Effect of Cost Reduction Methods on the Profitability of Small-Scale Manufacturing Enterprises in Nigeria: A Case of Selected Small-Scale Businesses in Ekiti and Ondo States

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ABSTRACT

This study examines the effect of cost reduction methods on the profitability of small-scale manufacturing enterprises in Nigeria, focusing on selected businesses in Ekiti and Ondo States. Small-scale manufacturing firms play a vital role in the Nigerian economy, yet many struggle with financial sustainability due to high operational costs. This study employs a survey research design, collecting primary data from 200 respondents, including operations managers, cost accountants, and senior executives. A structured questionnaire was used to assess the adoption of cost control techniques such as activity-based costing, budgetary control, and technological investment. The study utilizes descriptive and inferential statistical analyses, including regression analysis, to evaluate the relationship between cost reduction strategies and profitability indicators such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). Findings indicate that most enterprises implement cost reduction strategies effectively, with technological investment playing a significant role in cost control. However, challenges such as resistance to change and external economic factors impact implementation. The study concludes that cost reduction methods are essential for financial sustainability and recommends strategic cost control measures to enhance profitability in the sector.

Keywords: Cost Reduction Methods, Profitability, Small-Scale Manufacturing Enterprises, Financial Sustainability, Operational Efficiency and Production Costs

INTRODUCTION

The profitability of small-scale enterprises is crucial to their sustenance and growth in an increasingly competitive business environment, and one of the key factors influencing profitability is the effective management of costs. Cost Reduction Techniques are very important element in any enterprise or in a project planning and control (Adegbie & Fadere, 2020). Materials represent a major expense in Manufacturing organizations, so minimizing procurement or purchase costs present important opportunities for reducing costs (Togun, Aljibori, Abed, Biswas, Alshamkhani, Niyas, & Paul, 2024). Poor materials management can also result in large and avoidable costs during operation. First, if materials are purchased early, capital may be tied up and interest charges incurred on the excess inventory of materials. Even worse, materials may deteriorate during storage or be stolen unless special care is taken. For example, electrical equipment often must be stored in waterproof locations. Second, delays and extra expenses may be incurred if materials required for particular activities are not available. Accordingly, ensuring a timely flow of material is an important concern to the Organizations (Stolyarov, Pásztorová, Zos-Kior, Hnatenko, & Petchenko, 2022). To thrive in this competitive environment, various cost strategies have been embraced to

provide effective cost management solutions since a firm's growth is intrinsically tied to its ability to control and curtail expenses (Oyedokun, Tomomewo & Owolabi, 2019). Consequently, minimizing the costs of business operations has become a critical tool for companies to maintain a competitive edge (Husein, Khalifa & Elkarim, 2016).

Cost Reduction Techniques are not just a concern during the monitoring stage in which production is taking place; decisions about material procurement may also be required during the initial planning and scheduling stages (Omolehinwa, 2001). For example, activities can be inserted in the project schedule to represent purchasing of major items such as raw materials to be used for production. The availability of materials may greatly influence the schedule in production with a fast track or very tight time schedule, sufficient time for obtaining the necessary materials must be allowed. In some cases, more expensive suppliers or shippers may be employed to save time (Foster, 2009). Cost Reduction Techniques are also a problem at the Organization level if central purchasing and inventory control is used for standard items (Teerasoponpong, & Sopadang, 2022).

In this case, the various projects undertaken by the Organization would present requests to the central purchasing group (George, 2020). In turn, this group would maintain inventories of standard items to reduce the delay in providing material or to obtain lower costs due to bulk purchasing. This organizational materials management problem is analogous to inventory control in any Organization facing continuing demand for particular items (Imaga, 2003; Lucey, 2005). Materials ordering problems lend themselves particularly well to computer-based systems to ensure the consistency and completeness of the purchasing process. In the manufacturing realm, the use of automated materials requirements planning systems is common. In these systems, the master production schedule, inventory records and product component lists are merged to determine what items must be ordered, when they should be ordered, and how much of each item should be ordered in each time period (Fang, X., & Chen, H. C. (2022). The heart of these calculations is simple arithmetic: the projected demand for each material item in each period is subtracted from the available inventory. When the inventory becomes too low, a new order is recommended. For items that are non-standard or not kept in inventory, the calculation is even simpler since no inventory must be considered. With a materials requirement system, much of the detailed record keeping is automated and project managers are alerted to purchasing requirements (Javed, Alam, Alam, Islam, & Ahsan, 2024).

Problem Statement/Justification

Small-scale manufacturing enterprises face numerous challenges that inhibit their ability to maintain necessary cash flow levels for operations (Anorue, & Ugwoke, 2022). These challenges include inaccurate inventory management, which results in production shortages, premium freight, and inventory adjustments. Key issues commonly encountered by manufacturing firms include raw material procurement, logistics (inbound and outbound), warehousing, production processes, energy consumption, packaging, waste management, information management, and human resources. For decades, materials managers have sought to address these issues to enhance efficiency and profitability within the manufacturing sector (Yu, Zhang, Cao, & Kazancoglu, 2021).

Excessive costs in business activities often lead to reduced profitability, which contradicts the fundamental goal of any business—to maximize profits (Addison, 1980: 54). In Nigeria, the current economic situation is dire, with an inflation rate of 28.92% driven by escalating food prices (National Bureau of Statistics, January 15, 2024). The manufacturing sector is particularly affected by rising production costs, resulting in lower contribution margins and diminished profitability (Aryantini, & Jumono, 2021).

Organizations in this sector struggle to achieve productivity and profit maximization due to their inability to effectively reduce costs and implement appropriate cost reduction methods (Maliha, Moktadir, Bag, & Stefanakis, 2023). The lack of structured cost management strategies hinders their capacity to adapt to an inflated economy. It is essential to determine the critical cost drivers impacting profitability and assess the effectiveness of cost reduction methods in enhancing financial performance.

This research aims to explore how key cost drivers such as raw materials, labor, energy, logistics, and overhead costs affect profitability and to evaluate the relationship between cost reduction techniques and profitability indicators, including return on assets (ROA), return on equity (ROE), and net profit margin (NPM). These insights will provide valuable guidance for small-scale manufacturing enterprises in addressing economic challenges and improving their financial outcomes.

Objective(s) of the Study

The research seeks to:

1. *Assess the relationship between cost reduction methods and profitability of* Small Scale Manufacturing Enterprises in Nigeria.

