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EFFECT OF ACTIVITY BASED COSTING ON FINANCIAL PERFORMANCE OF CEMENT MANUFACTURING INDUSTRY IN KENYA

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ABSTRACT

In East Africa, Kenya is leading in both cement production and consumption. There are around 8 cement companies in Kenya. Three of these companies are listed at the Nairobi security exchange. Cement companies that are listed at NSE are Bamburi cement, ARM cement limited, East Africa Portland cement limited. Private companies are Mombasa cement, National cement, and Savannah cement. Competition amongst cement manufacturing is getting tough due to higher demand and supply in the real estate industry therefore companies are much interested in assessing financial positions to get or retain higher market share. This study focused on the effect of activity-based costing on financial performance of manufacturing industry in Kenya. The study used both qualitative and quantitative research method. The target population of the study was100 middle level management. The study used primary source of data that was collected through questionnaire that consisted of structured questions. Quantitative data was collected analyzed through descriptive analysis and SPPSS presentations was presented through percentages, means, standard deviations, and frequencies. The information was displayed by use of frequency tables. The study findings revealed that financial performance of manufacturing industry in Kenya was significantly related with activity-based costing. The activity-based costing had positive influence on performance. The study concluded that activity-based Costing (ABC) have positive influence on cement manufacturing firms as it enhances cost reduction which portent a high increase in profit and overall performance of an organisation.

Key Words: *Activity-Based Costing, Cement Manufacturing Companies in Kenya*

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INTRODUCTION

Activity-based costing (ABC) is an accounting methodology that identifies activities in an organization and assigns the cost and resources to all products and services according to their relative consumption (Isa & Thye, 2006). According to Seal, Garrison and Noreen (2006), ABC assigns more indirect costs (overhead costs) into direct costs compared to conventional costing. ABC recognizes that in modern businesses, most of the costs are determined by the number of activities related to a product or service (Seal et. al. 2006). The key to effective cost control may therefore lie in optimizing the efficiency of the activities that relate to a product or a service. Rehman (2010), while analyzing MA techniques in Pakistani manufacturing firms indicated that utilization of ABC is reportedly used by about 50% of the firms. Of those that reported high usage of variable costing, textile and cement sector comprised 68%. It was found that the profitable firms using two management accounting techniques; target costing and activity based management had significant impact on profitability at 6.4% and 8.2%, respectively.

ABC improves coordination among different units and departments within a company. Unit costs are calculated more accurately and do change according to seasonal fluctuations since they are not calculated by use of a single cost driver related to sales/production volume such as direct labor/machine hours (Saygili, 2007). According to Salawu, Oyesola and Tajudeen (2012), ABC provides more accurate cost data needed to make appropriate strategic decisions about product mix, sourcing, pricing, process improvement, and evaluation of business process performance. These claims have led many firms to adopt ABC systems (Salawu et al., 2012). Schoute (2011) examined the associations between product diversity, usage of advanced manufacturing technologies and activity-based costing adoption. According to Schoute (2011), product diversity, on average, is positively related to both activity-based costing adoption and activity-based costing ABC use, and also that these relationships are indeed inverted U-shaped.

There are several ways to solve math issues, including cost models. A cost model's guiding principle is that each company's costs must eventually be allocated or distributed among cost bearers (typically products). All produced goods, commodities, and services can be effectively modeled, and this can give purchasing organizations an understanding of suppliers' costs. A seller's direct material, direct labor, indirect cost, cost of sales, general and administrative (SG&A), cost of research and development (R&D), and profit can be fairly reflected in models created from industry data, financial journals, and government databases (Sower, 2008).

