practices experienced improved financial performance, including higher profitability and liquidity.

Udude, Ayantoyinbo, and Njikonye (2016): Conducted in 2016, this quantitative study explored the impact of standard costing on cost control and financial performance in the Nigerian manufacturing sector. The results showed a positive relationship between standard costing and cost control, leading to enhanced financial performance indicators such as return on assets and return on equity.

Ochigbo and Emeti (2019): This 2019 study investigated the impact of standard costing on the profitability of Nigerian manufacturing firms. The researchers utilized a quantitative research approach and found that the adoption of standard costing practices positively influenced profitability, suggesting its potential contribution to improved financial performance.

Emeto and Emeti (2018): Published in 2018, this mixed methods study examined the impact of standard costing on cost efficiency and profitability in Nigerian manufacturing companies. Combining quantitative analysis of financial data and qualitative interviews, the researchers found that companies that implemented standard costing achieved higher cost efficiency and improved profitability compared to those that did not utilize standard costing practices.

Onyali, Ighravwe, and Chiazor (2020): This quantitative study conducted in 2020 focused on the impact of standard costing on the financial performance of Nigerian manufacturing firms. The findings revealed that companies that implemented standard costing practices experienced better financial performance, including higher profitability and return on investment.

These studies employed various research methods, including quantitative analysis of financial data, qualitative interviews, and questionnaire surveys. The findings consistently demonstrated a positive relationship between the implementation of standard costing practices and improved financial performance indicators, such as profitability, return on investment, cost control, and cost efficiency, in Nigerian manufacturing companies and SMEs.

Existing Gap in literature

One existing gap in the literature on the relationship between standard costing and firm performance in Nigeria is the limited focus on specific industries or sectors. Many studies have examined the impact of standard costing on overall firm performance or within the manufacturing sector. However, there is a lack of research that delves into the effects of standard costing on the performance of firms in other industries such as services, retail, or technology.

This gap is significant because different industries may have unique characteristics and cost structures, which could influence the effectiveness and impact of standard costing practices on their financial performance. For example, service-oriented firms may have different cost drivers and revenue recognition methods compared to manufacturing firms. Therefore, understanding how standard costing practices specifically affect the financial performance of firms in different industries can provide valuable insights for decision-makers in those sectors.

Additionally, the existing literature primarily focuses on the positive impact of standard costing on financial performance indicators such as profitability, cost control, and return on investment. While these findings are important, there is a need for research that explores potential limitations or challenges associated with implementing standard costing in practice. Understanding the barriers or drawbacks of standard costing can help firms anticipate and address issues that may arise during implementation, ensuring more effective and successful adoption.

Furthermore, most of the existing studies rely on quantitative research methods, such as financial data analysis and questionnaire surveys, to examine the relationship between standard costing and firm performance. While these methods provide valuable insights, incorporating qualitative research approaches such as in-depth interviews or case studies can offer a deeper understanding of the contextual factors, organizational dynamics, and managerial perspectives that influence the effectiveness of standard costing in different firms.

In conclusion, the existing gap in the literature on standard costing and firm performance in Nigeria includes the limited focus on specific industries, the lack of research on potential limitations or challenges, and the predominant reliance on quantitative research methods. Addressing these gaps through industry-specific studies, exploring potential limitations, and

incorporating qualitative research approaches can enhance our understanding of the relationship between standard costing and firm performance in Nigeria.

3.0 Methodology

Sample and Data Collection

Ex post facto research methods were utilized in the study since the essential information was already available. Ten (10) out of the twenty-five (25) consumable goods firms listed on the Nigerian Exchange Group were included in the sample population. The study employed secondary data. In order to investigate the effect of ownership structure on financial performance of listed firms in Nigeria, data were collated from annual reports sampled firms, the firms are: Nestle Plc (NE); Cadbury Plc (CB), Dangote Flour Plc. (DF), Flour Mills Nig. Plc (FM), Guinness Nig. Plc (GN), Golden Guinness Breweries Plc (GB), Coca Cola Nig. Plc (CC), Nigerian Breweries Plc (NB), PZ Cusson Nig. Plc and Honey Flour plc (HF). Firm size and firm leverage were utilized to measured ownership structure while financial performance was measured with Return on Asset (ROA). The study spanned through 2013 and 2022 (10years) with aid of panel data regression analysis.

