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Operating Costs Control Mechanisms and Financial Performance of Quoted Consumer Goods Firms in Nigeria

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Abstract
The business environment where the consumer goods firms in Nigeria operate seems to pose challenges to the players due to increasing prices of manufacturing inputs and competition in the market terrain which eventually affect their profitability. Cost increases as various production activities are embarked upon and the need to keep cost under check is vital. This study examined the effect of operating cost control mechanisms on the financial performance of quoted consumer goods firms in Nigeria. The study adopted descriptive survey research design. The population of the study consisted of three hundred (300) workers drawn from the six geopolitical zones in Nigeria. The sample size of this study consisted of two hundred (200) workers randomly selected from the study population based on the six geopolitical zones in Nigeria. The sampling method used for this study was stratified sampling technique. This study used primary sources of data collection via structured questionnaire. The data collected were analyzed using multiple regression analysis technique and descriptive statistics technique respectively via SPSS Version 20. The study found a positive significant effect of Operating budgetary costng (OBC), Activity based costing (ABC) and Just in time (JIT) respectively on the financial performance of quoted consumer goods firms in Nigeria while Lean manufacturing (LM), standard costing (SC), inventory operations costing (IC) and value analysis control (VAC) respectively found insignificant positive effect on the financial performance of quoted consumer goods firms in Nigeria. The study concluded that operating cost control mechanisms impacted on the financial performance of quoted consumer goods firms in Nigeria and recommended that the studied firms should apply operating budget costing (OBC), Just in time and Activity based costing mechanisms respectively since both techniques impacted positively on the financial performance of quoted consumer goods firms in Nigeria.

Keywords: Operating Costs Control Mechnamisms, Financial Performance, Return on Assets

1. Introduction

1.1 Background to the Study

Operating cost control mechanisms are strategies designed by the operating managers of entities to achieve primary business objectives of profitability and competitive advantage. They are strategies formally put in place by the organizations through their control cost responsibility managers to ensure that appropriate costs of activities (operations) are managed and maintained within the intended limit so as to achieve expected financial performance. Achieving profitability is necessary for firms because the present–day business environment is very dynamic coupled with increased complexity owing to factors such as globalization, shorter product life cycles, technological advancements, the growing number of competitors, and evolving customer preferences (Adegbie & Fadere, 2020).

There is significant need for companies operating within the consumer goods manufacturing sector in Nigeria to adopt operating cost control mechanisms and more importantly by leveraging modern manufacturing technologies with the aim of enhancing economic profitability and minimizing operational costs. This is considered the best way to survive competition and improve financial performance (Njoroge *et al*, 2024). The importance of operating cost control mechanisms in this important sector of the Nigerian economy cannot be overstated, as they directly impact project viability, profitability, and overall financial health of the sector (Bassey & Ibegbulam, 2024; Obaigbena, *et al*., 2024; Ozowe *et al*, 2024). The operations of consumer goods firms often involve significant capital expenditures, extended timelines, and unpredictable variables, making stringent operating cost control mechanisms essential to ensure that operations are completed within the budget and meet

contractual commitments.

Controlling operational costs in the quoted consumer goods firms in Nigeria involves several key challenges and among these include: fluctuating commodity prices, regulatory compliance costs, and technological uncertainties, government laws and regulations. Additionally, the sector often deals with complex supply chains, geopolitical factors, and environmental regulations, all of which can lead to cost overruns and financial inefficiencies. Accordingly, effective operating costs control mechanisms imply strategies designed to address these multifaceted challenges, mitigate risks and optimize financial performance (Babayeju *et al*. 2024, Ekechukwu & Simpa, 2024, Ochulor *et al*. 2024). Operating cost control mechanisms constitute the processes which ultimately focus on controlling the total cost through competitive analysis to ensure that the costs incurred by the organization are kept within the pre-determined level. A key step in implementing operating cost control mechanisms by business organizations is the preparation of the operating budget in relation to production. Afterwards, actual performance is determined by computing the variances between the actual and budgeted costs, then implementing the necessary corrective actions.

Related accounting literatures on operating cost control mechanisms and firms' financial performance reveal that the first step in operating cost control is operating budget costing. Operating budget costing is the process of estimating operating expenditures and incomes to be generated by the organization for a specified period of time to boost profitability. Maintaining and increasing profitability depends on reducing costs and targeting expenditure reductions form part of operating cost control mechanisms which ultimately boost financial performance (Parveen & Pougajendy, 2023). In view of this fact, quoted consumer goods firms in Nigeria can incorporate operating cost control mechanisms in their manufacturing process as well as cost accounting principles, methods and techniques to enhance the intended profitability (Lucey, 2023; Akinleye & Fajuyagbe, 2022; Umo,2023).

By implication, the management of business organizations (including consumer goods firms in Nigeria) is concerned with profitability (a measure of financial performance) which can be achieved by applying some operating cost control mechanisms namely budget costing, standard costing, value analysis, just-in-time inventory control, activity-based costing, inventory operations costing, lean manufacturing analysis and supply chain management. Convincingly, robust financial performance (profitability) remains the primary focus of every business existence. Accordingly, management of quoted consumer goods firms in Nigeria should target proper care and efficiency in the use of resources so as to achieve a sustained profitability.

The link between operating cost control mechanisms and financial performance lies in the fact that the adoption of an effective operating cost control mechanisms (such as operating budget costing, standard costing, value analysis, just-in-time inventory control, activity-based costing, inventory operations costing, lean manufacturing analysis, supply chain management and linear programming technique) can effectively provide management of quoted consumer goods firms in Nigeria the operating strategies necessary to control and maintain costs and at the same time sustain profitability of the business as encapsulated in the literatures of both the developed and developing countries (Umo, 2023). Consequently, this allows for better decision-making, resource allocation and ultimately the company's overall financial performance since very little will be appreciated if profitability objective of the business is not prioritized. By accurately allocating costs to products, consumer goods firms can determine their profitability, identify areas of improvement and make informed pricing decisions. By applying cost control mechanisms in evaluating the efficiency and effectiveness of resource utilization and also identifying cost drivers, consumer goods firms can analyze the cost-effectiveness of different processes and ultimately optimize its operations and improve financial performance (Etim *et al*., 2024; Muse, 2021).

Financial performance is a paramount factor in assessing growth potential, earnings capacity and overall financial strength. It involves measuring the results of a firm's policies and operations in monetary terms reflected in financial performance indicators such as return on investment (ROI), return on assets (ROA), return on equity (ROE), liquidity to solvency (Ajala, 2021). Other measures of financial performance denote the organization's ability to achieve its objectives and include and, Earnings per share (EPS), and Economic Value Added (EVA) (Gichuki, 2012). While much accounting literature suggests some commonly used financial performance measures in Nigeria, this research argues that Return on Asset (ROA), a measure of profitability, can serve as a better metric particularly for organizing, analyzing and interpreting a firm's internal operations and thhe achievement of its objectives. It is on this basis that the researcher decided to study operating costs control mechanisms and financial performance of quoted consumer goods firms in Nigeria.

1.2 Statement of the Problem

Effective implementation of operating cost control mechanisms by business organizations allows for better decision-making, resource allocation, waste elimination and ultimately the company's profitability. Extant literatures reported that manufacturing firms can achieve better financial performance via the adoption of operating budget costing, standard costing, value analysis, just-in-time inventory control, activity-based costing, inventory operations costing, lean manufacturing analysis and supply chain management respectively as operating cost control mechanisms. But in reality, the consumer goods firms in Nigeria seems not to adopt these mechanisms which eventually lead to poor financial performance. This, in effect, has resulted in resource inefficiency and financial risks (Macharia *et al*. 2022).

Businesses find it difficult to survice in ever-changing and competitive environment unless the operating costs are well managed and brought under strict control. This is more so where the costs of operations keep biting in business orgnaizations. This is in line with the thought of of Akinleye and Fajuyagbe (2022) who reported that a sizeable number of enterprises have halted operations in Nigeria, while more significant companies have bought numerous ones or merged with other more prominent enterprises. Consequently, some enterprises cosntinously operated under losses and their inability to control operating costs, coupled with improper cost management practices eroded financial perofmrnace of many firms in Nigeria including consumer goods firms.

Related researches indicated that many firms often neglect cost accounting methods and use methods that are no longer relevant to the ever changing manufacturing environment. This eventually results in poor financial performance. Although considerable progress has been in place in implementing new cost accounting techniques, much is yet to be done (Adeniji, 2024). The quoted consumer goods manufacturing firms in Nigeria seems not to apply the operating cost control mechanisms that would have aided them run profitably and minimize the continued loss – making in their operations. This fact is further buttressed by Akinleye and Fajuyagbe (2022) that consumer goods manufacturing firms in Nigeria perform poorly due to their inability to control operating costs. Therefore, this study proposes that in order for the quoted consumer goods firms in Nigeria to avoid exceeding their budgets and operating at a loss, quoted consumer goods firms should, as a matter of necessity control their operating costs and keep them to a desired minimum level so as to achieve profitability and competitiveness by practically adopting operating cost control mechanisms (strategies) such as lean manufacturing, inventory control, operating budget control, activity based consting, standard costing, value analysis and just in time technique respectively as used in the literature (Akinleye & Fajuyagbe, 2022).

Previous studies on operating cost control mechanisms and financial performance of quoted consumer goods manufacturing firms in Nigeria such as Oluwayemisi *et al*., (2022); Adeigbe & Fadare (2020); Ali – Momoh *et al*., (2022); Akinlabi (2022); just to mention a few, focussed on selected manufacturing firms in Nigeria, and to the best of the researcher's knowledge based on the literatures reviewed, there is little empirical study on operating cost control mechanisms and financial performance of quoted consumer goods firms in Nigeria. Hence, empirical works on the effect of operating cost control mechanisms and financial performance of quoted consumer goods firms in a developing economy such as Nigeria is necessary.

1.3 Objectives of the Study

The main objective of this study was to examine the effect of operating costs control mechanisms on financial performance of quoted consumer goods firms in Nigeria. The specific objectives were:

1. To assess the effect of just in time inventory control on the return on asset of quoted consumer goods firms in Nigeria.
2. To investigate the effect of activity based costing on the return on asset of quoted consumer goods firms in Nigeria.
3. To examine the effect of inventory operations costing on the return on asset of quoted consumer goods firms in Nigeria.
4. To appraise the effect of standard costing on the return on asset of quoted consumer goods firms in Nigeria.
5. To examine the effect of operating budget control on the return on asset of quoted consumer goods firms in Nigeria.
6. To examine the effect of value analysis control on the return on asset of quoted consumer goods firms in Nigeria.
7. To explore the effect of lean manufacturing analysis on the return on asset of quoted consumer goods firms in Nigeria.

1.4 Research Hypotheses

The following research hypotheses were formulated to guide the study:

H_{O1}: There is no significant effect of just in time inventory control on the return on asset of quoted consumer goods firms.

H_{O2}: Activity based costing does not affect the return on asset of quoted consumer goods firms significantly.

H_{O3}: There is no significant effect of inventory operations costing on the return on asset of quoted consumer goods firms.

H_{O4}: Standard costing has no significant effect on the return on asset of quoted consumer goods firms.

H_{O5}: Operating budget control has no significant effect on the return on asset of quoted consumer goods firms in Nigeria.

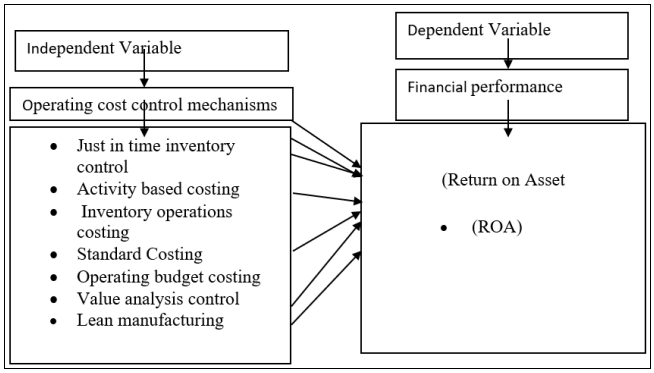
H_{O6}: Value analysis control does not significantly affect the return on asset of quoted consumer goods firms in Nigeria.

H_{O7}: There is no significant effect of lean manufacturing analysis on the return on asset of quoted consumer goods firms.

2. Review of Related Literature and Gap in the Literature

This chapter focussed on the review of the related literature. This chapter was organised in the following subheadings. These are conceptual review, theoretical review, empirical review, summary of empirical review and gap in the literatures review respectively.

2.1 Conceptual framework: This shows the diagrammatic interrelationships among the variables used in the study. This is presented below:



Source: Conceptualized by the Researcher

Fig 1: Conceptual framework of variables

2.1.1 Operating costs control mechanisms

Operating cost control mechanisms denote the strategies designed for the purpose of identifying and reducing business expenses in order to increase profitability. It starts with the budgeting process where the actual costs is compared with the budgeted costs. If actual costs are higher than budgeted, management takes actions so as to address the situation. Cost control mechanisms are characterized as controlling spending within a desired or budgeted level, with budgeting and budgetary management as essential procedures. Cost control is the process of keeping expenses at the level that was meant for them to be at or at the level that was anticipated for them using substantial budgetary and budgetary management systems. The area where corrective measures are conducted has implemented cost

control in order to compare actual costs with expected expenditures in order to allow for comparison of both sets of figures (Egbide *et al*, 2019).

According to the definition provided by Lawal & Ilo (2022), cost control refers to a complete set of accounting processes and management strategies that improve business efficiency by reducing expenses or, at the very least, decreasing the growth in costs. According to Akeem (2023), an aspect of marginal costs is included in cost management. As profitability amongst others is the essence of any business, there will be the need to incur reasonable costs and management is to ensure careful and efficient use of resources so as to achieve the set standard or target. Cost control is operated by setting of standards and maintaining the performance according to standard because, as management aspires to increase productivity for more profit, there will be increasing cost and collection of cost will be made by each area of responsibilities.