For the building industry in Kenya and Uganda, Bamburi Cement Limited produces and distributes building material that is cement. The business exports its goods to Mayotle, Uganda, and Reunion. Powermax, Powercrete, Nguvu, Supaset, Multipurpose, Powerplus, Roadcem, and pre-cast concrete paving blocks sold with the profiling Bamburi Blox are among the brands available in its retail line. The business also provides pre-cast concrete paving blocks sold with the brand profile Bamburi Blox. In addition, the business offers ready-mix cement and precast molded cement solutions for drainage, edge restraints, fence, and walling. 20221 African financials

Kenyan investors are the sole owners of THE Savannah cement investment, which has a KES 10 billion estimated market value. Savannah Cement operates an eco-friendly cement grinding factory with the production ability of 2 million tons annually. The firm is made up of local investors that are devoted to operating east Africa's most eco-friendly and effective cement-manufacturing complex to world-class standards. Savannah cement is not only intended to make the best use of green technology, but is also focused on reinventing environmental management in the local cement sector. The factory is close to Nairobi, which accounts for 50% of Kenya's cement consumption. 20221 Savannah Cement.

The rapid rise of the Kenyan construction sector over the past ten years has been attributed to both the country's emphasis on major infrastructure projects and the country's enormous housing demand. Attracted by this expansion, additional cement producers have entered the Kenyan market, increasing the total number of the nation's leading cement producers to six(Mwangi, 2019).

Cement usage in the nation has increased this year as a result of the construction of large-scale public projects such the 27.1 km Nairobi expressway, project renovating James Gichuru-Riono passage, Kenol-Marua highway dualling project, national government affordable housing programme and the Nairobi Western Bypass. The Eldoret bypass, the Lamu port, and the Don do Kundu bypass in Mombasa are other construction projects(Rotich ,2002).

Within 2021's 5 months, infrastructural projects nationally have pushed the demand demand for cement up by 26.6%. The national bureau of statistics for Kenya reports that local cement consumption was 3.30 million tonnes from January to May, up from 2.60 million tonnes the previous year. As producers scrambled to meet the surging demand, production increased throughout the time, climbing 27.3% to 3.38 million tonnes from 2.65 million tonnes in the comparable period of 2020 (, Mutegi ,2021).

Problem Statement

In the second quarter of 2018, Kenya's consumption of cement decreased by 1.4 million tonnes, reflecting sluggish activity in the real estate sector. Cement consumption was 1.5 million tonnes in the first three months of this year, or 15.7% of total consumption. The volume of cement imports decreased by 15.7%, while that of cement clinker decreased by 8%, according to the Kenyan National Bureau of Statistics (KNBS). Similarly, according to KNBS, the amount of imports of building supplies including iron and steel bars and rods decreased by 4.9 percent during the quarter under consideration. Despite the ongoing standard gauge Railway (SGR) building project in 2016, the decline in cement use started in (Mbogo, 2018). Kenyan cement producers are having a difficult time as a combination of weak demand for the building material and an influx of cheaper imports from Asia continue to hurt their bottom line. Despite the fact that the majority of local cement companies are not required to disclose their financial statements because they are not required to be listed on the Nairobi Securities Exchange, the poor performance of listed companies has painted a bleak picture of the important economic subsector. (Based in Tel Aviv; Coast, 2018)

Competitive strategy is a crucial problem for top cement businesses in Kenya. Kenya's top cement producers include East African Portland Cement, Bamburi Cement, and Rhino Cement from Athi River Mining. These organizations have to battle for limited resources market and restricted clients for them to realize their mission or objectives (Wanyonyi, 2012). (Wanyonyi, 2012). Most studies had

Focused costing from the perspective of cost component, liquidity factor, cost design, hence they under looked factors such as cost ABC costing, hence this drew the authors' attention on the gap left behind consequently this study bridged the gap by studying effect of activity-based costing on financial performance of cement manufacturing business. The study was conducted through comprehensive examination of how ABC Costing influence on performance of manufacturing industry through analysis of cement manufacturing industries.

Objective of the Study

This study's goal was to evaluate effect of Activity based costing on financial performance of cement manufacturing industry in Kenya. The study tested the following hypothesis;

- $H_{0:}$ Activity based costing has no significant influence on the financial performance of cement manufacturing industry in Kenya.
- H_1: Activity based costing has a significant impact on the financial performance of cement manufacturing industry in Kenya.

