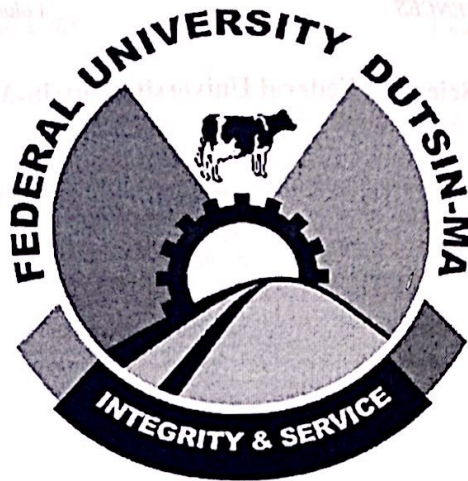




JOURNAL OF MANAGEMENT SCIENCES

A Publication of the Faculty Management Sciences

Federal University Dutsin-Ma

Katsina State

Volume 4, Number 4, Special Edition, 2022

ISSN: 2735-9093

© Faculty of Management Sciences, Federal University Dutsin-Ma, March, 2022

All rights reserved.

No part or whole of this Journal is allowed to be reproduced, stored in a retrieval system or transmitted in any form or by any means, without prior permission of the Copyright owner.

ISSN: 2735-9093

Printed by

Ahmadu Bello University Press Limited, Zaria,
Kaduna State, Nigeria.

Tel: 08065949711

E-mail: abupress2013@gmail.com,
abupress2020@yahoo.com

Website: www.abupress.com.ng

JOURNAL OF MANAGEMENT SCIENCES

*A Publication of the Faculty Management Sciences
Federal University Dutsin-Ma
Katsina State*

EDITOR IN CHIEF

Prof. Abdulkarim Garba

MANAGING EDITOR

Asso. Prof. Suleiman Abubakar Sadiq

ASSOCIATE EDITORS

Asso. Prof. Olaoye Ismail

Dr. Idris A. Adamu

Dr. Ahmed Abubakar

Dr. Nuhu J. Shagari

Dr. Munir S. Mashi

Dr. Abdulrahman Abdulrazak

Dr. Mohammed A. Yusuf

Dr. Abu Oseini

EDITORIAL ADVISORY BOARD

Prof. Emmanuel A. Kighir

Prof. Aliyu Mamman

Prof. Aminu Kado Kurfi

Prof. Joshua Okpanachi

Prof. Abdu Jafar Bambale

Prof. Abdulsalam Dauda

Prof. Saheed Zakari

Prof. Oladejo Lukman Gbolagade

Prof. Aminu Hassan

Asso. Prof. Isa A Adamu

Asso. Prof. Yusuf Hashim

CONTENTS

Corporate Governance and Effectiveness in Guaranty Trust Bank Plc., Lagos Branches, Nigeria OYALAKUN, Daniel Oluwaseun*, WOKOMA, Tamuno-Inam Nicholas SOLAJA, Oluwasegun Abraham, ADEFISAN, Kazeem Adesola	1
Does Effective Internal Control System affect Performance of Nigerian Microfinance Banks? ADEMOLA, Abimbola Oluwaseyi Ph.D, FCA	12
Impact Of Capital Structure On The Financial Performance Of Selected/Quoted Cement Manufacturing Companies In Nigeria Balarabe Abubakar¹ and Isah Alhaji Lawal²	25
Impact of Remittances on Financial Development in West African Countries KOLAWOLE, Kayode David (Ph.D)¹, BABAITA, Kolawole Alabi (Ph.D)², BUSARI, Romoke Rafiat (Ph.D)³, ABDULMUMINI, Maryam Jumai⁴	37
Is Open Market Operation an Effective Instrument of Monetary Policy Management in Nigeria? Stanley C. Udegbole	47
Performance and Risk-Return Characteristics of Residential Property Capital Returns in Nigeria. Case Study of Kano Metropolis Salihu N.¹, Nuhu M. Bashar², Sanni M. Lekan³ and Sule I. Abbas²	57
Impact Of Proactiveness on Sales Growth of Small and Medium Enterprises (SMEs) In Nigeria ¹Ibrahim Maikudi Kankia, ²Hadiza S. Abubakar PhD & ³Prof. Zainab Dabo	69
Financial Technology and the Supply Side of Financial Inclusion in sub-Sahara Africa Countries. *Samson Ogege**Ajibola Arewa (correspondent) *** Ojo-Agbodu Ayodele Abraha, ****Omowunmi Aminat Amusan ***** Ejianya Emmanuel Cand***** Owoola-Adebayo Soyingbe Folasade	87
Nigeria Pattern of Migration: Issues on Human Sustainable Development OMOROGHOMWAN, Blessing Osayemwenre Ph.D, CHRIS-OBADIGIE, Olayemi Omolola	101
Strategic Cost Management Practices and Customer Value Enhancement In Selected Quoted Manufacturing Firms in Lagos and Ogun States, Nigeria ADIGBOLE Ezekiel A. (Ph.d.)***, FAGBEMI Temitope O. (Ph.d)*, ABOGUN Segun (Ph.d)*and Alabi Jacob A. (Ph. d.)**	123