From the accounting literature of Umo (2023), perating cost control mechanisms are the means whereby management seeks to influence costs so as to keep them within planned limits. Thus, management sees cost control mechanisms as beneficial approaches adopted to search for better and more economical ways of completing related operation at the same time preventing waste within the existing environment. This environment is made up of acceptable operating methods for which standards have been developed. These standards are expressed in the perspective of budget and standard costs. Cost control connotes procedure whereby actual results are compared with the standard so that waste can be measured and appropriate action taken to correct the activity. Cost control mechanism highlights regulation by executive action relative to the cost of operating an undertaking. Cost control mechanism includes the managerial skill used in achieving sales target and involves setting of standards of performance. Firms are expected to adhere to standards. Cost control mechanism discusses the past, relate it to the present and carries findings tha support informed judgement and decisions. These mechanisms use variables the permit standards and which seek to attain lowest possible scosts under existing conditions (Umo, 2023).

According to Adeniyi (2007), cost control helps in regulating operating cost of business as well as keeping costs within acceptable limit. Ayodele (2005) defines operating cost control as a method of establishing the cost of a product developed and monitoring it to completion. Operating cost control is the process whereby management seeks to influence costs so as to keep them within planned limits. Management sees cost control as a search for better and more economical ways of completing each operation. Cost control is simply the prevention of waste within the existing environment (Onuora & Edoziuno, 2019). Cost control mechanisms are part of marginal cost that comprises establishing unit costs, monitoring and correcting subordinates' performance in order to guarantee that the enterprise's goals and ways of accomplishing them are achieved effectively and Akinleye and Fajuyagbe (2022) identified cost control as a complete spectrum of accounting and management practices targeted at boosting business efficiency via cost reduction or at least cost containment.

Akinleye and Fajuyagbe (2022), are of the opinion that cost management activities should result in a reduction in unnecessary spending, such as when material waste exceeds budget or productivity levels fall below agreed-upon standards. A cost-cutting strategy, on the other hand, can be aimed on decreasing expected costs by purchasing new equipment, modifying manufacturing processes and procedures and so on. Operating cost control also refers to management's endeavour to influence the conduct of employees responsible for performing tasks, incurring expenses, and making money. Management is a two-phase process consists of two stages: planning and control. Control, on the other hand, refers to the approaches used to evaluate whether actual performance complies to those plans. Management defines overall corporate goals for each responsibility centre and develops techniques and standards for reporting and evaluation via the budget process and financial control (Njoroge *et al*, 2024).

Cost-cutting and revenue growth can be employed to boost company's profit and cash flow as it is encapsulated in this literature that operations and quality will provide a solid foundation for cost reduction. Budgeting is the first step in cost control and it is described as the activity of identifying and reducing business expenses to boost profitability (Umo, 2023). Maintaining and increasing profitability depend on maintaining and reducing costs as well as targeting expenditure reductions are part of cost control, which aims to boost revenue. The long-term effects of implementing this level of control on profitability can be extremely favourable (Parveen & Pougajendy, 2023), Mustapha & Agbi, 2023); stated that cost control is cost management or cost containment which has to do with a broad set of cost accounting methods and management techniques having the goal of improving business cost efficiency by reducing costs or at least restricting their rate of growth.

Furthermore, cost control mechanisms involve the management measures designed and implemented to ensure that cost proceeds in accordance with the management plan. Their importance cannot be over-emphasized as they remain survival techniques for manufacturing companies and specifically used to ensure proper monitoring of cost against budget in order to correct any financial impropriety of the firm. Cost control mechanisms include the skills developed for maintaining expenses at the level intended or at the level anticipated for them to remain while utilizing robust budgeting and systematic inclinations (Oluwayemisi *et al*., 2022). In the opinion of Nwatu and Idoko (2022), cost control mechanisms are the major and crucial survival techniques used in operations management for the purpose of providing valuable information useful in the accounting activities of costing, pricing, control, strategic planning, budgeting and decision making. They help to highlight and support the view that cost control system has gained importance over decades in the determination of industries set up cost in relation to costing control practices in accounting departments. This is because effective costing control system is one of the means used to gather and analyze data for decision making. According to Kipkenei *et al*., (2022), the effectiveness of a control system results from valuable management information raised to enhance strategic and tactical management for operations excellence. This makes an organization competitive. However, it is noted from research work of Oladeji & Oladeji (2022), that there is no conventional approach of cost control and mechanisms put forward to be followed by businesses (small, medium and large enterprises). Therefore, the business enterprises should establish some basic standards to

be followed in cost estimation, price determination and decision making. Cost control mechanism is one systematic approaches or techniques that makes use of planned or budgeted costs of operations to examine variances by monitoring associated costs. It assists in the determination of profitability of firms operations. It is concerned with keeping acceptable cost limits through designed strategies. It serves as a useful technique for identifying and reducing business expenses to increase profits. Any business compares the company's actual financial results with the budgeted expectations, and if actual costs are higher than planned, management has the information it needs to take action. As an example, a company can obtain bids from different vendors that provide the same product or service, which can lower costs. Operating cost control mechanism is an important strategy for maintaining and improving profitability. It involves the process of monitoring and regulating the expenditure of funds. It requires setting targets and standards, ascertaining the actual performance, comparing the actual performance with standard, investigating the variances and taking corrective action. It aims at achieving standard and is considered as a preventive function in the company since costs are optimized before they are incurred. It is generally applicable to items which have standards and includes guidelines and directive which management should follow on how to do things (Udeh & Okeke, 2012).

Operating cost control mechanism is the means of identifying and reducing business expenses to increase profits. Operating cost control mechanisms support assumption that costs are in control unless costs exceed budget or standard by excessive amount. There arises the need to control efficiency of operations through the use of labour, materials, machines and plants which will ultimately boost profitability (Sutar, 2022).

2.1.2 Components of operating cost control mechanisms

2.1.2.1 Just in time inventory management

According to Harcourt and Ali (2021), just-in-time is a material management system which aims to work with zero inventory and to ensure materials when they are required; it requires minimum resources and responses in minimum time to the customers, having minimum waste and using all the factors of production. Just in time inventory management approach as an effective technique for firms' improvement of productivity, quality, efficiency; lowering of costs and waste as well as improving communication especially, within the manufacturing sector. Phebe and Njoku (2018) stated that the idea behind JIT inventory technique is to constantly pursue ways that make performance procedures more productive, with the eventual goal of providing products without wasting resources.

2.1.2.2 Activity based costing

Activity-based costing is regarded to be method that analyses performance of cost, cost objectives and resources. It could also assign the resources to various activities. Managers believe that ABC is a modern accounting system that measures the use of resources by activities. Organisations use the activity-based costing technique because it helps to identify how resources are consumed as well as assigning cost to each product and services based on the activity's actual consumption level. Furthermore, this method promotes cost reduction, efficient product pricing and performance measurement within the organisation which, in turn, provides a better governance towards maximising its resources. According to Alsayegh **(**2020) manufacturing firms utilize cost-effective resources from low-cost scales to achieve optimal profits. Allocation of the right resources for the right activities enables manufacturing firms to control costs and maximize returns (Vetchagool *et al*., 2021).

2.1.2.3 Inventory operations costing

Inventory control is a process that entails supervising the warehouse, the supply of products, and its accessibility so that there is an adequate supply of the goods to customers and raw materials to the manufacturing company. The main goals of the process are to control the stock and to accurately provide information on inventory. Moreover, inventory control is defined as observing the materials needed for production and working to provide them according to the planned timelines in order to ensure the regularity of operations and the use of capabilities, which leads to reducing costs and the regular flow of ready-made products to customers on specified dates (Marand *et al*., 2019). The importance of inventory control stems from the importance of determining the economic quantity of demand and determining the point of re-ordering and reducing inventory to the lowest possible extent. Inventory control is viewed as a vital approach for correcting the declining profitability circumstances that have plagued most businesses in recent years, particularly manufacturing industries (Akinlabi, 2022).

2.1.2.4 Standard costing

Standard costing as the planned unit cost of the products, components or service produced in a period. Standard costing involves the setting of acceptable or expected level of costs for various activities, measuring actual cost of activities as they unfold, comparing actual cost with those predetermined and taking corrective action where necessary. The operation of standard costing system is therefore required for accurate preparation of standard costs for effective cost control system. Standard costing is therefore a method of ascertaining how much costs should be, and analysing the causes of variations between how much they are and how much they should be. It is equally regarded as a scientific method of developing a comprehensive series of cost standards to cover the activities of a business of comparing actual costs against cost standards in such a way that the causes of variations are revealed in full details, and of combining the variations to form a complete statement of profit and loss (Sutar, 2022; Parveen & Pougajendy, 2023).

2.1.2.5 Operating budget control

An operating budget concerns the ongoing projections of revenue and expense items that affect the income statement. Budgetary control is considered by the Institute of Cost and Management Accountants (CIMA) as the establishment of budgets relating the responsibilities of executives to the requirements of a policy, and the continuous comparison of actual with budgeted results, either to secure by individual action the objective of that policy, or to provide a basis for its revision (Akeem, 2023).

Operating budget refers to a plan that illustrates all short-term activities, the firm's financial position and the targets the business aims to achieve within a specific period of time (Sagdic & Celikturk, 2017). Furthermore, Chowdhury *et al* (2020) explains that an operating budget includes an estimated revenue as well as the associated expenses to be incurred within a period of time, thereby enabling managers in projecting an estimated income and profit percentage.

Examples of operating budget includes sales, production or manufacturing, labour and overhead expenses.

Budgetary control could be seen as a way of directing, analysing performance, profit planning and techniques of operating cost control of individuals or sections of organisations (Boussabaine, 2013). The overall purpose of budgetary control is to help managers plan and control the use of resources in systematic and logical manner to ensure that they achieve their financial objectives, that is profit satisfying (making satisfactory level of profits) and profit maximization (making the maximum profit). Budgetary control is a subject to human judgment, interpretation and evaluation. The system necessitates forecasting which is surrounded with the risks of future uncertainties. It requires good and adequate standards and in some cases these are hard to develop at the same time, it requires skills, experience, and expenditure of time, money and effort to make this system to work successfully.

2.1.2.6 Value analysis control

Value analysis control is the process of reducing costs in a development project. This process is achieved by assessing materials, processes and or products and offering alternatives. The outcome should result in savings to the client/end user without compromising the intent of the design, i.e. by maintaining or improving performance and quality requirements of the product. The key metric/factor is to achieve the desired results without compromising on quality and performance of the product. Value analysis is a systematic approach to achieve desired performance and reliability of a product or service at minimum cost. It aims at maximizing value addition and in enhancing consumer/ customer satisfaction, it identifies and eliminates unnecessary costs to achieve higher profits. At the very heart of the value analysis process review is a concern to identify and eliminate product and service features that add no true value to the customer or the product but incur cost to the process of manufacturing or provision of the service. As such, the value analysis process is used to offer a higher performing product or service to the customer at a minimal cost as opposed to substituting an existing product with an inferior solution. This basic principle, of offering value at the lowest optimal cost of production, is never compromised. It is the principle that guides all actions within the value analysis process and allows any improvement ideas to be translated into commercial gains for the company and its customers. The value analysis process is therefore one of the key features of a business that understands and seeks to achieve Total Quality Management (TQM) in all that it does to satisfy customers (Freeman, 2020).

2.1.2.7 Lean manufacturing

Lean production manufacturing is the process that aims to eliminate unnecessary waste and maintain continuous flow of manufacturing to solve problems through ceaseless refinement and development of manufacturing company to generate desirability for customers in the Kaizen system. Lean production manufacturing has to implement up to date precision to suit brand new applications. The uncertainty about what lean manufacturing means is evident – and lean argued to entails strategic and operational components and these aspects defined its philosophy in a practical dimension. Valente *et al*. (2020), results of this study showed that assessing the impact of Lean practices such as statistical process control implementation lead to substantial improvements on market (e.g. market share and sales growth), and financial performances. Lean manufacturing can be defined as a philosophy, concept or technique of manufacturing products that minimizes environmental effects and eliminates industrial waste and maximizes the use of available resources in the organization, to economically transform raw materials into finished products. For this reason, lean manufacturing has proven to be the most effective strategy for eliminating waste and activities that do not generate value. In Nigeria, Okocha and Daud (2020) argued that the application of lean in manufacturing sector could help to reduce cost and eliminate waste. Surprisingly, lean production was found to impact flexible manufacturing by showing a decisive influence on performance in the manufacturing firm. However, the authors examine the impact and implementation of financial performance on two operational dimensions in the Nigerian manufacturing sector. Subsequently, scholars have also examined the financial benefits with regards to assets on the performance of lean approaches, production and practices.

2.1.3 Relationship between operating costs control mechanisms and Return on Asset (ROA)

2.1.3.1 Just in time inventory management and Return on asset (ROA)

Effective just-in-time inventory management is regarded by Oladekan and Tajudeen (2015) as one cardinal success factor which cannot be neglected in supply chain management practices. The challenge in managing inventory is to balance the supply of inventory with demand. The Just-in-time (JIT) inventory management strategy serves as a suitable practice to satisfy this objective. It emphasizes cost reduction and waste elimination in order to achieve firms' objective (Lai & Cheng, 2009). In a study by Nwulu and Opara (2022), on the relationship between just-in-time inventory management and market performance of manufacturing firms in Nigeria. The findings showed that just-in-time inventory management significantly impacts on both sales' growth and profitability; hence in conclusion the study asserted that the evidence of just-in-time inventory management facilitates improved marketing performance for manufacturing firms in Nigeria.

