Strategic cost Management Practices and Organizational Performance: A study of Selected Manufacturing Firms in Nigeria

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Abstract

There has been a lot of transformation in the manufacturing industry.. Therefore, the use of traditional cost management system such as standard costing and predetermined overhead allocation system in the Nigerian manufacturing industry has proven to be ineffective in product costing, cost management, and decision making. As a result of these developments, it has become necessary to employ more refined product costing techniques of strategic cost management. Some of the strategic cost management methods are Activities Base costing, Target Costing, Life Cycle Costing, Balance Scorecard and Total Quality Management. The implementation of the Strategic Cost Management System has led to improved product costing analysis and decision making, production efficiency, and improved firm performance and market competitiveness. This study examines the effect of strategic cost management practices on organizational performance of Nigerian manufacturing firms. The study was guided by two research questions and two hypotheses. The survey design was used in the study. The population of study was 70 staff or respondents drawn from Guiness Nigeria Plc, Cocoa-cola Nigeria Plc, Nigerian Breweries Plc and Delta Glass Plc with a sample size of 60 using the Taro Yamena's formula Data analysis and stated hypothesis were tested using Kruskal Wallis one way analysis of variance by rank. The findings revealed that strategic cost management practices positively cost impact on the organizational performance of the manufacturing firms under study. In light of this result of study, it is recommended that manufacturing firms still using the traditional costing methods should consider implementing the strategic cost management techniques to enhance their performance and competitiveness.

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1. Introduction

The state of the current manufacturing industry in Nigeria is facing some challenges that warrant curial attention. The sale of goods in Nigeria has faced strong competition from most imported goods, which are cheaper than those manufactured in Nigeria. Correspondingly, the market orientation has changed from seller's market to buyer's market. In addition, advancement in manufacturing technology has shift from single product manufacturing model to multiple and product mixed production approaches, and the life cycle of modern products have also become shortened (Abdel-Kader and Luther,2021). Nigeria consumer market is flooded with foreign and domestic products where customers and consumers have options to purchase products at prices that they consider reasonable and affordable. In order to survive and maintain a competitive advantage in this market, manufacturing firms in Nigeria have to adopt cost reduction and cost management practice that result in improved production, productivity, and profitability, while maintaining product quality (Cheng and lini, 2018). In their study, of responsibility accounting, Mamud Anitsal and Anitsal (2018) reveal the important relationship between responsibility centers and cost accounting strategies. The study reference that the use of strategic cost management techniques for product costing has impact on the assessment and evaluation of the performance of responsibility centers.

The advancement in manufacturing and information technologies have led to automated manufacturing processes. Consequently Nigeria manufacturing industry has to adapt to this reality in order to complete in today's market. The manufacturing costs in Nigeria have significantly increased by manufacturing and information technologies. The cost of automation contributes to the increased overhead manufacturing costs. Another challenge facing Nigeria manufacturing firms is the shortage of electric power supply in Nigeria. Because manufacturing firms have to generate their own power supply needed in this highly automated manufacturing environment, the cost of production increases considerably.

Thus, due to the changes in the industry the traditional cost management systems of budgetary control and standard costing are no longer effective because they do not necessarily focus much attention on the impact of customers, competitors and other external environmental factors and they are not amendable to strategically managed manufacturing cost to attain cost reduction. (Shuah, Malik and Malik, 2019).

1.2 Statement of the Problem

The state of the current manufacturing industry has become complex as manufacturing firms engage in production of multiple lines of products dealing with high costs of production, and facing fierce competition. Nigerian manufacturing industry is no exception to this characterization of today's manufacturing environment. The costs of production resources are high and scarce, and products manufactured by firm with imported products which are often offered at cheaper prices. Conventionally, one way that manufacturing firms can lessen the impact of these conditions on performance (profitability and competitiveness is to reduce and control production costs. Hence, manufacturing firms are now implementing the strategic cost management analyze and manage production costs, improve performance and attain competitive advantage Although several studies have examined the role of strategic cost management techniques in manufacturing operations in developed and developing countries empirical studies of strategic cost management techniques in Nigeria manufacturing industry is limited. Therefore,

an indebt studyof the impact of activity based costing (ABC), target costing(TC) and Life Cycle Costing (LCC) techniques on the performance of Nigerian manufacturing firms is warranted.

1.3 Objectives of the study

The major objective of this study is to investigate the impact of strategic cost management practices on organizational performance of selected manufacturing firms in Nigeria. The specific objectives include to:

i. Examine the impact of Activity Based Costing on organizational performance of manufacturing firms in Nigeria.
ii. Examine the effect of Target Costing on organizational performance of manufacturing firms in Nigeria.