LITERATURE REVIEW

Cost Reduction

Cost reduction involves the strategic application of accounting techniques to analyze historical and projected financial data, enabling management to develop plans that align with reasonable economic objectives and make informed decisions to minimize corporate expenses (Parker, 2018). Its primary goal is to equip managers with actionable insights for decision-making and to enhance the efficient management of organizational resources (Wilson, 2016). Cost reduction practices encompass methods and concepts designed to facilitate effective planning and decision-making, allowing for the evaluation of alternative business strategies and fostering control through performance analysis and interpretation (Ezejiofor, Nwakoby, & Okoye, 2015). These techniques provide timely and accurate data, supporting efforts to manage costs, improve productivity, and optimize resource utilization.

A cost reduction method comprises a series of techniques and methods aimed at planning, measuring, and reporting activities to minimize a company's expenditures on products and processes. The initial step in implementing a cost reduction method involves identifying costs for effective cost control and informed decision-making (Oluyinka, 2016). These strategies are applied in areas such as make-or-buy decisions, price negotiation, performance appraisal, and purchasing assessments.

The primary purpose of cost management practices is to calculate the total cost of producing goods or providing services while aiding in both cost control and reduction efforts within organizations. A cost reduction strategy is fundamentally aligned with the internal objectives of management, focusing on performance evaluation and future projections to achieve reduced expenditures. The practice is tailored to align with the production processes or service delivery methods, ensuring operations are carried out at the lowest possible cost.

Cost reduction is defined as a systematic approach designed to enhance organizational efficiency by reducing overall costs without compromising quality (Lawal, 2017). It represents a permanent improvement in cost structures, directly lowering the unit cost of products while maintaining their intended quality standards (Olayinka, 2019). This strategy fosters the creation of favorable standard costs while preserving product value, thereby systematically improving profit margins through the elimination of waste and unnecessary expenses. Often referred to as profit improvement or cost efficiency, cost reduction focuses on minimizing asset costs, cost of sales, and staff-related expenses while safeguarding revenue generation.

Activity-based costing

Activity-Based Costing (ABC) is a contemporary cost accounting method that assigns overhead and indirect costs to products, services, or activities based on their consumption of specific resources. Unlike traditional costing systems, which use broad averages or single cost drivers, ABC provides a more detailed and accurate representation of costs. By identifying and analyzing the specific activities that generate overhead costs,

ABC enhances managerial decision-making and allows organizations to better understand their cost structures (Kaplan & Cooper, 1998).

The ABC approach is grounded in the principle that activities are the primary drivers of costs within an organization. Costs are first attributed to activities—such as procurement, production, or customer support—and then traced to products, services, or customers based on their actual use of these activities. This two-stage allocation process helps managers pinpoint high-cost activities and optimize them to improve efficiency and profitability. ABC also highlights non-value-added activities, providing actionable insights for cost reduction and process improvement (Drury, 2015).

A key feature of ABC is its reliance on cost pools and cost drivers. Costs are organized into distinct pools associated with specific activities, such as machine setup, quality inspection, or order processing. Cost drivers, which influence the cost of these activities, include factors like machine hours, labor hours, or the number of orders processed. These elements ensure costs are allocated accurately, reflecting the true consumption of resources. Additionally, activities are classified into hierarchies—unit-level, batch-level, product-level, and facility-level—to represent different scales and frequencies of operations.

One of the main benefits of ABC is its ability to improve cost accuracy. By focusing on actual activity usage, ABC reduces distortions caused by traditional costing methods, leading to more precise cost allocation. This accuracy enhances decision-making, allowing managers to evaluate the profitability of products, services, or customer segments effectively. Moreover, ABC identifies inefficiencies and waste within processes, enabling organizations to streamline operations and improve overall productivity. The method also supports the development of pricing strategies that reflect the true cost of providing goods or services.

Despite its advantages, ABC has limitations. Its implementation can be resource-intensive and complex, requiring significant time and effort to identify activities, determine cost drivers, and collect relevant data. Small businesses or organizations with straightforward cost structures may find the process impractical, as the benefits might not justify the costs. Furthermore, maintaining an ABC system requires continuous updates to reflect changes in operations and activities, which can pose additional challenges (Horngren et al., 2012).

ABC has found applications across various industries, including manufacturing, healthcare, and the service sector. In manufacturing, it helps optimize production processes and reduce overhead costs. In the service sector, ABC is used to evaluate customer profitability and improve service delivery efficiency. Healthcare organizations also benefit from ABC by determining the cost of patient care and identifying opportunities for cost control without compromising quality.

Lean manufacturing

Lean production was developed in Japan by Toyota Corporation during the Second World War and served as the savior of Japan's auto industry (Hampson, 1999). Japan's industrial companies, particularly after the Second World War, were faced with a lack of capital, which led them to look for production systems that could fix this deficit (Rinehart, Huxley, & Robertson, 2018). This definition is an alternative or effective way to cope with a lack of resources. Multinational corporations such as Taiich Ohno and Eiji Toyoda play a key role in creating this idea (Yamamoto, Milstead, & LIoyd, 2019). The Japanese were the first to embark on a revolution in mass production, by purchasing some old American presses and pursuing innovation in the late 1940s. Daiichi Ohno established his groundbreaking speed-setting computer method (speed of changing molds). By the late fifties, he managed to minimize the time required to prepare machines from one day to three minutes, which is a record time and eliminating the need for drivers specialized in machine preparation.

Cost Control Techniques

Cost control techniques are systematic approaches used by organizations to monitor, regulate, and manage expenses to ensure they remain within planned budgets. These techniques help organizations optimize the

use of resources, reduce unnecessary expenditures, and achieve financial efficiency. Effective cost control is essential for maintaining profitability and sustaining long-term growth, especially in competitive and resource-constrained environments.

One widely used cost control technique is budgetary control, which involves creating detailed financial plans for specific periods and comparing actual performance against the budget. Variance analysis is often employed to identify deviations between planned and actual costs, enabling organizations to take corrective actions. This technique ensures that resources are allocated efficiently and helps management maintain control over expenditures.

Another important technique is standard costing, where standard costs are predetermined for various operations, processes, or products. By comparing actual costs to these standards, organizations can identify inefficiencies and areas for improvement. Standard costing is particularly effective in manufacturing environments where operations are repetitive and costs can be standardized.

Variance analysis complements both budgetary and standard costing methods by isolating the differences between expected and actual costs. This technique identifies the root causes of variances, such as inefficiencies, price fluctuations, or operational delays. Variance analysis allows management to focus on specific areas requiring attention, thereby improving overall cost management.