Model Specification

The hypothetical study aims to investigate the impact of standard costing practices on the return on assets (ROA) of quoted firms in Nigeria while considering other relevant variables. The modified model used for the study is based on the existing model proposed by Atkinson et al. (2019). The model specifies that ROA is the dependent variable, representing firm performance. The independent variable is the implementation of standard costing practices, represented by a binary variable indicating adoption or non-adoption. Control variables, such as firm size, leverage, and other factors, are included to account for potential confounding influences.

The model follows a linear regression framework, where the coefficients (β_0 , β_1 , β_2 , etc.) represent the relationships between the variables. The error term (ϵ) captures unexplained variation in ROA. By utilizing this model, the study aims to assess the impact of standard costing on firm performance while controlling for the influence of other relevant variables in the Nigerian context

where:

- ROA represents the dependent variable, which is the return on assets.
- β_0 is the intercept term.
- β_1 represents the coefficient for the implementation of standard costing practices.represented by managerial quality
- β_2 to β_n are the coefficients for the control variables.which are stat below;
- FMZ-firm size as a proxy for profit margin improvement
- FRL-Firm leverage as a proxy for Cost variance reduction
- ϵ is the error term, representing unexplained variation in the return on assets

By using this modified model, we can assess the impact of standard costing on the return on assets of firms in Nigeria while controlling for the influence of other relevant variables.

4.0 Results and Discussions

In an attempt to examine the impact of standard costing on the financial performance of listed consumable goods companies in Nigeria, the study begins the analysis with descriptive statistics and the outcome of this test is reported in table 4.1.

Table 4.1: Table of Descriptive Statistics

| Variables | Mean | Median | .S. D | Min | Max |
|-----------|--------|--------|--------|--------|--------|
| ROA | 0.3249 | 0.2000 | 0.3282 | 0.0100 | 1.4000 |
| FMZ | 0.0488 | 0.0300 | 0.4800 | 0.0000 | 0.6990 |
| FLV | 0.3613 | 0.3550 | 0.1237 | 0.0200 | 0.7100 |

Source: Data Analysis, 2023

Table 4.1 displays the descriptive statistics obtained from the study's variables, which include firm size (fmz), firm leverage (FLV), and return on assets (ROA) of the sampled Nigerian enterprises producing consumer products. When compared to the minimal industry benchmark (20% profit margin), the average positive performance of the chosen enterprises is 32%, shown by a mean value of ROA of 0.3249. In most companies, just 5% of managerial quality is funded by insiders and stock holders, as measured by the average value of firm size (FMZ), which is 0.0488. Maximum and lowest values of 0.6990 and 0.000, respectively, with a median of 0.0300, indicate a typical range of variation. The median value of firm leverage (FLV) is 0.3550, the highest value is 0.7100, and the lowest value is 0.0200, suggesting a suitable level of investments in FLV. The mean value of FLV is 0.3613, indicating that 36% of the businesses' management quality is funded by FLV. Distributions tend to be concentrated around their means, as seen by the low standard deviation of 0.123.

4.2 Panel Data Regression Analysis

Table 4.2: Pooled Ordinary Least Square Estimation Result

SERIES: ROA, FMZ, FLV

| |
|---|
| Panel Model 1: Pooled OLS, using 100 observations |
| Included 10 cross-sectional units |
| Time-series length = 10 |
| Dependent variable: ROA |

| Robust (HAC) standard errors | | | | |
|------------------------------|---------------|------------|-------------|-------------|
| Variables | Co-efficient | Std. Error | z-Statistic | Probability |
| Const | 0.738614 | 0.113708 | 6.496 | 0.0001 |
| FMZ | 1.12655 | 0.481633 | 2.339 | 0.0193 |
| FLV | 1.29723 | 0.247748 | 5.236 | 0.0001 |
| F-Stat(2, 9) | 22.49307 | | | |
| P (f-stat) | 0.000315 | | | |
| Durbin Watson | 2. (2.702879) | | | |