LITERATURE REVIEW

Theoretical Literature Review

Theory of Cost

According to economists, cost is what a person or business must forgo in order to obtain something else. Opening a factory to produce items necessitates a financial outlay, and once the plant owner has paid money to make goods, that money is no longer available for other uses. Cost production includes things like production facilities, equipment used in the production process, and plant employees.

Cost theory is a method for understanding production expenditures that presents a firm with an opportunity to have an output generating higher turnovers with reduced costs 2019 (Thompson)

Costs have a significant role in company decision-making. Pricing starts with the cost of manufacture. It assists managers in making wise decisions regarding pricing, whether to place a certain order for inputs or not, whether to drop or add a product to an already existing product line, and other matters. Costs are the financial outlays a company makes during the producing process. (2021, Chandi).

The costs incurred by an organization depend on how many products or services are produced. There is fluctuation of variable in relation to a firm's production level. There is the possibility of variable expenditure rising when the production level rises. On the other side, variable expenses will increase if volume decreases. (james, 2021).

Power is required for the cement. 30% of the price of cement is made up of power and utility costs. As a result, fuel and power costs significantly affect the company's operational expenses. The kiln is fired using coal. Diesel, coal, pet coke, and lignite are among the fuel types utilized in the kiln to crush the clinker. Depending on the heat treatment procedure being utilized, cement factories need varying amounts of power. Per pound of clinker produced, an average of 60 to 70 kilowatt hours (KWH) of energy are used. (PABON, 2014).

Empirical Review of ABC Costing System

Activity Based Costing is a classification system that allocates time and money in cost management and allows firms to deal with multiple product lines and multitude of stockkeeping units. Mohan and Patil (2003), ABC is a costing model which is used to measure activity costs, results, resources and cost objects. Pavlatos and Paggios (2008) contend that ABC is an essential action method that follows the Pareto Principle concerning an organization's arrangement of stock (Ramanathan, 2006). According to Flores and Clay (2012), activity based approaches reinforce a horizontal process view of the organization cutting across departmental borders. The process model facilitates the integration of budgets with other management initiatives, such as performance measurement systems focused on cause-effect or lead-lag relationship s (e.g. balanced scorecards).

Anand, Sahay and Subhashish (2004) in their study of cost management practices in India obtained responses from 53 CFOs in Indian corporations. The objective of their study was to capture the development in cost management practices such as accounting for overheads, applications of budgetary control and standard costing in corporate India. The 15 survey questionnaire also aimed to verify any significant difference in management motivation for the implementation and use of standard costing as a control tool between firms that use activities based cost management (ABCM) and firms using traditional costing systems. The study established that the firms are successful in capturing accurate cost and profit information from their ABC cost systems for value chain and supply chain analysis.

Salawu, Oyesola and Tajudeen (2012) did a survey of Activity Based Costing adoption among Manufacturing Companies in Nigeria. The study revealed that inability of the traditional cost systems to provide relevant cost was the most highly ranked reason in their decision to adopt ABC. The researchers found a positive association between the adoption of ABC and company characteristics (e.g. degree of customization, pressure of competition, business size, and proportion of overhead to total cost). However, none of the differences was found to be significant at 10% level. Isa and Thye (2006) examined the usage of management accounting practices in manufacturing firms in Malaysia. They also studied the relationship between product variety, complexity of production process, level of competition, company size, overhead expenses and usage of advanced management accounting practices.

This concept first appeared in the 80s as a means of tackling the limitations of the old cost systems with changes in technology and economy, specifically the imposition of arbitrary charges for indirect expenditures coming from errors in the imputation criteria. The ABC approach takes into account both goods that only consume activities and activities that use resources and result in expenditures. As a result, the products are a direct result of actions that were absolutely essential to manufacture them or a method that satisfied customer demands (Patricia Quesado & Rui Silva, 2020).