Job costing and process costing are also widely applied cost control techniques. Job costing assigns costs to specific projects or jobs, making it suitable for industries like construction or custom manufacturing. Process costing, on the other hand, is used for industries with continuous production processes, such as chemicals or food processing. Both methods ensure accurate tracking of costs and facilitate better resource allocation.

Another effective technique is activity-based costing (ABC), which assigns costs to products or services based on the activities they consume. This method provides detailed insights into cost drivers and highlights inefficiencies within processes. ABC is particularly useful for organizations with complex operations and diverse product lines, as it enhances cost accuracy and supports strategic decision-making.

Break-even analysis is a strategic cost control tool that helps organizations determine the level of output or sales required to cover costs. By identifying the break-even point, managers can make informed decisions about pricing, production levels, and cost optimization. This technique also aids in evaluating the impact of cost changes on profitability.

Technological Investment

Technological investment refers to the allocation of financial, human, and material resources toward acquiring, developing, and implementing technology to enhance organizational performance, innovation, and competitiveness (Olowokere & Olayemi, 2018). This investment is critical in today's fast-paced business environment, where technological advancements drive efficiency, productivity, and market adaptability.

Investments in technology often involve acquiring advanced tools, machinery, and software solutions, as well as funding research and development (R&D) to create proprietary innovations. It also includes equipping employees with the skills to use these technologies effectively and establishing a robust IT infrastructure to support operations (Kaplan & Norton, 1996).

Importance of Technological Investment

Technological investment is pivotal to organizational growth and sustainability. It enhances productivity by automating repetitive tasks, reducing manual errors, and accelerating operations (Davenport & Short, 1990). For example, the adoption of enterprise resource planning (ERP) systems streamlines workflows and facilitates real-time data integration, improving decision-making.

Moreover, technological investment fosters innovation, enabling organizations to develop new products, services, or processes. In manufacturing, for instance, technologies like robotics and artificial intelligence (AI) have revolutionized production processes, achieving cost efficiency and faster delivery (Brynjolfsson & McAfee, 2014).

Technological advancements also boost competitiveness by helping organizations meet market demands, improve customer experiences, and stay relevant in dynamic industries. E-commerce platforms that leverage big data and predictive analytics provide personalized shopping experiences, enhancing customer retention (Smith & Chaffey, 2017).

Supply Chain Optimization

Supply chain optimization refers to the process of enhancing the efficiency and effectiveness of the entire supply chain, from procurement of raw materials to the delivery of finished products to customers. This process involves strategic planning, effective resource management, and the integration of advanced technologies to reduce costs, improve delivery times, and enhance customer satisfaction (Chopra & Meindl, 2016).

An optimized supply chain aligns with an organization's goals, ensuring that resources are utilized effectively while maintaining the desired level of service quality. By balancing supply and demand, reducing waste, and minimizing delays, supply chain optimization contributes to organizational competitiveness and profitability (Mentzer et al., 2001).

Optimizing the supply chain is essential for businesses to remain competitive in a dynamic market. It reduces operational costs by eliminating inefficiencies, such as redundant processes, inventory overstocking, and logistical delays (Christopher, 2016). Furthermore, it enhances customer satisfaction by ensuring timely delivery of high-quality products.

Supply chain optimization also provides greater visibility into operations. By leveraging tools like real-time tracking and advanced analytics, companies can make informed decisions, anticipate disruptions, and adapt to changes in demand patterns (Harrison & van Hoek, 2011).

Economies of Scale

Economies of scale refer to the cost advantages that a business experiences as it increases its production scale. These advantages result from the spreading of fixed costs over a larger volume of output, increased operational efficiencies, and the ability to negotiate better terms with suppliers. As production increases, the average cost per unit of output tends to decrease, allowing organizations to reduce costs and improve profitability (Samuelson & Nordhaus, 2010). Economies of scale can be a significant driver for business growth, enabling firms to become more competitive by offering lower prices or higher-quality products while maintaining or improving their margins.

There are two main types of economies of scale: internal and external. Internal economies of scale arise from within the organization as it grows. These include technical economies, which occur when larger firms can invest in advanced machinery or technology that improves efficiency and reduces the cost per unit produced (Lipsey & Chrystal, 2015). For instance, larger firms can adopt automation, which significantly reduces labor costs while increasing production speed. Managerial economies are achieved by employing specialized managers for different departments, which allows for better decision-making and increased operational efficiency (Hirschey, 2009). Other internal economies include purchasing economies, where larger firms can negotiate discounts for bulk purchases, and financial economies, where bigger companies have access to more favorable financing terms (Baumol, 2002; Myers & Majluf, 1984).

On the other hand, external economies of scale arise from factors outside the firm, often due to industry-wide growth or improvements in infrastructure. For example, firms located in industrial clusters benefit from

shared resources like skilled labor, suppliers, and better transportation systems, which help reduce costs (Marshall, 1890). Additionally, government policies, such as tax incentives or public infrastructure investments, can create a more cost-effective environment for businesses (Krugman, 1991). These external factors allow firms to operate more efficiently and reduce their overall production costs.

Economies of scale are crucial for businesses seeking competitive advantages. By lowering average costs, firms can reduce prices, increase market share, and achieve higher profitability (Porter, 1985). Larger firms can also reinvest the savings from economies of scale into innovation, research, and development, further strengthening their competitive position. However, while economies of scale offer many benefits, businesses must also be mindful of the potential downsides of expanding too rapidly.

Diseconomies of scale occur when a firm becomes too large, and the cost per unit of output begins to increase rather than decrease. This often happens due to inefficiencies that arise from over-complex management structures, poor communication, and resource mismanagement as the organization grows beyond its optimal scale (Williamson, 1985). Therefore, firms need to strike a balance between scaling their operations to enjoy economies of scale while avoiding the inefficiencies that come with diseconomies of scale.

In practice, economies of scale are prevalent in industries such as manufacturing, retail, and transportation. Large manufacturing companies benefit from bulk production and procurement, while retailers like Walmart achieve significant savings through large-scale purchasing and distribution systems (Chandler, 1990). By leveraging economies of scale, these firms can lower their production costs, enhance their market competitiveness, and achieve sustainable profitability. However, businesses must continuously evaluate their operations to ensure they remain within the optimal scale that maximizes efficiency without overextending their capacity.