2.1.3.2 Activity based costing and Return on asset (ROA)

Activity based costing incorporates resource management contribute significantly to enhancement of overall efficiency and companies' financial performance. As such, the key elements of resource management; resource scheduling, resource forecasting and planning determines the levels of company's net returns. According to Alsayegh **(**2020) manufacturing firms utilize cost-effective resources from low-cost scales to achieve optimal profits. Activity-based costing (ABC) is a method for determining true costs. Though ABC is a relatively recent innovation in cost accounting, it is rapidly being adopted by companies across many industries, within government and other organizations like institutions, finance or service sectors. In the light of current practices, this paper emphasizes to understand the need and importance of ABC costing in the organizations. The profitability picture that emerges from the ABC analysis helps managers focus their attention and energy on improving activities. Productivity is critical for the long-term competitiveness and profitability of organizations. Keta (2022) evaluated the effects of activity-based costing as aspect of inventory management practice on supply chain

performance of Homa Bay County teaching and referral hospital. Findings revealed that activity-based costing inventory practice had a positive and significant effect on supply chain performance. Oranefo (2022) conducted a study on the effect of activity based costing on performance of manufacturing organizations in Nigeria. Results indicated that the application of ABC method significantly influenced the level of inventory management in production firms. Aduwo (2023) examined the association between management accounting techniques and firm performance of major construction companies in Nigeria. Findings revealed that budgeting practices, strategic analysis and activity based costing system affect firm performance.

2.1.3.3 Inventory operations costing and Return on asset (ROA)

Inventory control is a process that entails supervising the warehouse, the supply of products, and its accessibility so that there is an adequate supply of the goods to customers and raw materials to the manufacturing company (Osoo & Sije, 2023). The main goals of the process are to control the stock and to accurately provide information on inventory. Moreover, inventory control is defined as observing the materials needed for production and working to provide them according to the planned timelines in order to ensure the regularity of operations and the use of capabilities, which leads to reducing costs and the regular flow of ready-made products to customers on specified dates (Marand *et al*., 2019). In a study on the relationship between inventory control and the financial performance by Torky (2020), showed that the profitability of a company has a significant relationship with inventory management, and this suggests that if the management of inventory is done effectively, it ensures more profitability, while poor management translates to a poor financial performance.

2.1.3.4 Standard costing and Return on asset (ROA)

Standard costing provides a benchmark against which management can compare actual performance. According to Ologbenla (2021) in a study reported that results shows that contrary to some opinions that standards cost techniques is no longer in vogue, the study finds out that about 85% of the manufacturing firms sampled are still applying standard cost techniques to cost control in their various organizations. Again the study shows that the decision of these manufacturing firms to continue to use standard cost is because of its effectiveness in minimizing the cost of raw material as well as overheads cost of the organization. However, application of standard cost to personnel cost appears not be in vogue. It is recommended that manufacturing firms should emulate these firms that are minimizing their cost via application standard cost and also find a way of applying it to labour cost efficiently. Adeniyi (2014), examined the standard costing and competitive advantage in the manufacturing industry using ANOVA. The result revealed that standard costing enhances cost advantage and quality advantage in competitive manufacturing industry, despite some teething problems encountered by firms in adopting the techniques.

2.1.3.5 Operating budget costing and Return on asset (ROA)

The use of budgetary control by the firms, combined with employee participation, strategic cost-control measures, and effective monitoring systems, are essential for ensuring an organization's financial success. Engaging employees in the budgeting process creates a sense of responsibility and accountability, which leads to better cost management and operational efficiency. Implementing robust cost-control techniques such as target costing and quality control further helps organizations minimize costs and maximize profits. Making a budget is the first step in cost control, which is followed by ongoing tracking and observation of spending. Corrective measures are put in place to get the organization back on track in the event that the budget deviates from the original plan. Studies have asserted that a company's capacity to efficiently manage costs can be greatly impacted by the implementation of strategic cost-control strategies, such as the use of modern accounting systems and the establishment of reasonable budget (Parveen & Pougajendy, 2023; Onuora & Edoziuno, 2019).

The findings of the study by Njoroge *et al*., (2024), revealed that variations in financial performance of the company is explained by budget control (45.4%) and recommended need to enhance the budgetary controls through improving the mechanism for budgeting as the mechanism for enhancing profitability.

2.1.3.6 Value analysis control and Return on asset (ROA)

Value analysis control is a systematic process used by a multidisciplinary team, directed at analyzing the functions of a project, product, process, system, design, or service for the purpose of achieving the essential functions at the lowest life cycle cost consistent with required performance, reliability, availability, quality and safety. It is a method that is very important and useful in driving down the product cost which helps companies retain market share and sustain their profitability. In a case study on the concept of value analysis in sheet metal, carried out by Chaudhary and Piyush (2023), the result showed significant cost reduction of each part of the product. It was observed that the costs were reduced mainly due to alternate materials usage, the process and by elimination/replacement of a part by integrating with the adjacent one. Costs of direct material were compared for the original and new design. A significant 38% of savings in direct material cost was realized by this project.

Also, in a work by Sunmonu *et al* (2024), on the implementation of value analysis in Indian industry revealed that through error-free manufacturing processes, firm provide effective design of the product in the market. Due to this reliability and durability of the product enhanced and subsequently the profit as well as reputation of the organization improves. It also leads to the reduction of overall cost of the product manufacturing while maintaining the value of the product as desired.

2.1.3.7 Lean manufacturing and Return on asset (ROA)

Lean manufacturing can be defined as a philosophy, concept or technique of manufacturing products that minimizes environmental effects and eliminates industrial waste and maximizes the use of available resources in the organization, to economically transform raw materials into finished products (Henao *et al*., 2019). For this reason, lean manufacturing has proven to be the most effective strategy for eliminating waste and activities that do not generate value (Gupta & Sharma, 2016), as well as for improving efficiency, productivity, income, value for the customer, and, particularly, financial performance of companies (Debnath *et al*., 2023). However, lean manufacturing not only seeks to improve value for customers, but also the elimination of industrial waste that is deposited in landfills to minimize environmental impact, CO2 emissions and the

negative impact of production processes by environment (Baliga *et al*., 2019), which generates an increase financial performance (Alaaraj & Bakri, 2019).

The study conducted by Usman and Ragi (2023), on the relationship between lean manufacturing, financial performance and sustainable finance. The data was obtained from a self-administered questionnaire distributed to 460 Mexican firms that operate in the automotive industry. The results of the structural equation model (partial least squares) suggest that lean manufacturing have a positive and significant influence on both financial performance and sustainable finance.

2.1.4 Financial Performance

The financial performance of a firm is defined by the management team's ability in producing value for the organization. It is concerned with the way in which financial resources offered to an organisation are cautiously employed to accomplish the company's general corporate goals, to keep the organisation in business, and to enhance the firm's chances for future possibilities (Akinleye & Fajuyagbe, 2022).

Financial performance can be measured by ROA whereas firm value can be measured by Tobin's Q. (Johansson & Zametica, 2019) and used Return on Equity (ROE) instead of ROA. However, both measurement can be used to assess financial performance and are highly correlated. This study used ROA to measure the financial performance for the years under review. The reason behind using ROA in this study, instead of ROE, is because it has been used to a larger extent in previous studies. Return on Asset (ROA) is one of the most accepted and frequently used measures for evaluating companies' profitability. It has been used in a number of previous studies which aimed at investigating the effect of cost control and firms' performance (Johansson & Zametica, 2019; Ali-Momoh *et al*, 2022).

2.1.4.1 Return on Asset (ROA)

This denotes the rate of return on all of the business's assets and is frequently used as a proxy for total profitability; the higher the number, the more lucrative the organisation. Thus, the rate of return on assets is a measure of managerial efficiency since it demonstrates how effectively the firm's management turns the assets under its control into profit. ROA is more effective when comparing similar firms or historical performance (Ali-momoh *et al*, 2022).

Financial performance is a subjective assessment of a business's capacity to use assets and make money from its major way of operation. Additionally, the word is used to refer to a firm's total financial health during a given time period and may be used to compare similar companies within the same industry or to compare industries or sectors in terms of aggressiveness (Temitayo & Adegbie, 2020). Company performance is vital to management because it is a result that an individual or a group of individuals in an organisation accomplishes in relation to their power and obligation in accomplishing the aim legitimately, without breaching the law and in line with their morale and ethics. Three dimensions are used to assess a business's performance. The first dimension is a company's productivity, or the efficiency with which inputs are turned to outputs. The second dimension is profitability, or the point at which a business's profits surpass its expenses. The third dimension is the market premium, or the amount by which the market value of a firm exceeds its book value (Zengin & Ada, 2010). This multidimensional view of performance necessistates the creation of various models or patterns of interaction between performance and its determinants, indicating the multiple sets of linkages between dependent and independent variables in the estimated models (Phebe & Njoku, 2018).

2.2 Theoretical Review

This study is based on Kaizen Cost Theory, Agency theory and Stakeholders Theory respectively which are consistent with the previous studies on operating cost control and financial performance.

2.2.1 Kaizen Cost Theory

The Kaizen Costing theory was propounded by Masaaki Imai in 1986 in his book titled "the key to Japan's Competitive Success". Kaizen Costing theory is founded on the notion of producing tiny, gradual, but continual improvements in the production process at the lowest feasible cost (Ansari & Lockwod, 2004). Kaizen Costing theory ensures that goods meet or exceed consumer criteria for quality, functionality, and pricing in order to sustain the product's competitiveness. This may be achieved by gradually removing any procedures that could increase the product's production cost without enhancing its value (Mutja, 2018). This concept has dramatically revolutionized management practices not just in Japan, but across the globe (Ogundele 2004).

The Kaizen costing as the application of continuous improvement specifically for the objective of cost reduction; it focuses on boosting the efficiency of production and service delivery processes. Kaizen costing is a strategy for improving a process slowly rather than through dramatic breakthroughs. In contrast to target costing, Kaizen costing is employed throughout the manufacturing stage of a product's life cycle (Target cost is used at the design stage) (Target cost is applied during the design stage). According to Adeniji (2011), kaizen costing is a method of continuous improvement that encourages ongoing cost savings by increasing the level of adherence to a higher standard. Value analysis and value engineering are two methods that should be used to accomplish the goals of reducing costs that have been set for each idnvidual operatio. When using target costing, the focus is placed on the product, and the primary way in which cost reductions are accomplished is via the modification of the product.

2.2.2 Agency Theory

The agency idea was developed further by Ross and Minick (1976) as stated by Lawal and Ilo (2022). The concept is based on the assumption that there is a connection between the principle and the act in every organization. The process of making a choice is heavily influenced by thoth of these components. Within the context of a collobaration between many agencies, the idea proposes two different approaches to cost cutting. The first approach is called incentives, and it involves making an effort to align the interests of the act with the principle. The second factor is that the activities of the agent are being observed, which helps to narrow the information gap. In the research that has been done on agency theory, there has been identified two primary categories of control: output control and behaviour control. The phrase "behaviour control" refers to the procedures that monitors ongoing business and employee behaviour, while the term "output control" refers to the evaluation of planned output quality and/or quantity. "Behaviour control" is a direct term, whereas "output control" is an indirect one

(Change & Taylor, 1999). The process of evaluating angent's performance in terms of their financial standing, market share, and overall productivity is an integral part of output control. In addition, Onuora and Edoziumo (2019), posit the notion of cultural control via the use of clans.

In order for management to be eligible for any bonus that is linked to the company's profits, there is an incentive for management to maintain control over the company's reported earnings in order to meet earnings targets and qualify for any bonus that is tied to the company's earnings (performance-related pay). This results in an information imbalance since managers have the freedom to use their own judgment about accruals. As a result, the relevancy and dependability of reported profits, as well as the financial statements as a whole, are reduced. This will help reduce information asymmetry and protect the interests of both the principal shareholder and all other shareholders by ensuring that the financial statements prepared by management accurately reflect the 'true' economic condition and operating results of the entity. One of the monitoring mechanisms that should be established is auditing of financial statements (Alhassan, 2022).

2.2.3 Stakeholder's Theory

This theory was propounded by Freeman in 1984 which attributed the first definition of stakeholder to the 1963 Stanford Research Institute report, which describes groups without whose support the company would not be able to survive. Freeman keeps changing the concept of stakeholders in an attempt to advance this theory in such a way that it is suitable and suited for development in the corporate world and changes in business models. He defined stakeholders in 1984 as any group or person who can influence or is influenced by the accomplishment of the organisational goals. He defined stakeholders in 2004 as those entities absolutely necessary for the life and prosperity of the company. Still, this concept was thought to be too structured.

Hence, Friedman in 2006 noted that the freeman definition of stakeholder in 1984 was more balance and acceptable in academics (Fontaine *et al*., 2006). Yussoff & Alhaji (2012), in explaining this theory noted that the traditional view of firms sees shareholder as the only stakeholders recognized by business law in most countries because, they are the owners of the companies. Consequently, companies possess a fiduciary obligation to optimise their returns and prioritise the interests of shareholders. The latest business model acknowledges that institutions transform inputs from investors, employees, and suppliers into marketable products, subsequently providing returns to stakeholders. This model covered the needs of investors, employees, suppliers, and customers. Consequently, the primary groups identified by the theory as stakeholders comprise: Shareholders, Employees, Customers, Suppliers and Distributors, and Local Communities. Consequently, in reaction to contemporary business models, the theory broadens the definition of stakeholders to encompass governmental entities, political organisations, trade associations, labour unions, communities, affiliated firms, potential employees, and the general public. Also there are cases where competitors and prospective clients can be regarded as stakeholders to help improve business efficiency in the market place (Fontaine *et al*., 2006; Yusoff & Alhaji, 2012). The thrust of this theory is that the actions of the aforementioned stakeholders may influence either cost management or the financial sustainability of an organisation. Investors, as shareholders, must supply the requisite capital for acquiring modern facilities that can improve production efficiency; suppliers must ensure the availability of raw materials of appropriate quality and quantity at competitive prices; and there must be established markets where customers are prepared to purchase all produced items. The government, as a stakeholder, must establish a conducive climate for effective manufacturing and production. Consequently, when there is synergy in the business interactions among various stakeholders and the firm, such synergy is anticipated to boost the firm's performance and improve its financial sustainability.