The ABC costing approach calculates the cost of resources utilized or spent in a certain process, which entails a series of tasks required to generate goods or services. Utilities are delegated to events in the initial stage, and the events are given to products in the second. Cooper and Kaplan contend that two reporting systems should coexist within the organization since this allocation is made in both circumstances through cost drivers (Cunha,2017).

The study by Mohamed (2018) reviews the literature on cost accounting techniques practiced by the manufacturing and service industry. It concludes that practically all tools that are appropriate for service firms are also suitable for manufacturing firms. Never the less, the most common techniques in manufacturing companies include Activity Based Costing (ABC), Just in Time (JIT), Life Cycle Costing, Target Costing, Kaizen costing and Throughput Accounting, while, ABC is the most commonly used tool in the Service sector. However, ABC, Budgetary, Control, Cost Volume Profit analysis, and standard costing are common to both the manufacturing and service industries.

Rahman et al., (2017) examines the extent of use of Cost and Management Accounting Practices in Bangladesh cement industry. A sample of 23 cement companies was selected and analyzed. A structured questionnaire was distributed among selected professionals in the accounts and finance department. The study proposed a conceptual framework and revealed that there are five dimensions for practicing Cost and Management Accounting in the manufacturing industry. In terms of information for decision-making dimension, Cost Volume Profit (CVP) analysis is the most practiced tool. The cement companies widely accept value chain analysis for strategic analysis.

Kocakülâh & Austill (2016) discusses the use and process of target costing for product development, cost management, and product planning. They use a case study of a poultry processing company manufacturing home meal replacements for sale through supermarkets. Findings infer target costing will enhance the product and manufacturing planning process to assure greater efficiency and profitability.

Shingjergji and Sulanjaku (2017) evaluated the results of applying SCM tools by Albanian business firms to identify the most popular and frequently used tools. Shingjergji and Sulanjaku referred to a wide range of literature, made interviews and distributed questionnaires. From their analysis, they found SCM is a familiar concept in Albania and the business firms successfully adapt its tools. According to the respondents the most used SCM tools were: benchmarking, strategic pricing, customer accounting, and target costing. Findings indicate that the Albanian business firms have been successfully adopting strategic cost management tools to improve their competitive advantage in the market.

Ganapaiah (2018) study analyzes Strategic Cost Management (SCM) practices adopted by SMEs in India and how these practices impact their business performance. From the review of the literature, it was concluded that adopting Strategic Cost Management tools would be helpful to overcome financial challenges, be cost effective and more competitive in the market. The research by Henri et al. (2016) provides evidence suggesting that executional cost management allows for the analysis of performance which influences structural cost management and the definition of cost structure. Their paper provides empirical results from 319 manufacturing firms supporting the impact of the tracking of environmental costs on financial performance in the context of strategic cost management. The results contribute to this stream of research by suggesting that although a direct link may occur between the design of cost systems and financial performance, one portion of the effect may be indirect through organizational actions. Thus, past conflicting results might be explained in part by the lack of attention devoted to structural cost management.

The study by El-Deeb (2017) introduces the strategic management accounting for hospitals. This accounting framework is used for following and analyzing a health facility's services, resources, and costs. It provides the means for both routine management control and its useful tool for examining costs in connection with productive efficiency. It is built around a cost centers orientation. It is designed primarily for hospitals, and it can be easily modified to suit any service organizations. The study conforms to (O' Connor & Martinsons 2016) that the traditional costing system cannot perform multiple activities. El-Deeb concludes that with the proper costing system (Marginal Costing, Full Absorption Costing, Standard Costing, and Activity-Based Costing) will result in accurate recognition of costs and profitability of hospital units. The findings showed that the application of SMA is enhancing the quality of the accounting information presented by the costing system, and the quality of the decision-making process in the healthcare industry.