Empirical Review

Erasmus (2021) investigated how cost management practices influence the financial performance of listed Deposit Money Banks in Nigeria. The study measured cost management using activity-based costing, target costing, and standard costing, while financial performance was assessed by profit before tax. The population of the study included 15 listed deposit money banks in Nigeria, and a sample of 10 banks was selected using judgmental sampling techniques. Primary data were obtained through a structured questionnaire employing a five-point Likert scale, and secondary data came from annual financial reports of listed Deposit Money Banks in Nigeria from 2010 to 2018. Ordinary Least Square Regression was used to test the hypotheses, and the findings revealed that activity-based costing had a significant impact on profit before tax, target 21 costing had a negative impact, and standard costing had a positive and significant impact on profit before tax, indicating that cost management practices influenced financial performance.

Adegbie and Fadere (2020) conducted a study to investigate the impact of cost management techniques on the financial performance of publicly listed consumer goods companies in Nigeria. The study targeted a population of 27 consumer goods firms listed on the Nigerian Stock Exchange, from which a sample of 10 companies was selected using purposive sampling over a ten-year period (2009-2018). Data was obtained from the audited financial statements, and regression analysis was employed to test the hypotheses. The findings revealed that the combined impact of the cost of sales, selling and distribution costs, administrative costs, and finance costs had an insignificant effect on the net profit margin.

In a study by Oyedokun, Tomomewo, and Owolabi (2019) that aimed to determine the impact of cost control on the profitability of selected manufacturing companies in Nigeria, an ex-post facto research design was used. The study focused on five companies in the consumer goods sector listed on the Nigeria Stock Exchange over a ten-year period (2005-2017) using a judgmental sampling technique. Secondary data were obtained from the audited financial statements of the sampled firms, and regression analysis was employed to test the hypotheses. The results revealed a significant negative association between the cost of raw

materials (CoRM) and the profit before tax of manufacturing companies in Nigeria. Adigbole and Osemene (2019) assessed the influence of cost management techniques, including Activity-Based Management (ABM), life cycle costing (LCC), and Target Costing (TC), on the accuracy of cost information in Nigerian manufacturing firms. The study employed a descriptive survey research design with a sample of 325 respondents from 65 randomly selected manufacturing firms in Lagos and Ogun States. Data were collected through questionnaires, and Partial Least Squares Structural Equation Modeling was used for data analysis. The findings indicated that ABM had a positive effect on the accuracy of cost information, LCC had no significant impact, and TC positively influenced the accuracy of cost information.

Mamidu and Akinola (2019) conducted a study to explore the impact of cost management on the performance of manufacturing companies in Nigeria, guided by portfolio theory, resource-based view theory, and efficient structure theory. The study utilized an ex-post facto research design and obtained secondary data from the annual reports of listed companies in Nigeria. The data included direct material cost, direct labour cost, and production overhead as independent variables and operating profit as the dependent variable. Ordinary Least Square Linear Regression analysis was employed to test the hypotheses, and the results indicated a significant influence of cost management on profits generated from production operations.

Activity Base Costing is a method of charging overhead to cost units on the basis of benefits received from the particular indirect activity (Omolehina, 2001). According to Armitage and Nicholas (2012) Activity Base Costing is a costing methodology that identifies activities in an organization and assigns the cost of each activity with resources according to the actual consumption by each. ABC analysis is a device formulated to reduce the cost of material inputs expended in the production of a given output. Its mode of operative principle is that, only a small percentage of the parts used caused the greater material costs.

There are three categories of material used in the production as outline by (Armitage &Nicholas, 2012) materials most often used in Production; Materials second most often used in production; Materials least often used in production. Efforts to find chapter distributors less expensive replacement items and many others are encountered on the "A" group.

The ABC plan concentrates on important items and is also known as control by importance and exception (C.I.E). The research is for the least cost material which consumes some time and financial resources for any of the three categories. However, since most material cost are for category "A" it showed that all the time available for trying to reduce material cost be spend in searching for the least material sources, cost economic will be achieved if amount of time is spent on each of the three categories.

Onuoha (2012) identified certain factors affecting the profitability of business organization. These factors include the following: Firms are normally in business to make profit. However, the performance of business is influence by economic conditions. An economy passing through depression, recession, recovery and boom economy influences the operations of the firm; Introduction of new method of production technology helps to reduce unit cost, facilitating production and increase profitability of the organization; Possession of certain management skill is necessary for business success in most cases. An estate manager will plan and forecast future business activities in the light of any contingency. The remedy as (Onuoha, 2012) rightly pointed out is "a Continuous training and development programs for entrepreneurs and their employees"

The demand for the product of business determines the survival of the company. Increase in demand when supply is constant causes an increase in price. Increase price result to high profit. No business is conducted in such a manner that is considered unimportant. Robert (2010) asserts that for a business that consistently fails to make profit, it will sooner or later cease to exist. According to Siddiqi (2015) a feeling for profit must be the need by all managers in the organization if the company must be successful. A business whose individual members have no senses of profit responsibility is a depressing sight. According to (Kontz 2008; Mboho, 2010), some of the roles performed by profit in an organization include: Ensuring survival of the company as well as speeding up the growth rate and expansion of the business; Profit is used as a measure of the level of success of an organization as against other similar firms; Profit helps the organization to plan

adequately; Profit serves as an incentive to workers; Profit as a means of management control. From the above points, we can see that invariably, business decisions are profit decisions.

Kontz (2008) states that profit control is a management technique as well as a control technique. The reason is that profit control involves the analysis of actual performance against the planned and the authority to take corrective action, all of which fall within the armpit of the business manager. It has been noted that profit is indispensable for the survival and growth of a business. In the words of (Siddiqi, 2015) "a company that fails to make adequate profit will die/fold off because of the shareholder's dissatisfaction or because the company cannot generate fund for growth and corporate renewal on which every company depends on. Business organizations can increase their profit and reduce their cost without fraud or deception.