Moderating Role of Technological Orientation on the Relationship between Entrepreneurial, Orientation Learning Orientation on SMEs Innovation Performance: A Proposed Model Shamsudeen MuazuSalisu, Kabiru Tsoho, Adamu Baba Jajere, Abubakar Tijjani Usamat	139
Effects of Covid-19 Pandemic on Performance of Small Business of Kwara State, Nigeria Ibrahim Bamidele Hamzat	148
The Effects of Child Abuse and Neglect in the Society Baduku Silas Anthonia, Ummulkhairi Mohammed	157
Intellectual Capital and Financial Performance of Listed Deposit Money Banks in Nigeria Usman Sani Kofar Wambai¹, Ibrahim Abubakar, Ayuba², Abubakar Ahmed³, Khalid Haladu Bello³	165
Microfinance Bank Services and Profitability of Small and Medium Scale Enterprises: The North-Central Nigeria Experience YAHAYA Abdulrazak Akanni and AGBOOLA Luqman Wole	177
The Moderating Role of Risk Management Committee Size on the Relationship Between Non-Performing Loans and Financial Performance of Deposit Money Banks in Nigeria ¹Yusuf Ahmed Tijjani, ²Idris Ahmed PhD & ³Mohammed Zubairu PhD	187
Effect of Environmental Factors on Small and Medium Scale Enterprises Performance in Abeokuta South, Ogun State, Nigeria Ajagbe, F. A., Olaifa, O. I., Abiodun, J. A	204
Regulatory Interventions towards Development of Electronic Banking in Nigeria: A viewpoint Ismaila Yusuf	213
Critical Success Factors: A Tool For monitoring Small Medium Enterprises Performance During Covid-19 Pandemic in Ogun State, Nigeria OYALAKUN, Daniel Oluwaseun (Ph.D candidate, ACA), OGUNWEDE, Joseph Kayode (Ph.D, FCA), WOKOMA, Tamuno-Inam Nicholas (Ph.D, FCA) AJAO, John Sunday	222
Life Cycle Assessment and Financial Worthiness of Solar Photovoltaic Electricity Generation in Nigeria * Ajibola Arewa (correspondent) ** Samson Ogege *** Ojo-Agbodu Ayodele Abraha, ****Ejianya Emmanuel Cand *****Owoola-Adebayo Soyingbe Folasade	136

- Board Characteristics And Corporate Social Responsibility Disclosure In Nigerian Non-Financial Sector: The Moderating Effect Of Firm's Performance 246
Shamsuddeen Yusuf Bugaje, a1. Jamilu Salisu Ahmad, b2, Aliyu Sani Shawai, c3
- Moderating Effect of Ownership Structure on Social Sustainability Disclosure and Value among Nigerian Listed Manufacturing Firms 261
Teryima Samuel Orshi¹, Ibrahim Magaji Barde², Muhammad Liman Muhammad³
- Effects of Enterprise Creativity¹ on Business Competitiveness of Confectionery Businesses in Ogun State, Nigeria 283
Akinbola, Olufemi Amos, Kowo Solomon Akpoviroro, Sanni, Sekinat Arike, Akinbola, Omolola Sariat
- Digital Initiatives Value Addition: A Scale Development and Validation 299
Abubakar Ado Adamu¹, Nasiru Abdullahi², Salisu Umar³ and Abdullahi Hassan Gorondutse⁴
- Issues and Challenges of Financial Inclusion among Women Entrepreneurs in Nigeria 319
¹ADEMOLA, Abimbola O., ²LAWAL, Nureni A., ³AFOLABI, David O. and ⁴MORAKINYO, Ayodele D.