The SMA can be easily modified to suit any service firm. El-Deeb (2017) is an empirical study that proposes the combination of both the intellectual capital concept (IC) (measured through difference between the market value and the book value of the company) and the balanced scorecard technique (BSC) to deal with measuring, reporting and strategically managing the intellectual capital in the Travel & Leisure businesses listed in the Egyptian stock exchange. The author makes an exploratory study by analyzing secondary data from annual reports. The author examines a sample of 13 Travel & Leisure firms listed in the EGX 30 to prove the relation between intellectual capital, IC disclosure in annual reports and the performance of the companies measured by ROA and ROE. Also, a questionnaire was distributed to test the usefulness of the proposed model of Intellectual Scorecard (ISC) on enhancing performance. The findings shed light on the rationality of the intellectual scorecard model constructs and assure greater efficiency and profitability in the Egyptian travel and leisure companies.

El-Deeb et al. (2017) argue that the Activity Based Costing (ABC) system has proved successful in both products and services firms. The authors propose using a new model through the application of the ABC approach that can be implemented in the purchasing department as one of the most dynamic departments in the service sector to optimize purchasing activities performance. The authors propose purchasing measures, targeting customers' loyalty ensuring the continuous flow of supplies. The authors distributed surveys to three hundred purchasing manager and staff through five-star hotels in the Greater Cairo region. Data obtained was analyzed using the Statistical Package for Social Sciences (SPSS). Findings infer that further research is necessary to establish the exact nature of the causal linkages between proposed performance measures and strategic intent in order to gain insights into practice elsewhere.

Njeri (2021) sought to determine the influence of cost management on performance of Agribusiness enterprises in Kenya. The study design is descriptive panel research design. Secondary data was used for analysis. The target population was four Agribusiness enterprises with a total population of one thousand two hundred and forty five (1,245) farmers registered as at December, 2018 by the Commissioner of cooperatives in Kenya comprising of Homabay, Bungoma, Busia and Siaya counties which also formed the study target units. Census sampling was used to select sample of the population. Secondary data over the ten year-period covering 2009-2018 was obtained. Data was collected using secondary data collection sheet and analyzed using multiple panel regression models. Limitations faced during data collection included high illiteracy levels amongst members. This was controlled by taking the officials through the areas of cost management to have them understand the concepts under enquiry. The study findings showed that cost management had significant influence on return on investment, a measure of financial performance of Agribusiness enterprises in Kenya and tests for significance also showed that the influence was statistically significant.

Şuteu and Bugnar (2018) aimed at identifying a method for making efficient the economic activity, starting from the optimum operating mode of the equipment, which has been the subject of a previous study. The results of the studies performed on Happy embroidery machine led us to the need to identify a method of cost calculation allowing a proper allocation of costs on the product. The method proposed to be used allows that all activities needed for making a product could be identified and the afferent expenses for their implementation can be calculated and predicted with a greater accuracy than by using traditional methods of cost measurement. The ABC (Activity Based Costing) method implies the calculation method and the cost analysis, but can also be seen as a tool to measure the company performance.

Etemadi, Kelifa and Sepasi (2018) investigated the effect of cost accounting changes on financial performance of manufacturing firms through the variable of pricing system by considering moderator effect of perceived environmental uncertainty. The data of the study have also been collected based on the information from 80 manufacturing firms accepted in Tehran Stock Exchange. To analyze the data in this study, partial least squares structural equation modeling (PLS-SEM) was used. The results show that the effect of cost accounting changes on financial performance is positive and significant. Also despite the negative effect of pricing system changes on financial performance, the total effect of cost accounting changes on financial performance was also positive and significant. The results also reveal that moderator effect of perceived environmental uncertainty on the effect of cost accounting changes and pricing system changes on financial performance is not significant.