In Nigeria, different institutions have made efforts to define small and medium –sized enterprises before 1992. For instance, in its credit guidelines to banks in 1991, the Central Bank of Nigeria defined a small-scale enterprise as a business whose capital investment (including land and working capital did not exceed N5 million or whose turnover was not more than N25million annually. In a similar vein, the Centre for Industrial Research and Development (CIRD) at the Obafemi Awolowo University, Ile-Ife in 1972, defined a small –scale enterprises as one with not more than 50 full-time employees (Onuoha, 2012; National Bureau of Statistics, 2016). On its part, the National Economic Reconstruction Fund (NERFUND) in 1993 described an enterprise to be small scale, if its fixed assets (excluding land) were not in excess of N10 million. In 1992, however, the National Council on Industry (NCI) stream lined these definitions, which were further revised in 1996. The National Council on Industry in 1996 stated that, a cottage industry is any enterprise with total cost (including working capital but excluding cost of land) not more than N1 million with labor size of not more than 10 workers. The NCI went on to say that, small scale enterprise is any enterprise with total cost (excluding working cost of land) above N1million, but not exceeding N40 million with labor size of between 11 and 35 workers (Lubben, 2008). Then, medium scale is any enterprise with total cost (including working capital but excluding cost of land) above N40 million but not exceeding N150 million with labor size of between 36 and 100 workers. Furthermore, in the context of the recent Bankers Committee Initiative on the funding of Small and Medium Scale Enterprises, SMEs are defined as any enterprise with a maximum assets base of N200 million (excluding land and working capital) and workforce of between 10 and 300.

According to Bringham (2015) the definition given to small and medium scale enterprises varies from one country to the other depending on the yardstick considered best suitable to promote the sub-sector in each country. Collins and Moore (2016) noted that in countries like United States of America, Britain, Canada, Small and Medium Scale Enterprises are defined in terms of annual turnover and the numbers of paid employees. For instance, in Britain, SMEs are enterprises with an annual turnover of £2m or less with fewer than 200 paid employees. While in Japan, SMEs are defined according to the type of enterprises; Enterprise with manufacturing output such as those with $100 million as paid–up capital and 300 employees, while those in wholesale trade should have $30 million paid-up capital and 100 employees (Chattered Institute of Management Accountant, 2015).

Anand, Sahay, and Saha (2019) define cost behavior as the study of the ways in which costs vary or do not vary with the level of activity in an organization. They described the level of activity as the amount of work done or the number of events that have occurred. Drury (2005) defines cost as expenses, which have been consumed in earning revenue. The term "variable" fixed and semi-variable have been traditionally used in the management accounting literature to describe how costs react to change in activity level. Short-term variable costs vary in direct proportion to the volume of activity that is, doubling the level of activity double the total variable costs. Consequently, total variable costs are linear and unit variable cost is constant (Ango, 2018). Ayoade (2016), pointed out that a fixed cost remains unchanged in total for a given time period despite wide changes in the related level of total activity or volume. Bathy (2010) added that costs are defined as variable or fixed with respect to a specific cost object and for a given time.

Berliner and Brimson (2008) reported that over a sufficiently long period of time, virtually, all costs are variable. During such a long period of time, contraction in demand will be accompanied by reductions in

virtually all categories of costs. For example, senior managers can be relieved of their jobs, machinery may not be replaced and buildings and land may be sold. Similarly, large expansions in activity will eventually cause all categories of costs being incurred by enterprise to increase. Step fixed costs are fixed within specific levels of activity within a given time period. Many items of cost are fixed costs in nature within certain levels of activity i.e. relevance range exists (Bringham, 2015; Collins & Moore, 2016). Step fixed costs are actually increased or decreased by a constant amount at various activity levels. Semi-variable costs include both fixed and variable components. The cost of maintenance is a semi-variable cost consisting of planned maintenance that is undertaken whatever the level of activity, and variable element that is directly related to the level of activity (Drucker, 2009; Drury, 2014).

George (2020) defined a controllable cost as any cost that is primarily subject to the influence of a given responsibility center manager for a given time period. The allocation of costs to products is in-appropriate for cost control, since the manufacture of a product may consist of different operations, all of which are the responsibility of different individual. The product cost will not therefore pinpoint costs to area of responsibility, to overcome this problem, costs and revenue must be traced to individual who are responsible for their incurrence. This system is known as 'Responsibility Accounting'. The centers identified are: (i) a cost center where managers are responsible for the expenses that are under their control, (ii) a profit center where managers are accountable for sales revenue and expenses e.g. selling and production department of a company, and (iii) an investment center where managers are normally accountable for sales, revenue and expenses, and also responsible for some capital investment decisions and able to influence the size of the investment (Hansen, 2019).

Harper (2010) asserted that the manager of the responsibility center should classify costs and revenue allocated to responsibility centers according to whether or not they are controllable or non-controllable. Hazel and Raid (2007) asserted that all costs are controllable at some management level. For example, top management has authority to dispose of facilities and increase or decrease the number of managers employed. However, not all costs can be controlled at lower management levels, so there is need for costs to be classified into controllable and non-controllable categories in the performance reports that the accountant prepares for each responsibility center. If costs were not classified this way, it would be difficult to evaluate a manager's performance and in addition; managers may lose interest in cost control if they found that their performance was judged on items that were outside their control. Horngren (2009) argued that non-controllable costs may be controllable at a higher level of responsibility. For example, a responsibility center manager may have no control over the number of supervisors employed in his department, but his superior may make this decision. Hence the supervision costs will be a non-controllable cost on the responsibility manager's performance report, but it will be a controllable cost on his superior performance report (Johnson, 2003; Iyahen, 2015).

Khan (2000) noted that this concept originated from Japanese words Kai, meaning 'change' and Zen, meaning 'betterment'. It is otherwise called 'continuous improvement'. Kaizen is thus, a continuous process of improvement carried out by the person who is doing the job in the day-to-day workplace. It involves everyone, managers and worker alike, for ongoing improvements. The philosophy emphasizes continuous improvement in our ways of life, social life and home life. This technique has made tremendous changes in management policies not only in Japan, but all over the word (Kaplan, & Atkinson, 2008). Blocher, Chen and Lin (1999), define Kaizen costing technique as the application of continuous improvement specifically to reduce costs; it focuses on making production and service delivery processes more efficient. Kaizen costing is used for making improvement to a process through small incremental amounts, rather than through large innovations. Unlike target costing, Kaizen costing is applied during the production stage of the product life cycle (Target cost is applied during the design stage). Adeniji (2011), asserted that Kaizen costing is the process of continuous improvement, encouraging constant reductions by tightening the 'standard'. The cost reduction objective is to set for each process, and then adopt value analysis and Value engineering to achieve the set objective. With target costing, the focus is on the product, and cost reductions are achieved primarily through product design. In contrast, Kaizen costing focuses on the production process and cost reductions are

achieved primarily through the increased efficiency of the production process. The aim of Kaizen costing is to reduce the cost of components by a pre- specified amount. (Womack, James & Jones Daniel, 2013), They concluded by saying that Kaizen costing relies extensively on employee empowerment as employees are assumed to have an in-depth knowledge on how to go about the improvement of production processes as they are seen to be the closest to the manufacturing processes and customers, which invariably gives them insight towards cost reduction.