2.3 Empirical Review

This section presents studies carried out by various researchers on the effect of cost control and financial performance.

Adesina *et al* (2025) investigated the association between cost management and the bottom line of firms in Nigeria, namely those producing industrial and consumer goods. This study applied descriptive statistics as well as panel regression analysis to access the association between cost management variables and profitability measures such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin respectively. The data for the study were derived from the annual reports of companies listed on the Nigerian Exchange Group (NGX) from 2014 to 2023. The outcome of the study showed that administrative expenditures, marketing asw well as distribution expenses affected financial performance positively. The outcome of the study suggested that the use of AI-driven automation, lean manufacturing, and activity-based costing (ABC) in order for firms to be efficient and reduce operational costs.

Almadadha (2025) accessed the impact of blockchain technology on the financial performance of major Australian banks, specifically Commonwealth Bank, Westpac, and ANZ, from 2016 to 2023. Descriptive research design was used in the study while secondary data were derived from annual reports. The findings indicated a positive impact of blockchain application on financial performance which eventually suggested efficiency, cost reduction as well as profitability.

Ocholor *et al* (2024) assessed the effect of financial technology on the cost efficiency of commercial banks in Ethiopia. Secondary panel data were collected from the annual reports of seventeen commercial banks for period of 2011 to 2022. The outcome of the study indicated that banks operating in Ethiopia are efficient in cost management, with an 83% efficiency rate on average. Also, the effect of financial technology on bank size, interest spread rate, management quality, foreign exchange rate, capitalization and bank ownership was significant. The study results showed a positive association between financial innovation platforms and the cost efficiency of banks under study.

Asma *et al* (2025) investigated the impact of financial technology on banks' profitability. The study equally focussed on banks' operational efficiency as a mediator and the bank size as a moderator can impact their profitability in digital transformation. The Generalized method of moments (GMM) model was applied to analyze the data collected from 2015 to 2022. The outcome of the data analysis showed a significant and negative impact financial technology on banks' profitability in Egypt.

Ajit *et al*. (2025) studied the impact of lean management practices on organisational performance. This survey-based study was cross-sectional study. A self-administered survey five-point Likert scale questionnaire was used for primary data collection. Factor analysis, correlation, multiple regression analyses analyses were used to analyze the data. This study revealed that lean manufacturing related with organizational performance.

Wanlapa *et al*. (2025) studied the association between supply chain finance and firm performance of Thai listed firms. The sample size of the study was 64 firms listed on Thailand Stock Exchange from 2016 – 2020. Multiple regression technique was used to analyze the data collected. The study revealed significant positive relationship between supply chain finance and firm performance of the studied firms.

Deepika and Metta (2025) studied the impact of just in time inventory on customer satisfaction and operational efficiency. This study used a structured questionnaire to collect bdata for the study. The sample size of the study was 200 workers. The study used a convenience sampling technique. Multiple regression technique used to analyze the data while the study revealed significant effect of just in time on firm performance.

Kingsley (2024) studied lean management and firms' competitive advantage in Akwa Ibom State. Two hypotheses and two research questions were developed for the study with a survey methodology adopted. The population consisted of 59 employees while census techniques was adopted. The analysis was done using Ordinal Regression. The findings indicated that the Lean Management dimension and firms' competitive advantage in Akwa Ibom State were significantly correlated.

Afandy (2024) studied the impact of financial leverage and cost management on operational efficiency and earnings stability in Indonesia's hospitality industry. The study analyzed data from 280 hospitality businesses using Structural Equation Modeling Partial Least Squares. The findings revealed that both financial leverage and cost management enhanced earnings stability as well as financial leverage.

D Wejinya and Opara (2024) investigated the association between just-in-time (JIT) inventory technique and procurement performance of upstream multinational oil and gas companies in South-South Nigeria. Cross-sectional survey design was employed in this study with the population of 24 upstream multinational oil and gas companies operating in South-South Nigeria. The sample size of the study was the same as the population. The data collected was analyzed using Pearson's Product Correlation Coefficients where the outcome of the study revealed significant association between just in time inventory and procurement. Performance of upstream multinational oil and gas companies in South –South Nigeria.

Awotomilusi *et al* (2024) studied cost structure and financial performance of quoted industrial goods manufacturing firms in Nigeria. A survey of 50 accounting personnel from five sampled listed manufacturing sectors using Google Forms. The study applied the Principal Component Regression (PCR) technique for model estimation. The study discovered that cost control techniques of manufacturing companies in Nigeria have significant predictive power to explain changes in their market share.

Njoroge *et al*. (2024) studied the impact of cost control strategies on financial performance of Bamburi Cement Limited in Kenya. The sample size of the was ascertained using Taro Yamane's formula with a target population of 850 employees with sample size of 272 workers. Descriptive survey design was used for the study while Correlation analysis, regression equations, bar charts were used in data analysis via SPSS software. The findings revealed that budget control, cost monitoring as well as cost allocation impacted significantly on financial performance of the company.

Sunmonu *et al*. (2024) investigated the effect of cost reduction techniques on the firm performance of selected quoted manufacturing firms in Nigeria. The study used secondary data derived from the financial statements of the studied firms from 2018-2022. The study employed panel regression analysis via Eviews Version 10 while the findings showed that administrative costs and material costs exerted negative impact on the net profit margin of the firms.

Gbadamosi *et al*. (2024) studied just-in-time inventory management practice and performance of selected polytechnics in Southwest, Nigeria. The study used descriptive survey research design with a population of one thousand and thirty-six (1,036) store employees from federal, state and private polytechnics in the Southwest Nigeria. A sample size of five hundred and forty-four (544) determined through multi-stage and stratified sampling technique were respectively used for study. Primary data were obtained through questionnaire while linear regression was employed to determine the effect of the study variables. The findings of the study showed that JIT inventory management practice revealed significant effect on performance of polytechnics in Southwest Nigeria.

Ubabudu *et al*. (2024) studied the effect of inventory management on the profitability of firms in Nigeria Bottling Company, Kaduna. The study was quantitative which utilized both primary and secondary data. A survey instrument was developed to collect primary data from a sample of 100 managers and employees within the Nigeria Bottling Company, Kaduna while secondary data were collected from annual reports and financial statements of the company. The primary and secondary data collected were analyzed using descriptive statistics and regression analysis while the result of data analysis revealed a positive association between inventory management and prompt delivery in manufacturing sectors (Nigerian Bottling Company) Kaduna.

Aggreh *et al*. (2024) assessed the effect of cost reduction on the financial performance of quoted consumer goods firms in Nigeria. The study used ex-post facto research design where purposive sampling technique was used to obtain the sample size of the study. Secondary data were obtained from the financial statements of the listed consumer goods firms from 2011 to 2020 while Pooled Ordinary Least Square regression was used in estimating the test results at 5% level of significance. The major findings of the study showed that costs of assets did not significantly affect the return on equity of quoted consumer goods firms in Nigeria.

Adeniyi (2024) investigated the association between cost management and the financial success of particular Nigerian manufacturing enterprises. The study used secondary data acquired from the annual financial reports 2011 to 2020.

Descriptive statistics as well as inferential statistics were used in analyzing data. The findings revealed that administrative costs had an insignificantly negative influence on firms earnings after tax while selling and distribution costs had insignificant positive impact on the earnings of the firms.

Ali-Momoh *et al*. (2022) examined the linke between cost control and financial performance of selected Nigerian manufacturing firms. The study employed secondary source of data that were collated from annual financial reports of ten (10) sampled firms through 2011 to 2020. Data were analyzed using descriptive statistics, correlation analysis as well as panel regression. The outcome of the study showed that administrative cost exerted insignificant negative impact on profit after tax of the sampled firms, while selling and distribution cost exerted insignificant positive impact on profit after tax.

Ezechi and Onuora (2024) examined the effect of change in cost of inventories on output efficiency in Nigeria manufacturing firms. Ex-post facto research design was used in this study where 10 manufacturing firms in Nigeria were used as a sample size while panel least square was used as a method of data analysis. The outcome of the study revealed that cost of inventory has a positive impact on financial performance of manufacturing firms while cost of labour has a positive impact on financial performance of manufacturing firms in Nigeria.

Sugumar (2023) investigated effect of financial leverage on financial performance of firms. The study used correlation analysis as well as multiple regression analysis to analyze the data. The study revealed no association of non-debt tax shield, liquidity, inflation rate, bank rate with debt-equity ratio while size, profitability and dividend payout ratio respectively impacted debt to equity ratio positively.

Setianti and Haryono (2023) investigated the effects of product market competition, financial leverage, and financing risk on the stability of Islamic banks in Indonesia between 2018 and 2022. The data were analyzed with the aid of panel regression via EViews 10 software and the Common Effect Model respectively. The outcome of the study showed that financial leverage as well as financing risk showed negative impact on banking stability.

Mahmood (2023) studied the effect of financial leverage on dividend payout ratios in industrial companies listed on the Qatar Stock Exchange. The outcome of the study showed a significant positive association between the Debt-to-Assets ratio and the Dividend Payout Ratio respectively while using external funds in the investment structure of industrial companies enhanced the dividend payout to shareholders. Also, the study found no significant effect of the Debt-to-Equity ratio on the Dividend Payout Ratio, suggesting that dividend distribution was not influenced by the source of financing, whether debt or equity. The research further indicated that while debt financing did not affect dividend payouts, companies could increase shareholder wealth by reinvesting debt financing into financial assets, thereby enhancing the dividend payout ratio.

Arhinful and Radmehr (2023) studied the impact of financial leverage on the financial performance of firms listed on the Tokyo Stock Exchange. The study used a random-effects model to analyze data collected from 257 firms. The findings showed that both the cash coverage ratio and interest coverage ratio had a positive significant effect on return on assets (ROA), while the asset coverage ratio showed a negative insignificant effect. In terms of return on equity (ROE), the study found a negative and statistically significant impact from the asset coverage ratio, cash coverage ratio, and debt service obligation, while the interest coverge ratio had a positive and significant effect. These findings suggest that managers should consider reducing the percentage of debt financing in their capital structure to minimize the costs associated with interest and debt repayment, thereby enhancing profitability and reducing the risk of financial distress or bankruptcy.

Aduwo (2023) investigated the effect of cost strategies on growth of manufacturing companies in Nigeria. The data was obtained from the annual reports of selected manufacturing companies listed on the Nigerian Group of Exchange. Panel data regression was used in the analysis of data. The growth of sales for manufacturing enterprises in Nigeria showed negative insignificant impact on financial performance of firms. The outcome of the study showed that a change in production costs has a negative impact on the expansion of sales.

Aggreh and Nwori (2024) examined cost reduction strategies and performance of manufacturing companies in Nigeria. The study used survey bresearch design while the Spearman Rank Order was used in the determination of association between the variables. The analysis of the data showed a significant association between value analysis and profit before tax of the selected manufacturing companies in Nigeria as well as significant relationship between value analysis and return on asset of selected manufacturing companies.

Sani and kpor (2023) examined the impact of cost reduction techniques on operational efficiency of Nigerian Textile industry using selected textile firms operating within North-Western Nigeria. Primary data for the study were obtained through a structured questionnaire administered to five hundred and fifty-six (556) staff of these firms. Data obtained were descriptively analyzed using means and standard deviations well simple regression. The result of the descriptive analysis show that activity based costing (ABC) has significant and positive impact on firm Survivals (FS) in Nigeria. The regression result also indicated that the explanatory variable has significant impact on FS at 0.05 level of significance. It was further revealed in the regression analysis that about 60% of the variation in the rate of FS (Dependent Variable) is explained by the value of the predictor variable (ABC).

Fatoki and Adewale (2023) evaluated the effects of cost control on the survival of the manufacturing companies in Nigeria. The study adopted expost facto design while data were collected from the annual reports of the firms. The data were analysed with the use of fixed effects model while the results of the analysis revealed that the manufacturing companies have been able to control the cost incurred on salaries and wages and cost of borrowing known as finance cost or interest on loan.

Adebawojo (2023) investigated the effect of cost management on the financial sustainability and performance of manufacturing companies in Nigeria. An expost-facto research design was adopted. The study population included all 33 manufacturing companies in Nigeria as at December 2019 while the sample size consisted 10 Foods and Beverages companies selected based on Purposive and Judgmental Sampling Techniques. Validity and Reliability of data obtained were based on the statutory audit of the

financial reports. Data was analyzed using Multiple Regression. The results revealed that Cost Management without Company Size as control variable significantly affected Financial Sustainability of Manufacturing Companies.

Nkpodot and Emenyi (2023) studied the impact of cost efficiency on financial performance of listed firms in Nigeria. The study used expost facto research design as well as the with sample size of ten (10) firms from 2015-2021, while secondary data were collected from financial reports of the listed firms. Multiple linear regressions was employed in analyzing the data via SSPS version 20. The findings of the study showed a significant positive effect of raw material efficiency on the financial performance of listed manufacturing firms in Nigeria while labour efficiency showed positive impact on financial performance of listed manufacturing firms in Nigeria.

Oinkio (2023) examined the effect of material cost variance, labour cost variance, and sales variance on return on investment of pharmaceutical firms in Nigeria. The study used ex-post factor research and population of the study consisted of a total of seven (7) pharmaceutical firms in Nigeria. The data for this study were collected from the annual reports of the selected firms for a period of 5 years from 2018-2022. The study was analyzed using Panel Least Square Regression to analyze the data while the findings showed that material cost variance never impacted on the return on investment of pharmaceutical firms in Nigeria; labour cost variance showed significant negative impact on the return on investment of pharmaceutical firms in Nigeria while sales variance showed positive significant impact on the return on investment of pharmaceutical firms in Nigeria.