Pokorna (2016) investigated the link between the use of ABC among corporations in the Czech Republic and improvement in corporate financial performance. The empirical survey was carried out among 548 Czech medium-sized and large companies from various economic sectors. Financial performance was measured by standardized Return on Assets from 2005 to 2011. The ABC expansion among enterprises in the Czech Republic is currently comparable with neighboring countries, although the extent of its use is lower. Surprising but statistically significant results show that businesses that use ABC have on average the same or even lower financial performance than businesses without ABC.

ABC shows the relationship between doing particular tasks and the demands those actions impose on the organization's resources. Managers may easily observe how certain commodities, buyers, infrastructure, distribution channels of locations generate income and consumption of resources. Managers can concentrate their attention and effort on enhancing activities with the support of the profitability pictures that the ABC analysis produces (Wegmann,2018) .

In order to have a determination of the commodity costs towards profitability evaluation, and expenditure regulation, businesses employ cost systems. For profitable operations, it's essential to make accurate product cost estimations. When a company estimates the accurate cost of the product, it can determine which products are profitable and which ones are not. (Jan, 2013).

In a variety of organizational and managerial contexts, costing information is used in making determinations, results evaluation and value inventory. A "one size fits all" view towards systems of costing is likely undependable since basically every business use a similar platform in meeting their goals. However, there is a wide range of traits and attributes across costing systems (Stefan , Reichelstein & Stephen Penman, 2019 **).**

As part of the theory of cost accounting and an aspect of management accounting, activity-based costing (ABC) could improve organizational performance because it provides information fundamental to managing organizational resources, managing costs, improving organizational processes, adding value and enabling strategic decision making (Langfield-Smith et al., 2018). Cagwin and Bouwman (2016) and Jankala and Silvola (2017) found no positive direct association between the extent of ABC use and return on investment (ROI). Maiga and Jacobs (2018) revealed that the extent of ABC in various functional areas had no significant positive relationship with profitability. Pokorna (2016) reported that adoption of ABC does not improve ROA relative to firms without ABC.

Al-Qudah and Al-Hroot(2018) sought to investigate and evaluate the effect of implementing the activity-based costing technique (ABC) to the profitability of the manufacturing companies in Jordan. The sample of this study includes 72 observations; these observations are six financial ratios based on the financial statements of 12 industrial companies in Jordan that implemented the ABC technique in the period 2000-2011. A 4-year average pre and post the implementation of the ABC technique is taken for all technique variables. The profitability ratios are the return on assets (ROA), return on investment ratio (ROI), return on equity (ROE), gross profit margin (GP), operating margin ratio (OM), and net profit margin ratios (ROS). Using a paired t-test in order to test the significance difference between the pre and post implementation of the ABC technique, the results indicate that four financial ratios, namely the OM, ROS, ROA, and ROE ratios increased and improved after the implementation of the ABC technique. The OM and ROA ratios recorded as the highest ratios for 58.33% of the companies in the sample, while the ROS and ROE ratios increased by 50% for the companies in the sample. Furthermore, the GP ratio indicates that most ratios decreased after the implementation of the ABC technique.

This system is responsible for tracking the growth of different events and indicates the exact cost on every activity for commodities. To increase the accuracy of the cost calculation product, the ABC system concept is employed as a tool. However, at the current rate of development, the ABC system is no longer restricted to the cost accounting account concentration to product cost computation. Factory overhead costs are now included in the scope of the activity ABC system. The ABC system has developed to the point where it represents a new mode of conducting business. 2016 (Pangemanan & Ramintang).

Presence of water points, oil fields distances, and the tonnes-kilometers indicated by product of the distance and weight form the leading five cost drivers based on scientific findings of (Pingxin, Fei, Dinghua, & Lin, 2010) investigation of "the choice of cost drivers in activity -based costing application at a Chinese oil well cementing company." Thus, the findings of these studies indicate that adopting the ABC approach and the product of weight and distance as the cost driver will increase the accuracy of fuel cost distribution among individual wells.