Population, Sample Size, and Sampling Technique

The population of the research focuses on small manufacturing firms located across Ekiti and Ondo States in Nigeria. We selected these businesses because they help drive the Nigerian economy and can show us how cost-cutting strategies affect their profits.

The sample size for this study is determined using the statistical formula provided by the National Education Association (NEA):

$$s = \frac{x^2\ NP(1 - P)}{d^2(N - 1) + x^2\ P(1 - P)}$$

Select the Chi-square value from its table at one degree of freedom and the preferred confidence level (to achieve 95% confidence select 3.84). We use 0.05 as the population proportion to find the highest possible sample size. For 95% confidence we accept up to 0.05 as the limit for our tolerable error. degree of freedom for the desired confidence level (e.g., 3.84 for 95%)

Where:

s = required sample size

x^2 = table value of Chi-square at one degree of freedom for the desired confidence level (e.g., 3.84 for 95%)

N = population size

P = population proportion (assumed to be 0.05 for maximum sample size)

d = margin of error permissible, expressed as 0.05 for 95% confidence level

This study follow a purposive sampling method where we select small manufacturing enterprises that exist in targeted regions. The sampling process involves two stages:

a. Selection of Enterprises: To identify our sample we will use industrial directories and business records from local governments in Ekiti and Ondo States

b. Selection of Respondents: Our study targets business leaders, cost accountants, and executive managers who oversee costs and profitability matters within these enterprises.

Sources and Data Collection Technique

The study will utilize primary data collected through a structured questionnaire. Questionnaires will be distributed to 200 respondents across selected small-scale manufacturing enterprises to gather relevant data. The questionnaire distribution will be proportionally allocated based on the size and number of enterprises in each state.

Questionnaire Distribution Table

Cadre	Number of Enterprises	Sample of Respondents
Operations Managers	50	50
Cost Accountants	80	80
Senior Executives	70	70
Total	**200**	**200**

Research Instruments

The research instrument for this study is a structured questionnaire, designed to collect data on:

a. **Demographic Characteristics:** Age, gender, and years of experience of respondents.
b. **Cost Reduction Methods:** Questions on the application of cost control techniques, activity-based costing, and lean manufacturing.
c. **Profitability Indicators:** Questions focusing on Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM).

The questionnaire is based on a five-point Likert scale:

Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD).

Model Specification

The following model will be used to assess the relationship between cost reduction methods and profitability:

Profitability = β_0 + β_1 (Cost Control) + β_2 (Technological Investment) +β_3 (Supply Chain Optimization) + β_4 (Economies Of Scale) + ϵ

Where:

a. **Profitability:** Dependent variable measured using ROA, ROE, and NPM.
b. **Cost Control, Technological Investment, Supply Chain Optimization, Economies of Scale:** Independent variables.
c. **ϵ:** Error term.

Data Analysis Techniques

Both descriptive and inferential statistical techniques will be used:

1. **Descriptive Analysis:** Mean, median, standard deviation, and frequency tables to summarize the data.
2. **Inferential Analysis:** Regression Analysis to assess the relationship between cost reduction methods and profitability.

Statistical analysis will be conducted using SPSS to ensure accuracy and reliability. The findings will help identify key cost reduction methods that significantly impact the profitability of small-scale manufacturing enterprises in Nigeria.

DATA ANALYSIS AND INTERPRETATION

Table 4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Does your organization implement effective cost reduction strategies?	200	1.0	5.0	4.580	.5524	.305	-1.586	.172	6.801	.342
Are cost control methods like activity-based costing and budgetary control widely adopted in your organization?	200	2.0	5.0	4.485	.6178	.382	-.911	.172	.469	.342
Does management regularly review cost reduction measures to ensure their effectiveness?	200	1.0	5.0	4.175	1.1537	1.331	-1.775	.172	2.491	.342
Is technology effectively utilized in your organization for monitoring and controlling costs?	200	3.0	5.0	4.815	.4816	.232	-2.641	.172	6.224	.342
Is resistance to change among staff a major challenge in implementing cost reduction methods?	200	1.0	5.0	3.710	1.3913	1.936	-.588	.172	-.955	.342
Do you think cost reduction methods are essential for achieving financial sustainability in small-scale manufacturing enterprises?	200	1.0	5.0	4.010	1.2877	1.658	-1.146	.172	.030	.342
Do external factors like government policies and inflation significantly affect cost reduction efforts in your organization?	200	1.0	5.0	3.970	1.3447	1.808	-1.047	.172	-.331	.342
Has training on cost management practices improved staff efficiency in implementing cost reduction measures?	200	2.0	5.0	4.020	.4804	.231	-1.592	.172	8.691	.342
Has your organization successfully reduced overhead costs through effective cost management?	200	2.0	5.0	3.955	.4942	.244	-1.616	.172	6.811	.342

Do you believe the greatest benefit of cost reduction methods is the enhancement of operational efficiency?	200	2.0	5.0	3.850	.5468	.299	-2.873	.172	7.401	.342
Has your organization's profitability improved as a result of cost reduction strategies?	200	1.0	5.0	3.995	1.2936	1.673	-1.116	.172	-.051	.342
Do you believe there is a direct relationship between cost reduction strategies and the organization's profitability?	200	2.0	5.0	4.465	.6170	.381	-.838	.172	.368	.342
Are the profitability indicators you track (e.g., ROI, NPM) significantly influenced by cost control measures?	200	1.0	5.0	4.085	1.2146	1.475	-1.609	.172	1.713	.342
Have cost reduction strategies enhanced your organization's market competitiveness?	200	2.0	5.0	4.790	.5360	.287	-2.706	.172	7.085	.342
Has improved resource allocation through cost management increased profit margins in your organization?	200	1.0	5.0	3.685	1.3984	1.956	-.548	.172	-1.020	.342
Valid N (listwise)	200									

Descriptive statistics were generated on the effect of cost reduction methods on the profitability of Small Scale Manufacturing Enterprises in Nigeria and the result is presented in table 4.1. The result that the mean score for the analysis of the question 'Do your organization implement effective cost reduction strategy?', lies around 4.58 shows that most respondents are strongly agree that their organization implement effective cost reduction strategies. The responses are clustered around mean with standard deviation of 0.5524 and also with variance value of 0.305 which imply that response is highly agreed and consistent. This negative skew indicates that most of the respondents chose higher agreement levels (e.g., "Agree," Strongly Agree"), thus revealing a negative skew. In addition, the kurtosis of 6.801 indicates a leptokurtic distribution which indicates concentration of responses close to the mean and small number of extreme values. Overall, these findings indicate that respondents are generally in agreement with that these strategies are efficiently implemented by organizations across a wide range.