Alaaraj and Bakri (2019) explored the association between lean manufacturing, financial performance and sustainable finance. The population of the study consisted of 950 manufacturing firms. A sample size of 460 firms were used for the study. Secondary and primary data were collected from companies financial performance, while primary data were collected from structured questionnaire as well as personal interview to each of the workers which were selected using simple random sampling. The data were analyzed using the structural equation model. The results revealed that lean manufacturing have a positive and significant influence on both financial performance and sustainable finance.

Usma and Ragi (2023) assessed the impact of lean practice on firms performance. 45 manufacturing companies were used for the study, questionnaires were used to collected data. Descriptive survey design was used for the study while multiple regression analysis and correlation analysis were employed to analyze the data collected. The analysis of data showed that lean practices strongly associated with operational success.

Nwatu and Idoko (2020) investigated the effect of cost control measures on profitability of Vitafoam Nigeria Plc., This study used secondary data sourced from the annual financial report of Vitafoam Nigeria Plc. a listed company in the Nigerian Stock Exchange Group from 2017 – 2021. The study used vertical, horizontal as well as ratio analyses to analyze the data collected. The outcome of the study showed that a positive impact of cost measures on operating profit of the studied firms.

Suleiman *et al*. (2023) study examined how cost management and reduction affect Nigerian manufacturing companies' profitability. The 78 manufacturing companies registered on the Nigerian Stock Exchange, The study adopted census sampling technique while the vdata were collected from the annual reports of firms from 2012–2021. Multiple regression was used to analyze the data collected while the findings showed that administrative costs have a big impact on profitability.

Joseph *et al*. (2023) studied the effect of Lean Manufacturing on Operational Performance of Sugar Firms in Kenya. Questionnaires were used to collect data for the study. Multiple regression technique was used to analyze the data. The outcome of the study showed that lean Manufacturing impacted positively on operational performance of the firms under study.

Ayanaba *et al*. (2023) studied the effect of lean manufacturing concept implementation in the upstream Petroleum Industry through critical success Factors in United Kingdom. The study adopted a survey – based Petroleum based organisations. Data collected were analyzed using inferential. The results revealed that Lean implementation impacted on the firms performance significantly.

Wang *et al*. (2023) studied the effect of SCF on corporate sustainability performance (CSP), financial performance and environmental, social and governance performance from the perspective of the core firm. The primary data were collected for the study, with the sample size of 400 staff in Turkey food firms; data collected were analyze using multiple regression technique. The finding revealed that supply chain management, operations management, company sustainability, strategic management affected the firms performance positively.

Okorie and Nwokoro (2022) examined the impact of activity based costing systems on the financial performance and operational efficiency manufacturing companies. Sample of 50 employees used for the study while data were collected via structured questionnaire. Data collected were analyzed using both descriptive and inferential statistics. Findings showed that ABC system adoption significantly improved cost control, profitability and overall performance of companies.

Oladejo and Oladejo (2022) explored the effect of target costing on the performance of manufacturing firms in Nigeria. The study used a sample size of 60 staff, questionnaire was used to data collection for the study. Multiple regression technique was used to analyze the data. The study found that implementation of target costing practices positively influenced cost reduction, product quality and overall performance of firms.

Udegbunam *et al*. (2022) investigated the impact of activity-based costing (ABC) system adoption on the financial performance of Nigerian healthcare manufacturing companies. The study used primary data collected via questionnaires and interviews. Five firms were used with a total of 74 employees. The data collected were analyzed using multiple regression model. ABC system implementation was found to improve profitability, cost control and financial performance.

Lawal and Ilo (2022) investigated the association between costing systems and operational performance in Breweries companies in Nigeria. The study used questionnaires administered to 100 employees for data collection while descriptive survey design was used and data collected were analyzed using correlation analysis technique. The study

showed that adoption of costing system positively impacted operational efficiency, cost reduction and overall performance.

Owoeye and Adeboye (2022) examined the effect of implementing a standard costing system on the performance of manufacturing companies in Nigeria. The study Sample was 70 employees, data for the study were collected via interviews and structured questionnaires. Descriptive survey design was used and the collected were analyzed with use of multiple regression technique. Standard costing system adoption showed a positive impact on cost reduction, inventory management as well as overall performance improvement.

Mbonu and Amahalu (2022) investigated the effect of Corporate Social Responsibility Costs on Financial Performance of Deposit Money Banks listed on Nigeria Stock Exchange for a ten year period ranging from 2011-2020. Thirteen (13) Deposit Money Banks were purposively selected from a population of Fourteen (14) listed Deposit Money Banks. Ex-Post facto research design was adopted while Pearson Correlation Coefficient and Panel Least Square (PLS) Regression analysis via STATA 13 statistical software were used to analyze the data collected. The result of this study showed that Corporate Donations, Occupational Health and Safety Cost, Training Cost and Remediation Cost have a significant positive effect on Return on Assets.

Afolabi *et al*. (2022) studied the association between activity-based costing (ABC) system adoption and operational performance in SMEs in Nigeria. The study used a sample of 80 employees, data were collected using structured questionnaire. Method of analysis was done by the use of Pearson correlation model. The findings showed that ABC system positively impacted operational efficiency, cost reduction as well as overall performance.

Ahmed *et al*. (2022), evaluated the impact of a balanced scorecard approach on the performance of Consumer goods firms in Nigeria. Mixed-methods were used for the study; data were collected from 60 employees via questionnaire. The study adopted descriptive survey design while multiple regression technique was used to analyze the data. The result revealed that balanced scorecard implementation positively impacted performance of studied firms.

Keta (2022) evaluated the effect of activity based costing as aspect of inventory management practice on supply chain performance of Homa Bay County teaching and referral hospital. Data for the study were obtained from the financial statement. Descriptive and inferential statistics were used in the analysis of data. Findings showed that activity based costing inventory practice had a positive significant impact on supply chain performance.

Oranefo (2022) accessed the effect of activity based costing on performance of banking organizations in Somalia. 305 Bank of Kigali employees from Kigali made up the study's population. A sample size of 75 respondents was chosen for this study from a total population of 305 people. Descriptive and inferential statistics were utilized in the analysis of data. The outcome of the study showed that operational cost control and the performance of the Bank of Kigali are significantly positively associated while administrative costs and the performance of the Bank of Kigali are significantly positively correlated.

Mukira *et al*. (2022) investigated cost reduction strategies and performance of commercial Bank in Kenya. Census approach was adoped for the study using fourty one (41) commercial bank in Kenya. The study employed both primary and secondary source of data collection, questionnaires were administered to senior finance and operational managers at the headquarters of these commercial banks, data were also gathered from the audited animal report and account of these bank. The descriptive analysis of the study showed that banks cost reduction techniques has a positive significant impact on performance.

Umutoni and Rusibana (2022) investigated the extent at which supply chain management contributes to the financial performance of brewery firms in Rwanda. The study adopted descriptive survey research design. The study used primary data that were collected by using adopted structured questionnaires. The population of 78 staff was also used sample size. The study adopted descriptive analysis and questionnaires were used as instrument for data collection. Regression analysis was also adopted to statistically analyze the contribution of supply chain function on financial performance. The outcome of the study indicated that there is a positive and significant contribution of supply chain integration in brewery firms in Rwanda.

Akinleye and Fajuyagbe (2022) conducted research in the United States to investigate the connection between organizational costs and the profitability of businesses. The research used panel analysis to divide the energy business into two distinct subsectors: those that deal in the sale of fossil fuels for the purpose of generating electricity and those that deal in the sale of renewable energy for that purpose. The outcomes of the research suggested that organizational cost had a stronger effect on profitability.

Okorie and Nwokoro (2022) examined the association between activity-based costing on corporate performance of chosen manufacturing enterprises in the Anambra state. Descriptive survey research approach was adopted for the study. The population of this study was 539 staff while the sample size of 121 was determined using Taro Yamane technique. The data were analyzed using Spearman Ranked Order Correlation Coefficient via SPSS Version 22. The study showed that activity based costing significantly affected the corporate performance of manufacturing companies in Nigeria.

Kwadwo (2022) examined effect of inventory management and performance in Ghana. The study adopted the cross-sectioned design and employed the use of secondary data from 2004- 2014 from the annual reports of four manufacturing companies listed in Ghana stock Exchange (GSE) while judgmental sampling was adopted. The ordinary least square (OLS) was employed in data analysis. The study showed that there is a significantly strong association between inventory management and profitability of manufacturing firms in Ghana.

Akinleye and Fajuyagbe (2022) investigated the effects of organizational costs on firm performance in Turkey. The study used employed Durbin-Hausman panel cointegration test. The outcome of the study showed that organizational costs had a negative impact on firm performance in Turkey. According to the results, organizational costs have a positive impact on the expansion of sales within the manufacturing business.

Oluwayemisi, *et al*. (2022) investigated the association between financial performance and cost control in a sample of listed manufacturing companies in Nigeria. The study used expost facto research design. The data for the study

were sourced from the 10 chosen companies came from the audited annual financial reports of the sampled companies from 2011 to 2020. The data collected were analyzed using the panel regression model. The study's findings showed that selling and distribution costs had a negligibly favorable impact on financial performance while having a negligibly negative impact on the administrative financial performance of the sampled organizations.

Mukira *et al*. (2022) studied the impact of costs reduction on financial performance of hotels in the Kenyan Coastal region. A quantitative approach utilizing survey design and stratified random sampling was employed to gather and analyze the data. A total of 394 questionnaires were given out to different respondents from various strata in hotels along the coast of Kenya. Descriptive statistics and regression analysis were used to analyze the data. The outcome of the study showed that cost reduction strategies impacted positively on the performance of hotel in Keyan.

Alhassan *et al*. (2022) examined the impact of inventory management on financial performance of listed Nigerian manufacturing companies and found that inventory control has a significant impact on financial performance. Secondary data from 10 selected firms were sourced from the audited annual financial reports of sampled firms from 2011 to 2020. Data were analyzed using a panel regression model. The study revealed that inventory control has a significant impact on financial performance.

Akinlabi (2022) examined the effect of inventory management practices on operational performance of selected flour mills companies in Nigeria. The study used expost facto research design. Secondary data from 20 selected firms were sourced from the audited annual financial reports of sampled firms from 2013 to 2020. Data were analyzed using a panel regression model. The study showed that inventory control has a significant positive impact on financial performance.

Beka *et al*. (2021) investigated effect of supply chain management on firm performance in UK industrial firms. Questionnaires were used to collect data from 600 employees. Descriptive statistics and regression model were employed to analyze the data. The results of the study showed that supply chain management affected firm performance significantly. This suggested that SCF offers significant potential for key supply chain participants to positively impact operational performance through the reduction of overall business risks.

Rajaguru *et al*. (2022) examined the association between supply chain practices and performance of Australian retailing firms. 70 managers were used for the study; the study used questionnaires to collect data. Multiple regression technique was employed to analyze the data. The outcome of the study showed study that the SCF dimensions of accounts payable, accounts receivable as well as inventory finance impacted positively on firm performance

Awotomilusi *et al*. (2022) examined cost structure and financial performance of quoted industrial goods manufacturing companies in Nigeria. The study sampled 7 industrial goods manufacturing firms quoted in the Nigerian exchange group for the period of 2011 to 2020. Expost facto research design was employed while descriptive analysis was used to analyze the data collected. The finding of the study showed that cost structure significantly impacted on financial performance of sampled manufacturing companies.

Erasmus (2021) investigated the effect of cost management practice on the financial performance of listed Deposit Money Banks in Nigeria. The population of the study consisted of 15 listed deposit money banks in Nigeria. The study adopted judgmental sampling techniques in selecting 10 banks as the sample size for the study. Primary data were obtained through a structured designed questionnaires while the secondary data was obtained from the annual financial report of listed DMBs in Nigeria from 2010-2018. The Ordinary Least Square Regression was used for data analysis. The outcome of the study showed that activity-based costing had a significant impact on profit before tax. Also, target costing negatively impacted on profit before tax.

Erasmus (2021) investigated the association between standard costing and cost control in Nigerian oil and gas industry. The population for the study consisted of petroleum marketing companies listed in the Nigerian Stock Exchange Fact book of 2012. The study used both both primary and secondary methods of data collection.While the primary data were collected with the use of questionnaires; secondary data were sourced from the Nigerian Stock Exchange Fact book of 2011. The analysis of the data showed significant effect of standard costing on firm profitability.

Abdulwahid (2021) studied the effect of cost control and financial performance of 102 industrial sector companies listed in the Saudi stock exchange. The data collecxted for the study were analyzed with the use of pooled OLS, fixed and random effects as well as Generalized Method of Moments (GMM). The outcome of the study showed that a negative significant association between profitability and cost stickiness.

Muse (2021) assessed the association between cost management and the financial performance of three telecommunication companies in Turkey, Egypt, and Saudi Arabia. The study used the multiple regression models to analyze the data. The analysis of data showed that cost management of Egypt's telecommunication impacted on financial performance poorly while Saudi Arabia Telecom Company’s cost management impacted significantly on financial performance.

Ayorinde (2021) investigated at how cost containment affected pharmaceutical companies' financial results in Nigeria from 2010 to 2019. Secondary data were employed for the study. The six pharmaceutical companies that are publicly traded in Nigeria were used to collect secondary data for the study. The data collected were analyzed using regression technique while the findings showed that cost control significantly affected the financial success of pharmaceutical companies in Nigeria.

Udeh and Okeke (2012) investigated the effect of cost control on Rwanda's commercial banks performance. 120 commercial banks were used as population and sample size, secondary data were used for the study. Multiple regression technique was used to analyze the data. The also used expost facto research design. The analysis of data showed that operational cost control and the performance of the Bank of Kigali were positively associated while administrative costs and the performance of the Bank of Kigali were positively associated as well.