Conceptual Frame Work

Activity Based Costing	→	Financial Performance
▪ Overhead cost allocation ▪ Activity cost measure		▪ ROA ▪ ROI
Independent variable		**Dependent Variable**

Figure 1: Conceptual Framework

METHODOLOGY

This study used descriptive research design. The use of design was more crucial in this study because it looked at the effect by activity-based costing on the financial performance of the manufacturing sector using Bamburi cement as a case study. The target population was 100 respondents. The questionnaire was used in this study as data collection tool. The completed form was reviewed for accuracy and consistency before processing the results. With the aid of descriptive statistics and SPSS, quantitative data was examined and displayed as percentages, means, standard deviations, and frequencies. The data was presented visually via pie charts, bar graphs, par charts, and written text. The data that was qualitative in character or component of the data that was gathered from the open-ended questions was tested using content analysis.

FINDINGS AND DISCUSSION

Descriptive analysis

The independent (ABC costing) and dependent (Financial performance) variables of the study were presented in this section along with descriptive analysis results.

Financial Performance

The respondents to the survey were asked to indicate how much they agreed or disagreed with the assertions regarding financial performance. Table 1 below displayed the outcomes.

Table 1: Descriptive Statistics for Financial Performance

	N	Mean	Std. Deviation
There has been increase on the number of employees in the last five years	98	3.76	.83
We have opened new branches for our organization to serve customers better	98	4.61	.48
We have more tourist arrivals	98	2.59	1.12
We have an increase in profits in the past three years	98	3.85	.79
Our revenues have increased in the past three years	98	4.63	.69
Our destination image has attracted more clients in the last five years	98	4.37	.69
Valid N (list wise)	98		

Source: Research Data (2022)

According to the research in table 1, the majority of respondents with the highest mean scores—3.63 and 0.66, respectively—agreed that their destination's reputation has gained more customers during the past five years. Those who also concurred that the number of employees had increased during the past five years, with a mean of (3.42) and a standard deviation of (1.14). With a mean of (2.94) and a standard deviation of, more respondents agreed that there have been an increase in visitor arrivals (1.10). In the last three years, our revenues have climbed by a mean of (2.84) and a standard deviation of (1.02), while our profits have increased by a mean of (2.89) and a standard deviation of (1.02).

ABC Costing and Financial Performance

The respondents were asked to rate how much they agreed or disagreed with the following assertions regarding the impact of ABC costing on financial performance. The outcomes are displayed in table 2.

Table 2: ABC Costing and Financial Performance

	N	Mean	Standard deviation
ABC cost easy in forecasting Total cost	98	3.11	1.16
ABC costing reduces time of planning complex calculations	98	2.86	1.16
ABC costing explains more indirect costing.	98	3.23	.97
ABC costing provides accurate cost estimations.	98	2.98	1.22
ABC costing enhance benchmarking products sales.	98	3.35	.99
ABC costing enhances competitive advantage	98	3.33	1.33
ABC costing is cost saving method.	98	3.72	1.20
ABC costing increase performance.	98	4.20	1.01

Source: Research Data (2022)

One of the elements that affects the financial performance of Kenya's cement manufacturing business is acknowledged to be ABC costing. The goal of the investigation was to prove the assertion. Therefore, the respondents were asked to score their answers on a likert scale of 1 to 5, where 5 equaled "Strongly Agree," 4 "Agree," 3 "Undecided," 2 "Disagree," and 1 "Strongly Disagree." According to the research in table 4.8, the majority of respondents—those who received the greatest mean score and the lowest standard deviation—agreed that ABC costing improved performance. With a mean of (3.23) and a standard deviation of, ABC costing explained more indirect costing came in second place (0.97). With a mean of (3.72) and a standard deviation of (1.10), more respondents agreed that ABC costing is a cost-saving strategy. They also believed that ABC costing improves benchmarking product sales, with a mean of (3.35) and a standard deviation of (1.10). (0.99). Sales of ABC costing enhancement benchmarking goods at a mean of (3.35) and a standard deviation of (0.99).