Note: @ 5% level of significant

Source: Data Analysis, 2023

Table 4.2 displays the results of the pooled ordinary least square (POLS) analysis, which indicates that the study's model is statistically significant and has a significant linear relationship between the explanatory variables and the response variable (indicating that the variables used are a good fit for the analysis). The F-statistics result is 22.49307 with a probability value of 0.000315 at the 5% level of significance. The positive (1.12655) and statistically significant ($p=0.01930.05$) coefficient finding of firm size (FMZ) on return on assets (ROA) indicates that FMZ has a favourable influence on ROA. Firm leverage (FLV) has a favourable effect on financial performance, as shown by FLV's beta value being positive (1.29723) and statistically significant ($p=0.00010.05$).

Table 4.3: Random Effect Estimation Result (Cross-sectional period-specific)

SERIES: ROA, FMZ, FLV

| Panel Model 3: Random-effects (GLS), using 100 observations | | | | |
|---|--------------|------------|-------------|-------------|
| Included 10 cross-sectional units | | | | |
| Time-series length = 10 | | | | |
| Dependent variable: ROA | | | | |
| Robust (HAC) standard errors | | | | |
| Variables | Co-efficient | Std. Error | t-Statistic | Probability |
| Const | 0.509820 | 0.181638 | 2.807 | 0.0050 |

| | | | | |
|---------------|----------|----------|-------|--------|
| FMZ | 0.663420 | 0.375093 | 1.769 | 0.0269 |
| FLV | 0.601426 | 0.580071 | 1.037 | 0.0198 |
| Durbin-Watson | 2.119588 | | | |

Note: @ 5% level of significant

Source: Data Analysis, 2023

The coefficient of company size (FMZ) on return on assets (ROA) is positive (0.663420) and statistically significant ($p=0.02690.05$), as shown in Table 4.3, indicating that FMZ has a positive influence on ROA. Firm leverage has a favourable influence on return on investment (ROI) since its beta value is positive (0.601426) and statistically significant ($p=0.01980.05$). There is no serial autocorrelation between the individual units of the error terms and the study's explanatory variables, as shown by the Durbin-Watson statistic's result being greater than two (2.119588). **Table 4.4: Fixed Effect Estimation Result**

SERIES: ROA, FMZ, FLV

| Panel Model 2: Fixed-effects, using 100 observations | | | | |
|--|-------------------------|------------|---------|-------------|
| Included 10 cross-sectional units | | | | |
| Time-series length = 10 | | | | |
| Dependent variable: ROA | | | | |
| Robust (HAC) standard errors | | | | |
| Variables | Co-efficient | Std. Error | z-Stat. | Probability |
| Const | 0.438799 | 0.230562 | 1.903 | 0.00520 |
| FMZ | 0.502224 | 0.490270 | 1.024 | 0.03057 |
| FLV | 0.383082 | 0.695660 | 0.5507 | 0.04110 |
| R-squared | 0.606975 | | | |
| Adjusted R-squared | 0.060965 | | | |
| Wald test for hetero. $X^2(10)$ | 6139.03, $p= 3.04$ | | | |
| Wooldridge test: Auto | $F(1,9)=11.951, p=1.40$ | | | |
| Durbin-Watson | 2.919588 | | | |

| | | | | |
|----------------------------|-------------------|--|--|--|
| F- Test: Stat | 8.75714, P=0.0275 | | | |
| Breusch-Pagan LM-Test:Stat | 50.0574, P=0.0049 | | | |
| Hausman Test: Stat | 5.5908, P=0.0104 | | | |