Udeh and Okeke (2012) investigated the impact of budgetary control on cost control, profitability of manufacturing companies. The survey method was used for the study. Questionnaires were used for data collection and

the data collected were analyzed with the use of chi-square statistics via SPSS software. The findings of the study discovered that budgetary control impacted positively on the profitability of manufacturing companies.

Harcourt and Ali (2021) investigated just-in-time inventory management imports on sales performance of paint manufacturing firms in Rivers State, Nigeria. The study adopted an explanatory research design with causal type of investigation. Primary and secondary methods of data collection were employed to obtain relevant data for analysis. The instrument of data collection employed was questionnaires. The study population was 30 paint manufacturing firms in Rivers state while a total of 90 top management staff were used for the study. The data were analyzed with the use of Pearson's Product Movement Correlation statistics. The result of the findings showed significant positive association between just-in-time inventory management and sales performance of paint manufacturing firms in Rivers State.

Oluyemi and Chinyere (2020) studied the relationship between asset structure and financial performance of quoted construction companies in Nigeria. The study used secondary data from 2012 – 2018. The dependent variable of financial performance was measured using earning per share and return on asset while the independent variable of asset structure was measured by fixed asset and current asset. The data were analyzed with the use of correlation test, unit root test using the Augmented Dickey Fuller (ADF) as well as simple regression via Eview 11. The result of the analysis showed that fixed asset significant impact on return on asset while current asset showed positive significant impact on earnings per share.

Pham *et al*. (2021) examined the impact of activity-based costing implementation on firm performance. Primary data were used for the study and sample size of 255 respondents were used while regression model was used to analyze the data. Analysis of data showed that effective implementation of ABC system impacted positively on firms performance.

Asikogu *et al*.(2021) examined the association between management accounting techniques and firm performance of major construction companies in Nigeria. The study's sample included 27 companies that are listed on the Nigeria Stock Exchange from (2009–2018), while a sample size of ten businesses was chosen. Data were collected from financial statements of the studied firms. Descriptive and inferential statistics were applied in analyzing the data. The findings showed that budgeting practices, strategic analysis as well as activity based costing system affected firm performance while firm size and financial leverage affected return on assets negatively.

Martínez-Martínez (2022) examined the effect of lean manufacturing on firm performance in Somalia firms. 200 employees were used as sample size for the study.The study used descriptive research design; data collected were analyzed using multiple regression technique; the result revealed that implementation of lean manufacturing generated a positive impact on workers and business results.

Jae *et al*. (2022) carried out a study to determine how organizational restructuring strategy affects financial performance of businesses in UK. The study used 190 hotels in the UK with descriptive research design. The analysis of data showed that organizational restructuring enhanced financial performance of hotel businesses in UK.

Nwatu and Idoko (2020) studied the profitability and declining operating expenses of manufacturing companies in South-East Nigeria. There were 3866 staff members in total. The study used a stratified sample technique while the sampls size of the study was 350. Pearson correlation model was applied in analyzing the data. The analysis of data showed positive impact of sales revenue on profitability. Also, the analysis of data showed that bank fees, travel costs, and selling costs were significantly associated with the expansion, value of output per unit, and income of the manufacturing enterprises in South East Nigeria.

Torky (2020) explored the association between inventory control and the financial performance of a particular company through the use of a case study approach. The study used 100 managers of five manufacturing companies in Saudi Arabia as sample size. Descriptive survey design was used for the study while the data were analyzed with the use of multiple regression technique. The results showed that the profitability of a company significantly associated with inventory management.

Tarurhor and Emudainohwo (2020) examined the effect of lean manufacturing practices on a firm's performance. Data were collected using the survey of four hundred and thirty-three (433), and two hundred and four (204) as sample size for the study. The study used the structural equation model to analyze the data collected. The analysis of data showed that lean manufacturing positively impacted on a firm's performance.

Adigbole *et al*. (2020) examined strategic cost management practices and organizational performance. The study adopted survey research design, questionnaires were administered and a sample of two hundred and thirty three (233) responses from fifty seven (57) manufacturing firms were employed in the study. Partial least squares-structural equation modelling was used for analysis of data obtained. The findings of the study showed that strategic cost management has a positive impact on organizational performance.

Heneo *et al*. (2019) investigated the effect of lean manufacturing practices as well as firm performance measured by balance scorecard of manufacturing firms in Thailand firms. The study used simple random sampling technique to select a sample size of 400 medium-sized manufacturing firms. The study employed descriptive statistics and multiple regression technique to analyze the data. The study found JIT implementation and waste elimination practices impacted positively on firms performance.

Erasmus (2021) explored the cost management practice on financial performance of consumer goods companies in Nigeria. Secondary data were sourced from published annual financial statements of the selected consumer goods company trading on the floor of Stock Exchange in Nigeria from 2009-2018. The data collected were analyzed with the use of Pooled Ordinary Least Square (POLS) Estimator, Fixed Effect Model (FEM) as well as Random Effect Model (REM). The result of the study showed that salary and wages exerted positive insignificant impact on ROA.

Sunusi and Muhammad (2020) investigated the association between inventory turnover periods and profitability in Nigerian conglomerate enterprises between 2007 and 2016. The data were collected from the annual reports of six of the firms and analyzed using generalised least squares

regression while findings showed that inventory turnover impacted negatively the profitability of the studied companies.

Abdillah (2020) looked on the associated between inventory turnover and manufacturers' profitability who were listed on the Indonesia Stock Exchange between 2015 and 2017. The study used purposive sampling; 18 firms were used for the study while bthe data collected were analyzed using simple linear regression analysis. The results demonstrated that inventory turnover has a negative effect on return on assets.

Akparhuere *et al*. (2020) researched on the association between asset management efficiency on performance of building and construction companies in Nigeria. The study used secondary data from 2006 to 2017 and used simple regression method to analyse the data. The result of the analysis showed that asset turnover did not have significant effect on performance of building and construction companies in Nigeria. Also, inventory turnover significantly impacted on corporate performance of building and construction companies in Nigeria.

Rajaguru *et al* (2022) explored the interactive relationship between supply chain (SC) finance, supply oriented and demand oriented capability and corporate competitive capability to enhance overall performance. It particularly investigates the impact of SC integration as a strategic tool on this interactive relationship. Using SEM-PLS for data analysis, the research collected data via a questionnaire designed from prior studies, emphasizing alignment between SCM decisions and corporate strategy. The findings extend existing frameworks by integrating SC integration practices in a developing country context, focusing on manufacturing firms in Indonesia.

Yushang *et al*. (2020) looked on how cost management affected the financial performance of manufacturing companies in Zimbabwe. A descriptive research design was used for the study. The financial statements of manufacturing firm were used to collect panel data for the study from 2014–2018. Data collected were analyzed via pooled regression analysis. The analysis of data showed that cost of inventories insignificant impact on return on equity.

Akintoye *et al*. (2019) investigated how cost control affected the profitability of a few Nigerian manufacturing firms. The 78 manufacturing firms registered on the Nigeria Stock Exchange made up the study's sample. Five companies were chosen from a sample frame of 23 consumer goods companies that were listed on stock exchanges and were taken into consideration from 2005–2017. The study used a technique known as judgemental sampling. Data were collected from the financial statement of the firms. Descriptive and inferential statistics were used in data analysis. The analysis of data showed that cost of materials impacted negatively on the profitability.

Madwe *et al*. (2020) investigated the factors affecting the adoption of activity based costing at technical and vocational education and training colleges in KwaZulu-Natal, South Africa. Questionnaires were used for data collection. 234 copies of questionnaire were administered out of 654 staff. Data collected were analyzed via the Mann-Whitney test. The findings showed that implementation of ABC is affected the performance of colleges negatively.

Adeyemo (2020) studied the effect of cost control strategies on the financial performance of selected manufacturing companies in Nigeria. A sample size of 22 firms were studied using both secondary and primary data. Mixed-methods approach combining quantitative analysis and interviews were used in the study. Data were analyzed using regression model. Findings revealed that adoption of effective costing system positively influenced financial performances through better cost control, decision making and operational efficiency.

Mahlaha (2020) examined the impact of lean strategies on organizational performance. The study used a quantitative methodology with a sample size of 116 workers. The data collected were analyzed via multivariate statistical analysis. The analysis of data showed that the application of lean techniques improved the performance of businesses.

Egbide *et al*. (2020) examined the association between cost reduction strategies and the growth of manufacturing companies in Nigeria using data from annual reports of 40 manufacturing companies quoted on the Nigeria Stock Exchange from 2012-2016. 40 manufacturing companies were sampled purposively for this study. Correlation model was used to analyze th data collected while the results of the analysis showed a positive significant relationship between cost reduction strategies and growth of manufacturing companies in Nigeria.

2.4 Summary and gap in literature reviewed

Based on the empirical literature review above, it was observed that studies carried out to examine the effect of operating cost control mechanisms on financial performance of quoted consumer goods firms in Nigeria made use of secondary sources of data such as Akinleye and Fajuyagbe (2022), Oluwayemisi *et al*. (2022); Adegbie & Fadare (2020) and Ali – Momoh *et al*. (2022) respectively while very few studies made use of primary source of data such as Adeyemo (2020), Adigbole (2020) and Tarurhor and Emudainowo (2020), this means that there is evidence gap for a rigorous study on cost control and financial performance of quoted consumer goods firms in Nigeria.

Also, previous studies on operating cost control mechanisms and firms' performance of quoted consumer goods firms in Nigeria such as Oluwayemisi *et al*., (2022); Adegbie & Fadare (2020); Ali – Momoh *et al*. (2022); showed conflicting results and to the best of the researcher's knowledge based on the literatures reviewed, there is no rigorous empirical study on operating cost control and financial performance of quoted consumer goods firms in Nigeria. Hence, empirical works on the effect of cost control and the financial performance of quoted consumer goods firms in a developing economy such as Nigeria is inconclusive. Therefore, in the light of the above identified gaps with the previous studies, this study will examine the effect of operating cost control and financial performance of quoted consumer goods firms in Nigeria.

3. Research Methodology

This session focussed on research design, population of the study, sample size determination and sampling procedure, sampling technique, sources of data collection, reliability of the research instrument, validation of the research instrument, model specification, measurement and operationalization of variables, method of data analysis and decision rule respectively.

3.1 Research Design

The study adopted descriptive survey design and expost facto method since the research was quantitative based.

Descriptive survey design allows data to be collected from a sample via the researcher's structured questionnaire with the aim of discovering the relationship among variables. The choice of this design was informed by the nature of the research problem and the objectives of the study.

3.2 Population of the study

The population of the study consisted of three hundred (300) workers drawn from the six geopolitical zones in Nigeria. For the purpose of this study b, each geopolitical zone was labelled a strata, mtotalling 300 workers. This is shown in Table 3.1 below:

Table 3.1: Research population distribution

No. of strata	Geopolitical zones	No. of workers
Strta 1	North West	40
Strata 2	North Central	40
Strata 3	North East	40
Strata 4	South South	40
Strata 5	South East	40
Strata 6	South West	100
Total		**300**

Source: List of workers provided by the Administrative & Human Resources Department of each of the quoted consumer goods firms under study

The one hundred population workers from South West so chosen was based on the premise that it has the largest number of firms compared to other geopolitical zones.

3.3 Sample size Determination and sampling procedure

The sample size of this study was two hundred (200) workers selected based on the six (6) geopolitical zones in Nigeria as follows: North West, North Central, North East, South West, South South and South East respectively, using stratified simple random sampling approach.

Table 3.2: Administration of Questionnaires

No. of Strata	No. of questionnaires issued	No. of questionnaires returned and usable	Percentage of questionnaires returned and usable
Strta 1	20	20	10%
Strata 2	20	20	10%
Strata 3	20	20	10%
Strata 4	20	20	10%
Strata 5	20	20	10%
Strata 6	100	70	35%
Total	**200**	**170**	**85%**

3.4 Sampling Technique

As stated in Section 3.3, the study adopted stratified sampling technique. With stratified sampling technique, selecting objects based on subpopulation and heterogeneous characteristics as well as representativeness was possible.

3.5 Sources and method of Data Collection

This study used both primary and secondary sources of source of data. The primary source of data was collected using two hundred (200) copies of self-structured questionnaires which were sent to the studied firms accounting officers (workers) via online Google Forms to get the required information on operating cost control mechanisms while secondary source of data was collected from the firms financial statements to get information on financial performance (Return on asset). The online google forms are an online survey method used for data collection. It is appropriate for this study because of uniformity of data, dispersion of the respondents, low cost, anonymity, speed, and reduced data processing errors due to direct data entry by respondents. The potential response bias associated with online google forms survey by way poor internet service as well as non-availability of internet was minimized via follow up phone calls and reminders. This eventually gave significant a response rate.

3.6 Test of Reliability

Reliability refers to consistency measurements that contain the meaning of accuracy measurement. The reliability of instrument for this study was determined using cronbach alpha reliability coefficient via SPSS and a reliability coefficient of 0.7 was obtained which was the acceptable threshold.

3.7 Test of Validity

The validity of an instrument is the degree to which a test measures what it purports to measure. The instrument for this study was validated by my supervisor as well as other experts in the accounting field.

3.8 Model specification

The researcher adopted the model of Ezechi and Onuora (2024) that investigated the effect of cost control techniques and efficiency of manufacturing firms in Nigeria. The model structure was given as follows:

$$OPE = ß_0 + ß_1COI + ß_2COL + ß_3COS + ß_4OHC) \quad (1)$$

Where:

OPE= Output efficiency (proxy of firm performance)
CCOI= Change in Cost of inventory
CCOL= Change in Cost of Labour
CCOS= Change in Cost of sales
COHC= Change in Overhead cost

The above model was modified for this study as follows:

$$\text{Financial Performance (FP)} = ß_0 + ß_1JITC + ß_2ABCt + ß_3IC + ß_4SC + ß_5OBC + ß_6VAC + ß_7LM + \mu \quad (2)$$

Where:

FP = Financial performance
F = Function
$ß_0$ = Intercept
$ß_1$- $ß_7$ = Coefficients of the variables
JITC = Just in time costing
ABC = Activity based costing
IC = Inventory operations costing
SC = Standard Costing
OBC = Operating budget control
VAC = Value analysis control
LM = Lean manufacturing
μ = Error term

3.9 Measurement / operationalization of variables

The variables in the study were measured and operationalized as shown in table below.