1.4 Research Questions

Based on the objectives of the study, the researcher developed the following research questions:

i. What is the impact of Activity Base Costing on organizational performance of manufacturing firms in Nigeria?
ii. What is the effect of Target Costing on organization performance of manufacturing firms in Nigeria?

1.5 Hypotheses

In order to answer the research questions the researcher poses the following set of null hypotheses.

Ho1; Activity-Based Costing has no significant impact on organizational performance of manufacturing firms in Nigeria.

Ho2: Target Costing has no significant effect on organizational performance of manufacturing firms in Nigeria.

1.6 Scope of the study

This study focuses on strategic cost management practices and organizational performance of selected manufacturing firms in Nigeria namely, Guinness Nigeria Plc, Coca-cola Nigeria Plc, Nigerian Breweries Plc and delta Glass Plc all in Nigeria.

2. Review of Related Literature

Conceptual framework

Strategic cost Management

Strategic cost management is the application of cost management techniques which have strategic orientation to generate and use cost and non-cost information in strategic decision relating to cost reduction, productivity improvement, customer satisfaction and improvement of competitive position (Cooper and Slag Mulder. 2018; Hongren et al 2017). According to Anderson (2017), strategic cost management is a key goal of a firm, which aims to enable a cost approximation of a product or service with the firm’s strategy and maximize its strategic performance. Guanet al. (2016) viewed strategic cost management as strategically managing costs and the use of data related to the costs of an enterprise by identifying the best strategies that lead to a sustainable competitive advantage.

Strategic cost management (SCM) encompasses numerous cost management techniques such as Activity-Based Costing, Target Costing, Life Cycle Costing, Balance Scorecard, Total Quality Management (TQM), Value Chain Analysis, Early Warning Analysis, and Product-Cycle

Approach Steveevska, et, al (2020). The activity-based costing (ABC) and target costing (TC) strategies are the focus of this study.

The objectives of strategic cost management are to secure cost reduction, productivity improvement, customers satisfaction profit maximization and strategic positioning improvement (Hongren et al, 2017). Strategic cost management is meant to help a firm identify and develop superior strategies that can result in sustainable competitive advantage (Berisha, 2017. Intahan, 2021). To achieving the objectives of strategic cost management, it operates by techniques or practices that have been developed over the years (Hilton et al 2015). These techniques which are diverse are mostly developed outside the traditional management accounting and are still evolving. These techniques of strategic cost management include activity-based costing; Kaizen costing bench marketing, quality costing, activity based management, target costing and life cycle costing, among others (Hilton et al, 2015).

Activity-Based Costing:

Activity Based Costing was first developed by Cooper and Kaplan (1999) as an approach to address problems associated with traditional cost management practices such as standard costing or variable costing, absorption costing and predetermined cost allocation which tend to have the in ability to provide detailed relevant and timely information. Activity Based Costing (ABC) is an accounting cost allocation technique that identifies activities contributing to the incurrence of costs and allocates the costs to products on the basis of activity bases. ABC is a management accounting process that ensures the allocation of costs to products based on activities which determine the incurrence of such costs or the consumption of such products or services (Turney 1996.CooperandKaplan,1999).Firms using ABC are able to offer high quality product resulting from production efficiency can charge premium prices and increase profit margin and return on investments (Ratt anaphaphtham and Ussahaw anitchakit 2021).

Target Costing

Another Strategic Cost Management method is target costing. Target costing(TC)is a process of allocating product costs based on consumer demand, product planning and design and functional cost analysis (Emiaso and Amaechi 2019). Ansari and Bell (2017), describe the basic principles of Target Costing as a market oriented customer-focused, and design focused technique to achieve cross-functional and value chain goals. Target costing embodies the concepts of described product/service quality characteristics (Ellram, 2017), product functionality through market survey (Zergin and Ada, 2019), target selling price through pricing research, customers view surveys reviews of competitor pricing, and disaggregation of target cost components and functions (Gopalakrishnan, Samuels and Swenson, 2017), target profit through market research (Hamood, Omar, and Suleinnan, 2019), cost reduction, and continuous improvement (Shank and Hisher, 2018).

Lifecycle costing

Life Cycle Costing refers to the process of estimating and accumulating the total costs in monetary terms that the producer or manufacturer will incur over the products entire (life cycle) to minimize the combined costs (Testa Iralaw, Freyand O’ Connor, 2021). Horngren, Foster and Datar 2016) have referred to life cycle costing as the cradle-to-grave costing “since all the costs associated with the product during its life span are captured. Life cycle costing ensures that the total costs determined for each of a product life stages-introduction, growth, maturity, and decline are accurate. Life cycle cost information assist managers and planners to manage costs more effectively since it focused on cost behavior during a chunique phase of the product life cycle. In cost management, it is possible to classify costs in product life cycle into these three groups. Pre-manufacturing cost, manufacturing cost and post-manufacturing costs. (Bengu and Kara, 2020).