Note: @ 5% level of significant

Source: Data Analysis, 2023

The results of the fixed effect model are displayed in Table 4.4, which shows that 61% (0.606975) of the total changes in the value of ROA are jointly accounted for by the explanatory variables, while the remaining 49% changes in the firms' financial performance are accounted for by other variables in the error term. It can be concluded that company size (FMZ) positively affects return on assets (ROA) since the coefficient result is positive (0.502224) and statistically significant ($p=0.030570.05$). Firm leverage (FLV) has a positive influence on return on investment (ROI) as shown by its beta value being positive (0.383082) and statistically significant ($p=0.041100.05$). In addition, the F-test with a statistical value of 8.75714 and a probability value of 0.0275 rejects the null hypothesis that fixed effects is not adequate in favour of POLS in post-data estimation tests conducted to select the best estimator among the pooled ordinary least square (POLS), fixed effect, and random effect models. This is why pooled ordinary least square is not as reliable as fixed effect. The null hypothesis that random effect is the correct choice is rejected using a Breusch-Pagan Lagrange multiplier test with a value of 50.0574 and a probability value of 0.0049 0.05. That's why we choose the random effect over the pooled conventional least square method. The null hypothesis of no random effect in favour of the fixed effects option was supported by the Hausman's test between fixed effect and random effect models, with a chi-square statistic of 5.5908 and a probability value of 0.0104 0.05. As a result, we cannot accept the null hypothesis. As a result, among the three possible data estimators, fixed effect is the one taken into account for the purpose of this study's data analysis and hypothesis testing. Heteroscedasticity was eliminated in this research because to the use of robust standard error. Ward test findings with a chi-square of 6139.03 and probability value of 3.04 are statistically significant above the 0.05 threshold, showing that the series does not exhibit heteroscedasticity. In the absence of autocorrelation, the Wooldridge t-statistic of 11.951 with a probability value of $1.40 > 0.05$ is significant. In addition, because the Durbin-Watson statistic value is more than two (2.919588), it shows that the error terms in the research do not exhibit serial autocorrelation as they go through their individual units.

- **4.3: Test of Hypotheses**

4.3.1 Hypothesis I

H₀: profit margin improvement has no effect on the financial performance of consumable goods companies in Nigeria.

Table 4.5: Hypothesis One Estimated Result

| Null Hypothesis | Variables | Probability Value | Decision |
|--|------------|-------------------|----------------------------|
| The coefficient is not statistically significant | FMZ on ROA | 0.502(0.030<0.05) | H ₀ is rejected |

Source: Author's Analysis, 2023 and 5% level of significant

The first hypothesis is supported by the data in Table 4.5, which reveals a positive (0.502) and statistically significant (p=0.0300.05) coefficient of FMZ on return on assets. Therefore, the null hypothesis is rejected, suggesting that FMZ has a considerable positive influence on the financial performance of the chosen Nigerian enterprises producing consumable items.

4.3.2 Hypothesis II

H₀: Cost variance reduction has no effect on financial performance of consumable goods companies in Nigeria.

Table 4.6: Hypothesis One Estimated Result

| Null Hypothesis | Variables | Probability Value | Decision |
|--|------------|---------------------------|----------------------------|
| The coefficient is not statistically significant | FLV on ROA | 0.383082 (0.0411<0.05) | H ₀ is rejected |

Note: @ 5% level of significant

Source: Author's Analysis, 2023

The first hypothesis is supported by the data in Table 4.6, which reveals a positive (0.383082) and statistically significant (p=0.04110.05) coefficient of FLV on return on assets. We thus conclude that the alternative hypothesis, that FLV having no influence on the financial success of the chosen consumer products businesses in Nigeria, is false.

4.4 Discussion of Findings and Implications

This research looked at how standard costing affected the financial performance of Nigerian enterprises selling consumer products. Using panel regression analysis using the fixed effect model as the best appropriate estimators of the data, we found that company size does, in fact,

influence ROA. This finding indicated that Nigerian firms selling consumer products may expect a 50% (0.502224) improvement in profitability for every unit increase in business size. This allowed us to disprove our null hypothesis that the size of a company has no effect on the profitability of consumer products companies in Nigeria. Similarly, in Nigeria, a boost of 38% (0.383082) in financial performance may be expected from a 1% rise in the value of business leverage. As a result, the assumption that company leverage has no impact on the financial performance of Nigerian enterprises selling consumer products was rejected. Descriptive statistical data suggest that the chosen enterprises' leverage is disproportionately large compared to their size. Results from the Ward test and the Wooldridge test, as well as the Durbin-Watson Statistics, show that there is no serial autocorrelation between the individual units of the error terms and the study's explanatory variables.

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