The Measurement/operationalization of variables are presented in the table 3.3 below:

Table 3.3: Measurement / operationalization of variables

Variables	Description	Measurement	Apriori Expectation	Sources
Financial Performance (FP).	This is the return on the assets used during the year.	Total asset divided by total income multiplied by 100%		Muse (2021)
Independent Variables Inventory control (IC)	This is operations management, logistics and supply chain management, the technological system and the programmed software necessary for managing inventory.	Questionnaire responses.	Positive	Aggreh *et al*.(2024)
Just in time (JITC)	JIT inventory technique designed to have the right inventory in the right quality and amount in the correct place and at the opportune time	Questionnaire responses.	Positive	Deepika *et al*.(2025)
Activity based costing(ABC)	Activity-based costing (ABC) is a method that is based upon activities.	Questionnaire responses.	Positive	
Lean manufacturing (LM)	Lean manufacturing is a technique used by manufacturing to minimizes environmental effects and eliminates industrial waste and maximizes the use of available resources in the organization.	Questionnaire responses.	Positive	Aggreh *et al* (2025)
Budgetary control	This is the continuous comparison of actual with budgeted results.	Questionnaire responses.	Positive	Parveen & Pougajendy (2023)
Standard costing	This is the predetermined unit cost of a product or service.	Questionnaire responses.	Positive	Ologbenla (2021)
Value analysis control	This is a technique of reducing the cost of a product right from the design stage.	Questionnaire responses.	Positive	Ologbenla (2020)

Source: Researcher's Compilation (2025)

3.10 Method of Data Analysis

The data for this study were analysed using multiple regression analysis technique and descriptive statistics technique respectively. The researcher analyzed the likert scale questionnaire (ordinal data) as interval data via data transformation method to be able to achieve the objective of the study. Specifically, multiple linear regression analysis technique was used to test the formulated hypotheses via SPSS. Multiple linear regression analysis technique was appropriate for this study because of its ability to predict the effect of dependent variable by the independent variables. While descriptive statistics technique was used to answer research questions in this study to explain the data characteristics.

3.11 Decision Rule and Statistical Procedure

The decision rule for the test of hypotheses was stated thus:
Reject Ho if $p < 0.05$ and $Tcal < Ttab$
Do not reject Ho if $p > 0.05$ and $Tcal > Ttab$

3.12 Diagnostic Tests

Diagnostic tests were undertaken to determine the suitability and dependability research data for analysis (Johansson & Zametica (2019). Before commencement of descriptive and inferential analysis, diagnostic tests comprising multicollinearity, normality and homoscedasticity tests were conducted.

3.12.1 Multicollinearity Test

Multicollinearity is a situation of multiple correlations among the independent variables (Johansson & Zametica, (2019). Statistical significance of the independent variables is undermined when they correlate as they are supposed to be independent. Multicollinearity problem leads to unreliable regression results. The current study employed the variance inflation factor in testing for multicollinearity. VIF values of between 1-10 mean insignificant correlations among predictors thus data has no multicollinearity problem (Johansson & Zametica, 2019).

3.12.2 Normality Test

Normality test determines whether the research data is normally distributed (Johansson & Zametica, 2019). A set of data that is normally distributed usually clusters around the mean with more occurrences than those far from the mean and its frequency distribution curve is bell-shaped. Normality test was conducted for the study to determine whether the data was well modeled for descriptive analysis. At 95% level of confidence, data is normally distributed if the $p\text{-value} > 0.05$.

3.12.3 Homoscedasticity Test

Homoscedasticity means that the residuals or error terms in a data are constant (Johansson & Zametica, 2019). This suggests that the data set is consistent for regression analysis. Violation of homoscedasticity leads to heteroscedasticity problem. Heteroscedasticity problem occurs due to larger discrepancies between the largest observed values and the smallest observed values of the data set. Heteroscedasticity leads covariance matrix's inconsistency thus making hypotheses tests and regression coefficients invalid.

4. Data Presentation, Analysis and Discussion of Findings

This chapter primarily focussed on data presentation, analysis and discussion of findings respectively.

4.1 Data Presentation

4.1.1 Response rate

The researcher achieved a response rate of 85% since 170 out of 200 issued questionnaires were fully filled and returned. Results on response rate are presented in Table 4.1.

Table 4.1: Response rate

Response	Total
Total number of issued questionnaires	**2**00
Fully filled and returned questionnaires	**17**0
Response rate	**85%**

4.2 Reliability Test

Table 4.2: Reliability Test Results

Study variables	Number of test items	Cronbach alpha coefficient
Inventory control	7	0.766
Just in time costing	9	0.856
Lean manufacturing	6	0.824
Operating budget	7	0.707
Standard costing	7	0.875
Activity- based costing	8	0.776
Value analysis control	9	0.865
Financial performance	7	0.883

Source: Researcher's Computation

4.3 Normality Test

Table 4.3: Normality Test Result

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
ROA	.085	170	.004	.983	170	.112
a. Lilliefors Significance Correction						

Source: Researcher's Computation

The normality test was conducted to ensure that the dataset satisfy the regression assumption test of normality. In carrying out the test, Shapiro Wilk test was used to statistically test for normality and the p- value of 0.112 obtained was greater than 0.05, showing that the dataset are normally distributed.

4.4 Multicollinearity Test

Multicollinearity test was undertaken to determine the multiple correlations among the
independent variables.

Table 4.4: Multicollinearity Test Result

Explanatory variables	Variance inflation factor
Inventory control	1.595
Just in time costing	1.346
Lean manufacturing	1.352
Operating budget costing	1.075
Standard costing	1.191
Activity- based costing	1.260
Value analysis control	1.156

Source: Researcher's Computation

Evidently as shown in Table 3.6 above, inventory control (VIF = 1.202), just in time costing (VIF = 1.438), lean manufacturing (VIF = 1.439), operating budget (VIF = 1.669), standard costing (VIF = 1.797), activity based costing (VIF = 1.451) and value analysis (VIF = 1.883) respectively had VIF values greater than one, meaning that the assumption of multicollinearity was not violated but satisfied (Etim *et al*. 2023).

4.5 Homoscedasticity Tests

This implies that the variance of the residuals is equal for all combinations of values on the independent x-variables. If the variance of the residuals differs between the different values of the independent x-variables, there is heteroscedasticity. In carrying out this test, scatter plots were done using SPSS and was a spread of the residuals, meaning that this assumption was met.

4.6 Autocorrelation Test

This assumption is about no autocorrelation, which means that the residuals are correlated with each other over time. This means that the value of a variable will be affected by its previous value and the estimation of the standard errors risks becoming incorrect. Further, the problem with autocorrelation means that the regression becomes ineffective. To investigate whether autocorrelation exists in the material, a Durbin Watson (DW) test was applied, examining whether there is a relationship between a residual and its previous value. The outcome of the DW test always assumes values between 0 and 4, where 2 is the most desirable result (Johansson & Zametica, 2019). Since our results of the Durbin Watson test was 1.693 (see Appendix 3 below), we assume that the assumption is fulfilled.

Table 4.5: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IC	170	.00	4.43	3.3183	.51881
ABC	170	1.67	4.67	3.3775	.55516
BUC	170	1.50	4.33	2.8516	.60176
SC	170	.00	4.57	2.9198	.58882
JIT	170	1.56	4.11	2.8506	.52464
LM	170	1.67	4.83	3.0480	.66505
VAC	170	2.33	6.67	3.2699	.48273
ROA	170	-617.43	1167.00	11.2368	107.38221
Valid N (listwise)	170				

Source: Researcher's Computation

The descriptive statistics which gave the description of features of data and variables in the work are presented in Table 4.2 above. The statistics are minimum, maximum, mean and standard deviation. The mean showed the average and standard deviation showed the degree of dispersion. Financial performance(ROA) -Dependent variable had the minimum value of -617.43, maximum value of 1167.0, mean of 11.24 and standard deviation of 107.38 respectively. The value of -617.43 means the minimum value accrued to the studied firms in the use of their assets; the value of 1167.0 depicts the maximum value generated by the firms in using their assets; while on the average, the value of 11.24 was generated by the firms by using their asset and they had standard deviation of 107.38, showing a wide spread in the dataset.

The Inventory operations costing (IC) had the minimum value of 0.00, maximum value of 4.43, mean of 3.32 and standard deviation of 0. 519 respectively. This means that the firms had no inventory operations costing; the maximum value of inventory operations costing across the firms was 4.43 while on the average, inventory operations costing across the firms was 3.32 and the value of inventory control operations in terms of standard deviation was 0.519 with a low spread of data. Just in time (JIT) had the minimum value of 1.56, maximum value of 4.11, mean of 2.85 and standard deviation of 0.525 respectively. This means that the minimum value of Just in time(JIT) costing across the firms was 1.56; while the maximum value of JIT costing across the firms was 4.11; on the average, Just in time(JIT) across the firms was 2.85 and the value of Just in time (JIT) in terms of standard deviation was 0.525 showing a low spread of data.

Lean manufacturing (LM) had the minimum value of 1.67, maximum value of 4.83, mean of 3.05 and standard deviation of 0.665 respectively. This means that the minimum value of Lean manufacturing(LM) across the firms was 1.67; while the maximum value of Lean manufacturing (LM) across the firms was 4.83; on the average, Lean manufacturing(LM) across the firms was 3.05 and the value of 0.665 showed standard deviation of lean manufacturing (LM) of the studied firms having a low spread of data.

Also, Activity based costing (ABC) had the minimum value of 1.67, maximum value of 4.67, mean of 3.38 and standard deviation of 0.555 respectively. This means that the minimum value of Activity based costing(ABC) across the firms was 1.67; while its maximum value of was 4.67; on the average, Activity based costing (ABC) had a value of 3.38 and a standard deviation of 0.555 across the firms having a low spread of data.

Standard costing(SC) had the minimum value of 0.00, maximum value of 4.57, mean of 2.92 and standard deviation of 0.588 respectively. This means that the minimum value of standard costing(SC) across the firms was 0.00 depicting that the firms studied never adopt standard costing; while its maximum value was 4.67; on the average, standard costing (SC) had a value of 2.92 and a standard deviation of 0.588 across the firms having a low spread of data.

Operating budgetary costing (OBC) had the minimum value of 1.50, maximum value of 4.33, mean of 2.853 and standard deviation of 0.602 respectively. This means that the minimum value of Operating budgetary costing(OBC) across the firms was 1.50 depicting the least value of operating budgetary costing in the industry; while its maximum value was 4.33 across the firms; on the average, Operating budgetary costing(OBC) had a value of 2.853 in the studied firms and a standard deviation of 0.588 across the firms showing a moderate spread.

Value analysis control(VAC) had the minimum value of 2.33, maximum value of 6.67, mean of 3.27 and standard deviation of 0.483 respectively. This means that the minimum value of Value analysis control(VAC) across the firms was 2.33 depicting the least value of Value analysis control(VAC) in the industry; while its maximum value was 6.67 across the firms; on the average, Value analysis control(VAC) had a value of 3.27 in the studied firms and a standard deviation of 0.588 across the firms showing a moderate spread in the sample.

Table 4.6: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	89.128	107.975		.825	.410		
	IC	15.764	16.684	.176	.945	.346	.913	1.595
	ABC	4.121	15.336	.321	.269	.002	.944	1.260
	BUC	8.192	14.252	.146	.575	.000	.930	1.075
	SC	-29.319	15.434	.160	1.900	.059	.840	1.191
	JIT	-1.443	18.291	.217	.079	.004	.743	1.346
	LM	5.024	14.457	.131	.348	.729	.740	1.352
	VAC	5.953	18.416	.327	.323	.747	.865	1.156

a. Dependent Variable: ROA

Source: Researcher's Computation(2025)

4.7 Test of Hypotheses

4.7.1 Test of Hypothesis One

H_{O1}: There is no significant effect of just in time costing (JIT) on the return on asset of quoted consumer goods firms in Nigeria.

The result in Table 4.3 showed that just in time costing (JIT) has positive significant effect (Beta =.217 or 21.7%, p=0.004, p< 0.05, t= 0.79). Thus, the null hypothesis one which states that there is no significant effect of just in time costing on the return on asset of quoted consumer goods firms in Nigeria was rejected.

4.7.2 Test of Hypothesis Two

H_{O2}: Activity based costing does not affect the return on asset of quoted consumer goods firms in Nigeria significantly.

The result in Table 4.3 showed that Activity based costing(ABC) has positive significant effect(Beta =.321 or 32.1%, p=.002, p< 0.05, t= 0.269). Thus, the null hypothesis two which states that activity based costing does not affect the return on asset of quoted consumer goods firms in Nigeria significantly was rejected.

4.7.3 Test of Hypothesis Three

H_{O3}: There is no significant effect of inventory operations costing on the return on asset of quoted consumer goods firms in Nigeria.

The result in Table 4.3 showed that inventory operations costing(IC) has positive insignificant effect(Beta =.176 or 17.6%, p=0.945, p> 0.05, t= .346). Thus, the null hypothesis three which states that there is no significant effect of inventory control on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

4.7.4 Test of Hypothesis Four

H_{O4}: Standard costing has no significant effect on the return on asset of quoted consumer goods firms in Nigeria.