Spickova and myskova (2018) notes that the main goal of life cycle costing approach is to optimize the life cycle cost of a product without losing its performance. The organization that seeks cost reduction and performance improve activities on all the production stages of a product as noted by Berliner and Brimson (2018).

Organizational Performance

Organizational performance is the accomplishment of an organization measured in financial (qualitative) or non-financial (qualitative) terms. Mostly, organizational performance can be measured in financial terms (Profit, return on investment (ROI)return on assets (ROA), earnings per share (EPS), product market performance (market share and sales level), Shareholder return (dividends ratio, economic value added (EVA), and stock price). These measures of organizational performance are effectiveness indicators, and firms success several studies have used these performance indicators to study organizational performance (Hassan et al, 2019; Hagedorn and Cloodt, 2013. In their study of the balanced scorecard (BSC) concept Kaplan and Norton (1996) argue that an organization vision and strategy are best achieved if viewed from customer, internal business operations growth and financial perspectives. The study of Tontiset and Usshnauranitchi, (2019) which investigates the relationships among cost management effectiveness, cost information usefulness, corporate competitiveness and firms success, reveals that cost management effectiveness plays a role in driving superior corporate competitiveness and firms success.

2.1 Theoretical framework

This study is anchored on the resource bases view theory which focuses on the presence of competitive advantage and is normally attained by firms that have special resource with their competitorsdonothave.Firmshaveincreasedcompetitiveadvantagewhentheycancreatevalue and succeed in their strategy based on firm resources (Kaneko, et al 2018).

According to Ellram (2017), the resources and capability that will create competitive advantage must be rare, valuable, non-imitable, non-substitutable and not transferable. Tontiset and Ussahnawanitchakit (2019) noted that the bundles of resources are heterogeneously distributed across firms, and that the resource differences persist overtime. Valuable resources are those that generate high returns, resources that are rare, those that cannot be obtained by competitors and resources that are difficult to initiate by rival companies. The resources at the disposal of an organization to create competitive advantage may constitute physical, human, organization, and intangible assets. Therefore the deployment of the strategic cost management techniques such as ABC, ABM and life cycle costing constitutes a bundle of resources that can be used by the firm to achieve competitive advantage through customer value enhancement. It is in this light that this study is under pinned by the resource based view.

Empirical Review

The following empirical studies were used to improve the study: Janjic, Karapaviovic and Damjanivic (2017) report that the impact of strategic cost management techniques are negligible they acknowledged the potential benefits of the techniques on performance and competition. Cescon, Costantini and Grassett (2018) conclude strategic cost management techniques such as strategic pricing balances score card risk analysis, target costing and life-cycle costing have positive association with performance and competitive forces.

Extant literature reveals that strategic cost management has a positive impact on firms performance either directly or indirectly. Ali, Malo-Alin and Haque, 2015 provide evidence that reducing unnecessary costs and can improve a company's financial performance. Firms using strategic cost management technique are able to offer high quality product resulting firms production efficiency can charge premium prices and increase profit margin and return on investments (Rattanaphaphtham and ussahawanitchkit (2021).

3.Methodology

The study adopted the survey research method. The primary sources of data used for the study included questionnaire and personal interviews. Secondary sources of data included journal articles, text books and other relevant publications. A of 70 respondents was drawn from four manufacturing firms in Nigeria under study namely: Guiness Nigeria Plc. A sample size of 60 was selected from a population of 70 using the taro Yamen's formula which is given as

$$n = \frac{N}{1+N(e)^2}$$

where,

n= sample size
e=level of significance
0.05or95%
N=Population size=70

$$n = \frac{70}{1+70(0.05)^2} \quad \frac{70}{1+0.25}$$

$$\frac{70}{1.25}$$

=60respondents.

Applying the formula, the sample size from a population of 70 is 60 respondents at 5% confidence level.

In addition, the hypotheses formulated were tested using Kruskal Wallisone-way analysis of variance by rank.

4. Hypotheses testing and results

Hypothesis:

Activity-Based costing has no significant impact on organizational performance of manufacturing firms in Nigeria.