Pingxin, Fei, Dinghua, and Lin investigated the selection of cost drivers in an activity-based costing application at a Chinese oil well cementing company (2010). The scientific findings identified five potential cost drivers: the quantity of wells, the separation between the office and the oil field, the weight of the cement and additives, the depth of well cementing, and the ton-kilometers measured by product. The cost factor that is most useful among those for distance and weight is the cost. As a result, these research' findings suggest that using the ABC technique and the weight-distance product as the cost driver will improve the precision of the fuel cost distribution.

According to Zaman (2009), the success of a corporation is significantly impacted by how ABC is perceived in terms of the strategic cost allocation approach, greater efficiency, and higher effectiveness. According to Rattanphtham and Ussahawanichakit (2010), ABC efficacy is significantly and favorably associated to production process effectiveness, cost advantages, product planning expertise, and cost advantage are significantly and favorably related to financial performance.

The senior leadership is likely to apply awareness from this investigation in negotiating with suppliers towards a lowering of the natural utilities' 8% moisture content, likely putting aside 19.2 million yuan (NT$) yearly likely to be avoided. More so, the costs on natural utilities procurement events connected to product objectives in terms of 240 million yuan (NT$) furnace slug procurement of the case company (Yang & Chang, 2018).

CONCLUSION AND RECOMMENDATIONS

The objective of the study was to evaluate effect of Activity based costing on financial performance of cement manufacturing industry in Kenya. The result showed that, the majority of respondents agreed on the vital influence of Activity based costing on financial performance. Furthermore, the study established that, there is a statistically significant strong positive relationship between Activity based costing and financial performance. Also, the study revealed that, the variations in financial performance is influenced by Activity based costing. Therefore, the result confirmed that activity-based costing is very fundamental for financial performance of cement manufacturing industry in Kenya.

According to Zaman (2009), the success of a corporation is significantly impacted by how ABC is perceived in terms of the strategic cost allocation approach, greater efficiency, and higher effectiveness. According to Rattanphtham and Ussahawanichakit (2010), ABC efficacy is significantly and favorably associated to production process effectiveness, cost advantages, product planning expertise, and cost advantage are significantly and favorably related to financial performance.

Most firms in the manufacturing sector have adopted the use of activity-based costing. This is attributed to increased ranges of products, competition and increased overhead necessary for performance of this Firm. Variance analysis in standard costing is combined with innovative techniques which affects the financial performance of this Firm. The findings also showed that ABC helps to identify inefficient products (value destroying), departments and activities and helps to allocate more resources on profitable products. In addition, there is a high rate of centralization and coordination. ABC helps to identify inefficient products, departments and activities and helps to allocate more resources on profitable products.

Majority of the manufacturing companies in their daily operations are usually challenged by cost management. Some organizations have allocated and entire department with smaller cost departments to try and deal with the issue of cost management. The result implies that Activity-Based Costing (ABC) have positive influence on cement manufacturing firms as it enhances cost reduction which will portent a high increase in profit and overall performance of an organisation. It is therefore recommended that manufacturing organizations should undertake adequate studies into their rudimentary cost information on the products they manufacture and the activities in which they undertake.

Recommendations

There is a need to create awareness on the impact of activity-based costing on financial performance of manufacturing firms in industrial Area Nairobi. Firm's should also continue using ABC system in order to identify inefficient products, departments and activities and helps to allocate more resources on profitable products. The institutions also need to put up clearly specified goals and objectives in order for activity based costing in to be effective in the company.

Suggestion for Further Studies

Similar research needs to be done in manufacturing firms in other counties and countries so as to enable generalization of the findings. In addition, more research should be carried out that also includes those companies in other sectors to establish if they also consider the management accounting practices as important and to establish the frequency rate of usage of the practices. Further research is important in other countries with similar or almost same micro and macroeconomic environments for manufacturing companies. The findings of which would facilitate a cross-country comparison of the management accounting practices and their impact on financial performance.

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