The result in Table 4.3 showed that Standard costing(SC) has positive insignificant effect (Beta = .160 or 16.0%, p= 0.059, p> 0.05, t= 1.900). Thus, the null hypothesis four which states standard costing has no significant effect on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

4.7.5 Test of Hypothesis Five

H_{O5}: Operating budget costing has no significant effect on the return on asset of quoted consumer goods firms in Nigeria.

The result in Table 4.3 showed that operating budget costing (BC) has positive significant effect(Beta = .146 or 14.6%, p=0.000, p< 0.05, t=.575). Thus, the null hypothesis five which states that operating budget costing has no significant effect on the return on asset of quoted consumer goods firms in Nigeria was rejected.

4.7.6 Test of Hypothesis Six

H_{O6}: Value analysis control has no significant effect on the return on asset of quoted consumer goods firms in Nigeria.

The result in Table 4.3 showed Value analysis control(VAC) has positive insignificant effect(Beta = .327 or 32.7%, p=0.747, p>0.05, t= 0.323). Thus, the null hypothesis six which states that Value analysis control has no significant effect on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

4.7.7 Test of Hypothesis Seven

H_{O7}: There is no significant effect of lean manufacturing on the return on asset of quoted consumer goods firms in Nigeria.

The result in Table 4.3 showed Lean manufacturing (LM) has positive significant effect (Beta = .131 or 13.1%, p=0.729, p> 0.05, t= 0.348). Thus, the null hypothesis seven which states that there is no significant effect of lean manufacturing on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

Result in Table 4.4 below showed the Anova result with the F calculated value of 9.407 which measured the composite statistical significance of all the variables in the model greater than the p- value of .000 at 0.05 level of significance. This means that inventory control (IC), Just in time (JIT), Lean manufacturing (LM), Activity based costing (ABC), Standard costing (SC), Budgetary control (OBC) and Value analysis control (VAC) respectively had significant effect on the return on asset of quoted consumer goods firms in Nigeria. Therefore, the null hypotheses were rejected.

Table 4.7: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76267.394	7	10895.342	.943	.000[b]
	Residual	1872461.260	162	11558.403		
	Total	1948728.653	169			
a. Dependent Variable: ROA						
b. Predictors: (Constant) VAC, ABC, LM, IC, OBC, SC, JIT						

Source: Researcher's Computation(2025)

The model summary which used to explain the effect of operating budget costing (OBC), Cost of inventory (IC)), Just in time(JIT), Lean manufacturing (LM), Standard costing (SC), Activity based costing(ABC) and Value analysis control(VAC) on the financial performance of quoted consumer goods firms in Nigeria was shown in Table 4.5 below showed the R Square of 0.639 means that 63.9% of the variation in financial performance was explained by operating budget costing (OBC), inventory control (IC), Just in time (JIT), Lean manufacturing (LM), Standard costs (SC), Activity based costing (ABC) and Value analysis control (VAC) respectively while the remaining 37% was due to unexplained variables not used in this study.

Table 4.8: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.198[a]	.639	-.002	107.51001	2.888
a. Predictors: (Constant), VAC, ABC, LM, IC, OBC, SC, JIT					
b. Dependent Variable: ROA					

Source: Researcher's Computation(2025)

4.8 Discussion of Findings

In evaluating the model of the study, we have;

FP=89.128+0.217(JIT)+0.321(ABC)+0.176(IC)+0.160(SC) +0.146(OBC)+0.327(VAC)+ 0.131(LM) +107.975

The constant of 89.128 is the value that return on asset takes when all the independent variables is zero. The coefficient of Just in time costing (JIT) was 0.217 means that one unit increase in just in time costing(JIT) will result in increase in the dependent variable (ROA) by 0.217 units. The coefficient of Activity based costing (ABC) was 0. 321 means that one unit increase in activity based costing(ABC) will result in increase in the dependent variable (ROA) by 0.321.

The coefficient inventory operations costing (IC) was 0.176 means that one unit increase in inventory operations costing (IC) will result in increase in the dependent variable (ROA) by 0.176 units; The coefficient of standard costing (SC) is 0. 160 and means that one unit increase in standard costing (SC) will result in increase in the dependent variable (ROA) by 0.160. The coefficient of operating budget costing (OBC) was 0.146 and means that one unit increase in operating budget costing (OBC) will result in increase in the dependent variable (ROA) by 0.146. While the coefficient of Value analysis (VAC) was 0.327 and means that one unit increase in value analysis control(VAC) will result in increase in the dependent variable (ROA) by 0.327 and coefficient of lean manufacturing (LM) was 0. 131 means that one unit increase in lean manufacturing (LM) will result in increase in the dependent variable (ROA) by 0.131.

The model summary which is used to explain the effect of operating budget costing(OBC), inventory operations costing (IC), Just in time (JIT), Lean manufacturing (LM), Standard costing (SC), Activity based costing (ABC) and Value analysis control (VAC) on the financial performance of quoted consumer goods firms in Nigeria was shown in Table 4.5. The R Square of 0.639 obtained means that 63.9% of the variation in financial performance was explained by operating budget costing (OBC), inventory operations costing (IC), Just in time (JIT), Lean manufacturing (LM), Standard costing (SC), Activity based costing (ABC) and Value analysis control (VAC) respectively while the remaining 37 % was due to unexplained variables not used in this study.

Just in time costing and financial Performance(ROA) of quoted consumer goods firms in Nigeria

The result in Table 4.3 showed that just in time costing (JIT) has positive significant effect (Beta =.217 or 21.7%, p=0.004, p< 0.05, t= 0.79). Thus, the null hypothesis one which states that there is no significant effect of just in time costing on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

The finding of this study was not consistent with the findings of Ayanaba *et al*. (2023) whose study revealed that just in time costing had insignificant effect on the financial performance of manufacturing firms in Nigeria. Also, this finding was in agreement with finding of Adeyemo (2020), whose findings showed that just in time costing had a positive effect on the corporate performance of manufacturing firms in Nigeria. This finding has supported the theory used in this work as well as the a priori expectation. Similarly, this findings was in agreement with finding of Oluwayemisi *et al* (2022).

Activity based costing and financial Performance (ROA) of quoted consumer goods firms in Nigeria

The result in Table 4.3 showed that Activity based costing(ABC) has positive insignificant effect (Beta =.321 or 32.1%, p=.002, p< 0.05, t= 0.269). Thus, the null hypothesis two which states that activity based costing does not affect the return on asset of quoted consumer goods firms in Nigeria significantly was not rejected.

The finding of this study was consistent with the findings of Oluwayemisi (2022) whose study revealed that activity based costing had significant effect on the financial performance of manufacturing firms in Nigeria. Also, this finding was not in agreement with finding of Madwe etal.(2020) whose findings showed that activity based costing has a positive insignificant effect on the corporate performance of manufacturing firms in Nigeria. This finding has not supported the theory used in this study as well as the a priori expectation.

Inventory operations costing and financial Performance (ROA) of quoted consumer goods firms in Nigeria

The result in Table 4.3 showed that inventory operations costing(IC) has positive insignificant effect (Beta = .176 or 17.6%, p= 0.346, p> 0.05, t= .945). Thus, the null hypothesis three which states that there is no significant effect of inventory operations costing on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

The finding of this study was inconsistent with the findings of Aggreh *et al*. (2024) whose study revealed significant effect of inventory control on the financial performance of manufacturing firms in Nigeria. Also, this findings was in agreement with finding of Onuora & Edoziuno (2019), whose findings showed that inventory control has a positive insignificant effect on corporate performance. Similarly, the finding of Akinlabi (2022) who studied the impact of inventory management practices found insignificant effect on firms' competitiveness and organizational performance of Nigerian manufacturing firms.

Standard costing and financial Performance (ROA) of quoted consumer goods firms in Nigeria

The result in Table 4.3 showed that Standard costing (SC) has positive but insignificant effect (Beta = .160 or 16.0%, p= 0.059, p> 0.05, t= 1.900). Thus, the null hypothesis four which states that standard costing has no significant effect on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

The finding of this study was consistent with the findings of Ali-momoh *et al* (2022) whose study revealed that standard costing had insignificant positive effect on the financial performance of manufacturing firms in Nigeria. Similarly, the findings of Nwatu & Idoko(2020), who investigated the effect of standard costing on firms performance of manufacturing firms in Nigeria supported this finding.

Operating budget costing and financial Performance (ROA) of quoted consumer goods firms in Nigeria

The result in Table 4.3 showed that operating budget costing(BC) has positive significant effect (Beta = .146 or 14.6%, p=0.000, p< 0.05, t=.575). Thus, the null hypothesis five which states that operating budget costing has no significant effect on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

The finding of this study is consistent with the finding of Ayorinde (2021) whose study revealed that operating budget costing had significant effect on the financial performance of manufacturing firms in Nigeria. Also, this findings is in agreement with finding of Erasmus (2021) whose study showed that operating budget costing had a positive significant effect on the corporate performance of manufacturing firms in Nigeria. This finding has supported in the theory used in this work as well as the a priori expectation.

Value analysis and financial Performance (ROA) of quoted consumer goods firms in Nigeria

The result in Table 4.3 showed Value analysis control (VAC) has positive insignificant effect (Beta = .327 or 32.7%, p=0.747, p>0.05, t= 0.323). Thus, the null hypothesis six which states that Value analysis control has no significant effect on the return on asset of quoted consumer goods firms in Nigeria was not rejected. This finding was not in line with the finding of Ravichandran (2010), whose study on cost reduction through value analysis and its role in management decision making in Indian firms revealed significant effect on firms performance.

Lean manufacturing and financial Performance (ROA) of quoted consumer goods firms in Nigeria

The result in Table 4.3 showed Lean manufacturing (LM) has positive significant effect (Beta = .131 or 13.1%, p= .727, p>0.05, t= .348). Thus, the null hypothesis seven which states that there is no significant effect of lean manufacturing on the return on asset of quoted consumer goods firms in Nigeria was not rejected.

The finding of this study is consistent with the findings of Gonzalo *et al*. (2023) whose study revealed that lean manufacturing had insignificant effect on the profitability of manufacturing firms in Hargeisa, Somalia. Also, this findings is also in agreement with finding of Mahlaha(2020), whose findings showed that lean manufacturing had a positive insignificant effect on the corporate performance of manufacturing firms in Nigeria. This finding has supported the theory used in this work as well as the a priori expectation.

5. Summary, Conclusion and Recommendations

This chapter focused on the summary of findings, conclusion, recommendations as well as the contribution to knowledge and the business implication of findings.

5.1 Summary of Findings

The study examined the effect of operating cost control mechanisms on the financial performance of quoted consumer goods firms in Nigeria. The study used inventory operations costing, just in time, lean manufacturing, activity based costing, standard costing, operating budget costing and value analysis control respectively as proxies of operating cost control mechanisms while financial performance was measured by Return on Assets (ROA). The data analysis was carried out by employing multiple regression analysis techniques and descriptive statistics via SPSS. Specifically, the study revealed the following:

1. Just in time costing showed significant positive effect on the financial performance of listed consumer goods

firms in Nigeria.
2. Activity based costing showed significant positive effect on the financial performance of listed consumer goods firms in Nigeria.
3. Inventory operations costing had insignificant positive effect on the financial performance of quoted consumer goods firms in Nigeria.
4. Standard costs revealed insignificant positive effect on the financial performance of listed consumer goods firms in Nigeria.
5. Operating budget costing revealed significant positive effect on the financial performance of listed consumer goods firms in Nigeria.
6. Value analysis control revealed insignificant positive effect on the financial performance of listed consumer goods firms in Nigeria.
7. Lean manufacturing showed significant positive effect on the financial performance of listed consumer goods firms in Nigeria.

5.2 Conclusion

The study concluded that operating budgetary costing (OBC), inventory operations costing (IC), Just in time costing (JIT), Lean manufacturing (LM), Standard costing (SC), Activity based costing (ABC) and Value analysis control (VAC) respectively affected the financial performance (ROA) of quoted consumer goods firms in Nigeria. Specifically, inventory operations costing(IC), Just in time costing(JIT), Standard costing (SC), Activity based costing (ABC) and Value analysis control (VAC) respectively revealed insignificant impact on financial performance of quoted consumer goods firms in Nigeria. While Operating budget costing (OBC) and Lean manufacturing (LM) revealed significant impact on financial performance of quoted consumer goods firms in Nigeria.

5.3 Recommendations

Given the findings of the study, the following recommendations were made:

1. Just in time costing should be adopted by the studied firms so as to enhance their financial performance of listed consumer goods firms in Nigeria.
2. Activity based costing should be adopted by the studied firms so as to enhance their financial performance of listed consumer goods firms in Nigeria.
3. Inventory operations costing should be improved by the studied firms because it impacted insignificantly on the financial performance of quoted consumer goods firms in Nigeria.
4. Standard costing system should be improved by the studied firms because it impacted insignificantly on the financial performance of listed consumer goods firms in Nigeria.
5. Operating budget costing should be improved by the studied firms because it impacted insignificantly on the financial performance of listed consumer goods firms in Nigeria.
6. Value analysis control should be improved by the studied firms because it impacted insignificantly on the financial performance of listed consumer goods firms in Nigeria.
7. Lean manufacturing should be improved by the studied firms because it impacted insignificantly on the financial performance of listed consumer goods firms in Nigeria.

5.4 Contribution to Knowledge

This study reviewed both empirical and conceptual works as well as theories underpinning operating cost control mechanisms and financial performance of firms in both developed and developing countries of the world. During the review of previous works, it was discovered that results of some previous works revealed conflicting findings in both developed and developing jurisdictions. The result of the analysis of data of this study specifically established that Operating budgetary costing (OBC) and Lean manufacturing (LM) affected the financial performance of quoted consumer goods firms in Nigeria positively which constituted the contribution to knowledge of this study. Conceptually, this work has provided a robost explanatort insights on the variables used in the study as well as empirical evidence that has extended the streams of literature in this field.

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