Hypothesis (I) was tested using Kruskal Wallis one-way analysis of variance by rank.
Test statistic : Kruskal Wallis one-way analysis of variance by rank.
Degree of freedom=k –1 =2 – 1=1

TablevalueX$_1^2$, 0.05=3.841$_{tab}$
Level of significance = 0.05
Decision Rule: reject Ho if H calculated 7+tab^2

Sampling Distribution:

$$H \frac{12}{(N+1)} \quad \frac{\overset{k}{\in}}{j=1} \quad \frac{RJ^2}{nj} - 3(N+1)$$

Where k= number of samples

Nj=number of cases in7thsample

N=$\sum_{nj}$ the number of cases in all samples combined Rj= sum K of ranks in jth sample (column)
K
$\sum$=directs one to sum over the k samples (column) J

Computation:

Table1:Responses on Activity-Based Costing and its significant positive impaction organizational performance of manufacturing firms in Nigeria.

RESPONSES	FREQUENCY	PERCENTAGE
Strongly Agree	29	48.33
Agree	25	41.69
Undecided	3	5.00
Strongly disagree	1	1.67
Disagree	2	3.33
Total	60	100

Source: Field survey2024.

Ranking all the observations for the K groups in a series assigning ranks we have Table 2: Ranks of groups

Frequency	Percentage
8	10
7	9
4	6
1	2
3	5
TotalR_1=23	32=R_2

Source: Computation from table 1

R1 = Sum of 1st column on rank
=8+7+4+1+3=23

R2=Sum of 2ndcolumon rank

=10+9+6+2+5=32

$$H \qquad \frac{12}{(N+1)} \qquad \underset{j=1}{\overset{k}{\in}} \qquad \frac{RJ^{2}}{nj} -3(N+1)$$

$$\frac{12}{10(10+1)} \qquad \frac{23}{5} + \frac{32}{5} -3(10+1)$$

$$\overline{12} \quad \{\overline{529} \qquad\qquad 10 \quad + \; 5$$

1024 -33

$$=0.10909(105.8+204.8)-35$$

$$=31.3197$$

Decision:

Since the calculated value of 31.3197>X^2 table 3.841, we reject the null hypothesis and accept H1the alternative hypothesis. This implies that Activity-Based Costing has significant impact on organizational performance of manufacturing firms in Nigeria. This findings was supported by the views of (Ali, Malo-Alain and Haque, 2015) which state that firms using Activity-Based Costing are able to offer high quality product resulting from production efficiency can charge premium prices and increase profit margin, return on investments and organizational performance.

Computation table 3

Responses on Target Costing and its significant positive effect on organizational performance of manufacturing firms in Nigeria.

responses	frequency	Percentage
Strongly Agree	30	50
Agree	24	40
Undecided	3	5
Strongly disagree	2	3.33
Disagree	1	1.67
Total	60	100

Source: Field survey,2024

Table 4: Rank of groups

Frequency	Percentage
8	10
7	9
4	6

3	5
1	2
TotalR_1=23	R_2=32

Source:Computation from table 3

$$\frac{12}{10(10+1)} \quad \frac{23}{5}+\frac{32}{5}-3(10+1)$$

12

110

$$\frac{529}{5}+\frac{1024}{}-33$$

$$=0.10909(105.8+204.8) -33$$

$$=95.123$$

Decision:

Since the calculated value of 95.123> X^2 table 3.841 we reject the null hypothesis and accept Hi alternative hypothesis. This implies that target costing has significant effect on organizational performance of manufacturing firms in Nigeria. This is supported by the view of (Hang, Lai and Chuin (2012) which states that target costing can assist a firm in producing products with lower costs, better quality and enhancement of performance.

5. Conclusion

The study examined strategic cost management practices and organizational performance of selected manufacturing firms in Nigeria. The study reveals that there is positive significant impact between activity based costing on organizational performance of manufacturing firms in Nigeria. There is also a significant positive relationship between target costing and organizational performance of manufacturing firm in Nigeria.

To conclude, strategic cost management practices is imperative for organizational performance of manufacturing firms in Nigeria.

6. Recommendations

In view of the findings and conclusion of the study, the following recommendations were proposed for effective implementation of strategic cost management practices by manufacturing firm in Nigeria.

1. Manufacturing firms still using the traditional costing methods should consider implementing the strategic cost management techniques to enhance their performance and competitiveness.
2. Manufacturing companies that want to improve their competitive position could consider implementing cycle costing and activity based management techniques if they have not done so. These techniques of strategic cost management have been proved empirically to significantly impact on the performance of manufacturing companies.
3. Further research could be carried out focusing on the implementation of strategic cost management techniques for competitive advantage in service rending companies in order to find out of the findings of this study will still hold in these firms.

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