STRATEGIC COST MANAGEMENT PRACTICES AND CUSTOMER VALUE ENHANCEMENT IN SELECTED QUOTED MANUFACTURING FIRMS IN LAGOS AND OGUN STATES, NIGERIA

ADIGBOLE Ezekiel A. (Ph.d.)^{***}, FAGBEMI Temitope O. (Ph.d)^{*},
ABOGUN Segun (Ph.d)^{*} and Alabi Jacob A. (Ph. d.)^{**}

^{*} Department of Accounting, University of Ilorin, Ilorin, Nigeria.

^{**} Department of Entrepreneurial Studies, Faculty of Management Sciences,
National Open University of Nigeria, Abuja, Nigeria.

^{***}Corresponding Authour - ezekieladigbole@yahoo.com

ABSTRACT

The pursuance of customers value should be the goal of any manufacturing firm in Nigeria as this is the key to remaining competitive in a competitive environment. Strategic cost management practices can deliver customer value enhancement. Hence, the objectives of this study were to: assess the influence of Activity Based Costing (ABC) on Customer Value Enhancement; examine the effect of Activity Based Management (ABM) on CVE; and evaluate the impact of Life Cycle Costing (LCC) on CVE. Survey research design was employed. Three hundred and eighty - five respondents in seventy - seven listed manufacturing firms in Lagos and Ogun States constituted the population of this study and the sample consisted of three hundred and twenty- five respondents in sixty - five randomly selected manufacturing firms. Questionnaire administration was used in collecting the primary data used. Partial least squares - Structural equation modeling was used in data analysis. The study found that: ABC has positive significant effect on CVE enhancement ($\beta = 0.365, p < 0.01$); ABM has positive insignificant influence on CVE ($\beta = 0.084, p > 0.10$); and LCC has positive significant impact on CVE ($\beta = 0.395, p < 0.01$). It was concluded that strategic cost management practices are relevant for the enhancement of customer value. The study recommended that manufacturing firms in Nigeria should continue to implement strategic cost management techniques to enhance customer value for profitability improvement.

Key words: Activity-based costing, Activity-based management, Life cycle costing and Customer value enhancement.

INTRODUCTION

In a competitive environment, firms deploy contemporary cost management techniques to create value to their customers so that they can remain competitive in the market. The satisfaction of the desired value of customer by a firm is a key to attaining competitive advantage over their competitors. Strategic cost management- a modern cost management system can be put in place by firms to secure customer value enhancement. This system is able to enhance customer value as it is focused on effectively managing costs of a product in the light of customer satisfaction, (McNair, Silvi & Polutnik, 2001a). The application of strategic cost management ensures that a firm creates value for the customer thereby maximizing its revenue (McNair, Polutnik & Silvi 2001b). The need for a firm to keep enhancing the value required by customers is a necessity for creating a competitive edge over competitors (Kumar & Shefabi, 2011).

Customer value is the determinant of the success of any business in the market place, hence, this should not be taken lightly. Strategic cost management seeks to give a better understanding of

which activities and outcomes that really create value for customers at reduced cost (Mcnaair, Polutnik & Silvi 2001a).

The most important goal of any manufacturing company is to make profit and to ensure it remains in business. This cannot be possible where the buyers of goods are not willing to patronise the products manufactured. To ensure that customers are satisfied and retained by a firm values being received must constantly be enhanced. It is only when customer value is enhanced that revenues can be made and profitability improved. Making efforts to enhance the value received by customers is key to remaining competitive in the market. This is where strategic cost management becomes relevant as it creates opportunity for cost reduction and improvement of production processes that delivers improved customer value.

Allot of studies have been carried on usage of management accounting techniques in Nigeria but there is a dearth of researches in the area of strategic cost management and customer value enhancement. There is therefore the need to explore this area and add to the discuss on the relevant of strategic cost management in enhancing customers value.

The broad objective of this study is examine the impact of strategic cost management techniques on customers value enhancement in selected quoted manufacturing firms in Lagos and Ogun States of Nigeria. While the specific objectives are to:

- i) evaluate the impact of activity-based costing on customers value enhancement;
- ii) assess the effect of activity-based management on customers value enhancement; and
- iii) examine life-cycle costing on customers value enhancement;

Based on the above objectives the/following hypotheses stated in the null form are tested in this study:

- i) Activity-based costing has no significant impact on customer value enhancement in selected quoted manufacturing firms.
- ii) Activity-based management has no significant effect on customer value enhancement in selected quoted manufacturing firms.
- iii) Life-cycle costing has no significant effect on customer value enhancement in selected quoted manufacturing firms.