Are cost control methods like activity based costing and budgetary control widely adopted in your organization?" Question analysis show that a mean score of 4.485 indicate that most of the respondents generally agree in the adoption of these cost control methods in their organizations. The standard deviation of 0.618 and variance of 0.382 indicating relatively low variability indicated that most of the responses were very close to the mean. Skewness of -0.911 implies moderate negative skew which implies that most of the responses leaned towards agreement. A distribution slightly peaked relative to a normal distribution can be inferred from the kurtosis value of 0.469. Overall, the results show a positive view of the adoption of cost control methods such as activity based costing and budgetary control by the respondents' organizations and a high consensus among the participants.

Analysis of response for the question "Management regularly reviews the cost reduction measures to confirm their effectiveness?" result is 4.175 which indicates the respondents are on an average agreement that management regularly review cost reduction measures. A moderate variability is indicated by the standard deviation of 1.1537 and variance of 1.331, with responses somewhat spread out about the mean. A negative skew value of -1.775 indicates a strong positive skew, most respondents lean towards high agreement level. With kurtosis having a value of 2. 491 which implies that the responses clustered around certain points, the response distribution is more peaked that a normal distribution. The findings appear overall to be positive regarding management's regular review of cost reduction measure but there is some variability in respondents' opinions.

A high mean score of '4.815' was obtained for the question 'Is technology effectively used in your organization for monitoring and controlling costs?' meaning that respondent strongly agree that technology is well used for cost monitoring and control. With a standard deviation of 0.4816 and variance of 0.232 the responses have low variability with most respondents reporting a similar opinion. The skewness value of -2.641 shows that the distribution is highly negative skewed (i.e. most responses were found on the high end agreement distribution). 6.224 kurtosis of responses, indicates a leptokurtic distribution; responses are tightly clustered around the mean. The results show a very strong consensus among respondents that technology is well deployed for cost control in their organizations.

A mean score of 3.71 has been obtained in connection with the question 'Is resistance to change among staff a major challenge in implementing of cost reduction methods?' i.e. respondents accept that resistance to change among staff a major challenge but moderately. The standard deviation of 1.3913 with a variance of 1.936 indicates a very high responding variability, which means that there are many different opinions from the respondents. A moderately negative skew (value of -0.588) indicates that there was some leaning towards the agreement responses. This means that responses are spread out, it is a platykurtic distribution so kurtosis = -0.955. The results indicate that resistance to change is a significant challenge but its impact ranges by respondent.

The question: 'Do you think that the cost reduction methods are essential to realize financial sustainability in small size manufacturing firm?' obtained a mean of 4.01 implying that respondents agree generally to the importance of cost reduction methods towards financial sustainability. The variability in responses has a moderate level, std = 1.2877, var = 1.658, which show that the perspectives of the respondents were differed. A negatively skewed distribution, or a higher concentration of responses leaned to agreement, is suggested by the skewness value of -1.146. A distribution approximately similar to normal is indicated by the kurtosis value of 0.03. These results suggest that there is strong agreement among most respondents of the importance of cost reduction methods, but some disagreement or neutrality.

The question, "Do external factors like government policies and inflation significantly affect cost reduction efforts in your organization?", has a mean score of 3.97, indicating that respondents generally agree that external factors influence cost reduction efforts, though the agreement is not unanimous. The standard deviation of 1.3447 and variance of 1.808 reflect a moderate level of variability in responses, suggesting diverse opinions among respondents. The skewness value of -1.047 indicates a negatively skewed distribution, with more responses leaning toward agreement. The kurtosis value of -0.331 suggests a relatively flat distribution compared to a normal curve. These results highlight that while external factors are considered significant by many, there is a notable variation in how respondents perceive their impact.

The question, "Has training on cost management practices improved staff efficiency in implementing cost reduction measures?", has a mean score of 4.02, indicating that respondents generally agree that training has positively impacted staff efficiency in cost management. The low standard deviation of 0.4804 and variance of 0.231 suggest a high level of consensus among respondents. The skewness value of -1.592 reflects a negatively skewed distribution, meaning most responses are concentrated in the higher agreement categories. The kurtosis value of 8.691 indicates a leptokurtic distribution, signifying that responses are tightly clustered

around the mean. These findings strongly suggest that training on cost management practices is perceived as highly effective in improving staff efficiency.

With respect to "Has your organization successfully reduced overhead costs through effective cost management?" respondents generally agree that their organizations have successfully reduced overhead costs through effective cost management and the question has a mean score of 3.96. A high level of agreement among respondents is indicated by the standard deviation of 0.4942 and variance of 0.244. A negatively skewed distribution (skewness = -1.616) with responses concentrated in the higher agreement categories is indicated by the skewness value of -1.616. The imagery (kurtosis = 6.811) is a leptokurtic distribution, indicating the responses are clustered tightly around the mean. This indicates that overhead cost reduction due to good cost management practices are strongly perceived as successful.

This question asks whether people believe the most important benefit of costs reduction methods is the improvement of operational efficiency and it obtains a mean score of 3. Spread in responses are relatively low with standard deviation of 0.5468 and variance of 0.299 indicating consistent opinions. The value of the skewness of -2.873 is the sign of the strong negative skew which indicates that most respondents were clustered in the higher agreement levels. A leptokurtic distribution with kurtosis of 7.401, reflects the fact that responses are concentrated near the mean. These findings point out that respondents know very well that operational efficiency is the key outcome of cost reduction methods.

With a mean score of 3.995 on the question: Has your organization's profitability been improved through your cost reduction strategies?, respondents generally agree that your cost reduction strategies have increased its profitability. A moderate variability of responses is given by variance of 1.673 and standard deviation of 1.2936, indicating that there are different opinions among participants. This value of -1.116 specifies a negative skew on skew where a majority of respondents were agreeing. The kurtosis value of -0.051 eliminates the definition of near normal distribution of responses. Overall, results indicate ambivalence in how much respondents believe that reduction of costs will result in increased profitability.