The scope of this study is limited to three techniques of strategic cost management - activity-based costing, activity-based management and life-cycle costing, and their impacts on customer value enhancement. These techniques have potentials for enhancing the value of customers, hence the attention for this study. Manufacturing firms in Lagos and Ogun states are the study reference because most of the quoted manufacturing firms in Nigeria either have their head offices or factories located in these two states.

LITERATURE REVIEW

Conceptual Review

Strategic Cost Management

Strategic cost management is the provision of complete cost information for the purpose of enhancing strategic management functions and it emerged from the blending of the three strategic management themes of: value chain analysis, strategic positioning analysis, and cost driver analysis. (Shank, 1989).

Horngren, Foster and Datar (2000) described strategic cost management as the set of actions that managers take to satisfy customers while continuously reducing and controlling costs. Cost management is a philosophy, an attitude and a set of techniques to create a higher value to lower costs (Hilton, Maher, Selto, & Sanity, 2001; Blocker, Stout, & Cokins, 2006).

From the various definitions given above, the main objectives of strategic cost management are: productivity improvement, customers' satisfaction, profit maximization and strategic positioning improvement (McNair, 2000).

Strategic cost management provides complete information that can assist a firm in identifying opportunities for product quality improvement and elimination of production process that are costly (Boita, Ardelean, Haiduc and Constantin, 2012).

Strategic cost management is a sets of techniques / practices, that can be used in achieving the objectives of strategic cost management. Though there is no agreement in literature as to the number of techniques there are of strategic cost management but the common ones include: Activity-based costing, Activity-based management, Life-cycle costing, Target costing, Kaizen costing, Quality costing, Balanced Score Card (BSC), etc. This study is restricted to the first three techniques / practices of strategic cost management, which are examined here after.

ACTIVITY-BASED COSTING (ABC),

Activity - Based Costing (ABC) was introduced to solve cost allocation problems and it allocates resources costs to products based on activities consumed (Krumwiede & Roth, 1997). In the late eighties when it was discovered that the traditional absorption costing systems could not produce effective cost allocation of overheads, ABC emerged to provide solution. The key idea of activity - based costing is that activities consume resources and products consume activities. The system also uses a two stage allocation process but in contrast to the traditional costing system it relates the firm's resources to activities performed by these resources and then linking the cost of these activities to cost objects such as products or services (Sakurai, 1996; Cooper and Kaplan, 1998; Bekcioğlu, Gurel, & Kizilyalcin, 2014). With this process, activity - based costing is able to measure more accurately, the costs of activities that are not proportional to the volume of outputs produced.

The need for accurate cost estimation for products and services has become more critical now days when companies manufacture diverse products and hence, the need for ABC (Qian and Ben-Arieh, 2008). ABC was originally meant for cost allocations (Kaplan, 1992), but the uses have gone beyond cost allocations to include its uses for product profitability analysis and cost management.

With ABC technique accurately identifying overhead costs and cost drivers more streamlined business processes can be made. When all direct and indirect costs are allocated to a product, managers begin to get an idea of which business processes are performing well and which are inefficient. They can then streamline these processes by allocating more resources to profitable activities and eliminating practices that are costly and wasteful. As a result of this process, companies are better able to manage manufacturing performance and improve the quality of products and services. When quality of products are improved, customer value enhancement can be achieved.

ACTIVITY -BASED MANAGEMENT (ABM)

Activity -Based Management (ABM) is built on Activity -Based Costing (ABC) and it focuses on activity analysis to determine value added activities and non- value added activities. This is meant to improve production process and eliminate activities that do not add value to the product being manufactured and by so doing ensures that high value is delivered to customers at reduced cost. Activity based management evaluates costs and activities levels in order to identify opportunities to improve performances.

Activity-based management is also described as a cost management system in which costs are assigned to the products (service that caused the work activity transaction to occur). Work activity transactions are the focus of ABM because the overhead costs have increasingly become logistical transactions – scheduling materials movements, production runs and customs shipments (Brandt, Levint, & Gourdoux, 1999). Activity-based management (ABM) compliments ABC by using ABC information in the analysis of processes to identify inefficiencies and non- value added activities (Cooper & Kaplan, 1998). The fundamental principle of ABM is management of cost through the management of activities of an organization.

The objectives of ABM are to improve customers value, minimise waste, reduce costs and enhance revenues of the firm (Boita et al., 2012; Brandt et al., 1999). ABM is a popular approach in the redesign of process; it focuses on the concept of value for the customer, and has a broader concept product quality.