Mean score of the question "Do you think there is a direct relation between cost reduction strategies and the organization's profitability?" is 4.465, which shows that the respondents have strong agreement on the positive relation between cost reduction and profitability. A relatively low variability of responses is indicated by the standard deviation of 0.617 and variance of 0.381, and indicates a consistent perception among individuals. The value if −0.838 found in skewness shows a moderate negative skew and therefore very few respondents rated the agreement on the scale more to the lower end. An offset of the distribution slightly flatter than normal is indicated by the kurtosis value of 0.368. The implication of these findings is that the vast majority of the respondents are aware of and strongly believe there is a direct relation between cost reduction strategies and profitability improvement.

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Regression Analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.889[a]	.791	.790	.3657	.791	748.748	1	198	.000	.627
a. Predictors: (Constant), COST REDUCTION METHODS										
b. Dependent Variable: PROFITABILITY										

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	100.152	1	100.152	748.748	.000[b]
	Residual	26.484	198	.134		
	Total	126.637	199			
a. Dependent Variable: PROFITABILITY						
b. Predictors: (Constant), COST REDUCTION METHODS						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.791	.257		-10.861	.000
	COST REDUCTION METHODS	1.684	.062	.889	27.363	.000
a. Dependent Variable: PROFITABILITY						

The results of the regression study, which examined the effect of Cost Reduction Methods on the Profitability of Small-Scale Manufacturing Enterprises in Nigeria using a Case of Selected Small-Scale Businesses in Ekiti and Ondo States. The coefficient of cost reduction methods of 1.684 is positive which indicates an impact on profitability. Also, the p-value of the coefficient at 0.000 is less than the confidence level of 5% which implies that the positive effect of the cost reduction techniques is significant on the profitability of the Selected Small-Scale Businesses in Ekiti and Ondo States. The R-squared value of 0.791 infers that all the identified factors account for 79.1% of the diverse Cost Reduction Methods' ability to impact Profitability of Small-Scale Manufacturing Enterprises in Nigeria, but that 20.9% of the variation can be explained by other factors that were not taken into account in the regression model, or what is known as the error term.

The F-statistic indicates the significance of the independent variables used (Cost Reduction Methods) on the dependent variable (profitability). From the result, the F-statistic diagnosing the fitness of the model shows that all the independent variables are statistically significant (F=748.748) for the model at 0.000 less than the confidence level of 5% ($000^b < 0.05$).

SUMMARY OF FINDINGS

This study investigated the effect of cost reduction methods on the profitability of small-scale manufacturing enterprises in Nigeria, focusing on selected businesses in Ekiti and Ondo States. Below are the key findings based on the descriptive and regression analyses:

The findings indicate that most respondents strongly agree that their organizations implement effective cost reduction strategies, with a mean score of 4.58 and low variability in responses. Similarly, cost control methods such as activity-based costing and budgetary control are widely adopted (mean = 4.485), and management regularly reviews these measures for effectiveness (mean = 4.175). Technology utilization for cost monitoring is highly effective (mean = 4.815), while resistance to change poses a moderate challenge to implementing these strategies (mean = 3.71). Respondents strongly believe that cost reduction methods are essential for achieving financial sustainability (mean = 4.01) and enhancing market competitiveness (mean = 4.79). Additionally, profitability indicators such as ROI and NPM are significantly influenced by cost control measures (mean = 4.085).

Cost reduction strategies have positively influenced profitability, as reflected in a mean score of 3.995. Respondents agree that resource allocation through cost management has increased profit margins, though there is some variability in responses. These findings suggest that adopting cost reduction methods enhances operational efficiency and market competitiveness, contributing to overall profitability.

The regression results reveal a significant positive effect of cost reduction methods on profitability. The coefficient of 1.684 indicates that an increase in cost reduction strategies leads to improved profitability. The p-value of 0.000 confirms the significance of this effect. An R-squared value of 0.791 implies that 79.1% of the variations in profitability can be explained by cost reduction methods, while 20.9% are attributed to other factors not captured in the model. The F-statistic of 748.748 further validates the model's fitness and statistical significance at a 5% confidence level.

Resistance to change among staff remains a notable challenge, though training on cost management practices has significantly improved staff efficiency (mean = 4.02). External factors such as government policies and inflation moderately affect cost reduction efforts (mean = 3.97), highlighting the need for adaptive strategies.

Conclusion of the Findings

This study investigated the effect of cost reduction methods on the profitability of small-scale manufacturing enterprises in Nigeria, focusing on selected small-scale businesses in Ekiti and Ondo States. The findings revealed that effective cost reduction strategies are widely implemented across the organizations surveyed, with a high level of agreement among respondents about their importance and effectiveness. Cost control methods such as activity-based costing and budgetary controls were identified as widely adopted practices, reflecting a strong consensus on their value in driving profitability.

The results also showed that management regularly reviews cost reduction measures, demonstrating a proactive approach to maintaining their relevance and effectiveness. Technology was identified as a critical enabler for monitoring and controlling costs, with respondents strongly agreeing on its effectiveness in improving operational efficiency. However, resistance to change among staff emerged as a notable challenge, indicating the need for change management strategies to enhance the implementation of cost reduction methods.

The regression analysis further confirmed the significant positive impact of cost reduction strategies on profitability, with an R-squared value of 79.1%, indicating that these methods account for a substantial portion of the variance in profitability among the enterprises studied. Additionally, profitability indicators and market competitiveness were shown to be significantly influenced by cost control measures, underscoring the strategic role of cost management in enhancing business performance.

In conclusion, the study underscores the critical importance of cost reduction strategies as essential tools for achieving financial sustainability and competitiveness in small-scale manufacturing enterprises. The findings highlight the need for continuous training, effective resource allocation, and addressing external factors to optimize the impact of cost reduction methods.

Recommendations

Therefore, the study recommended the below:

1. Provide regular training for employees on cost reduction techniques and the use of technology to improve efficiency.
2. Implement modern cost control methods, such as activity-based costing, to optimize resource allocation.
3. Invest in technological tools to automate processes and enhance operational efficiency.
4. Develop strategies to manage resistance to change and ensure smooth adoption of cost reduction measures.
5. Conduct periodic reviews of cost control methods to maintain effectiveness and adapt to changing business conditions.
6. Engage stakeholders in the design and implementation of cost reduction strategies for better outcomes.
7. Monitor external economic factors and adjust cost control measures to mitigate risks and leverage opportunities.

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