Managing activities under activity/-based management is a process of relentless and continuous improvement of all aspects of the business. This includes a constant search for improvement opportunities through determining what activities should be performed and those activities that should be left out. By this way, Turney (1996) noted that ABM can improve strategic position and capability of an organization by deploying resources to activities that yield the highest strategic benefits and improving what is important to customers.

LIFE CYCLE COSTING

Life cycle costing as an instrument of strategic cost management builds on the conceptual framework that facilitates management's ability to exploit internal and external linkages (Hansen & Mowen, 2000). It focuses attention on the total cost that will be incurred during a product's entire life cycle (Woodward, 1997 & Asiedu & Gu, 1998). By focusing of attention on management of the entire cost of the life cycle of a product including its pre-production costs, production costs and post production costs the scope of cost management has been extended beyond the traditional to strategic level (Blocher, Staut, Stokings & Chent, 2008).

Cooper & Slagmulder, (2004) in their study reported that it is possible to manage costs throughout the product life cycle. Hence, life cycle costing not only gives attention to costs incurred by the producer over the product cycle (such as design, manufacturing, marketing, logistics and service) but also on the costs that customer's will incur such as the cost of acquisition, operation, maintenance, shutdowns and disposal (Petrova & Zarudnev (2013).

The total costs focused on by life cycle costing for identification, analysis and management is a combination of producer's costs such as research and development planning and design, manufacturing and marketing costs and user's (customer's) costs such as operating cost, maintenance and disposal. (Artto, 1994).

Woodward, (1997) & Lindholm & Suomala, (2005) noted that life cycle costing two major activities are carried out as the: estimation of the total costs of a product over its entire life cycle and also managing the costs at all the phases of the product life cycle.

The objectives of life cycle costing, as noted by Petrova & Zarudnev (2013) are: to identify associated costs during the planning period with a given product design and take necessary action to enhance customer's value; to support cost comparisons among different products designed in order to make more informed decisions and among alternatives; to identify the nature and timing of costs to plan and manage effectively (Kubáňková & Hyršlová (2014); and to provide cost information for managers and planners to manage costs more effectively since it focused on cost behavior during each unique phase of the product life cycle.

CUSTOMER VALUE ENHANCEMENT

Customer value is enhanced when the total value created by a firm is more than total customer cost (Kotler, 2017). Customer value enhancement refers to the firm's capability of being able to launch new products and services to market to achieve customer satisfaction and make decisions based on useful information that is all inclusive (both financial and non-financial information) so as to respond to the requirements of the best stakeholders (Ulaga and Eggert, 2002). Customer value enhancement is associated with the projected value which is measured from value creation and is the perception of their customers. Strategic cost management ensures that products or services introduced into the market enhance customer's value and it is customer focused. For customer value to be enhanced the producer should usually have customer satisfaction in mind when designing or manufacturing a product.

Customer value enhancement can deliver long term loyalty of customer, improved competitive advantage and performance (Kaneko *et al.* 2013). When a firm effectively implement strategic cost management techniques especially ABC, ABM and life cycle costing the value receivable by its customers will be enhanced.

THEORETICAL REVIEW

The resources - based view is a rising and dominant theoretical background in strategic literature that addresses the questions of an organization's identity and it is mainly concerned with the sources and nature of capabilities (Theriou, Aggelidis and Theriou, 2009). Barney (1991) noted that the resources - based view has an intra -organizational focus and argues that performance is a result of firm specific resources and capabilities. Teeche, Pinsno and Shuen, (1991) posits that the basis of resources- base view theory is that successful firms will find their future competitiveness on the development of distinctive and unique capabilities which may be tangible or intangible in nature.

The resource –based view focuses on the presence of competitive advantage and is normally attained by firms that have special resources which their competitors do not have. Firms have increased competitive advantage when they can create value and succeed in their strategy based on firm resources (Kaneko, *et al.* 2013).

According to Barney (1991), the resources and capability that will create competitive advantage must be rare, valuable, non- imitable, non-substitutable and not transferable. Tontiset and Ussahawanitchakit, (2009) noted that the bundles of resources are heterogeneously distributed across firms, and that the resource differences persist over time. 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 imitate by rival companies.

The resources at the disposal of an organization to create competitive advantage may constitute physical, human, organizational, 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 firm to achieve competitive advantage through customer value enhancement. It is in this light that this study is underpinned by the resource based view.

METHODOLOGY

The cross-sectional survey research design was employed in this study as it allows for detail examination of statistical associations at one point in time from a large sample drawn from the population under study.

Seventy - seven (77) quoted manufacturing firms located in Lagos and Ogun states as at 2016 constituted the population of this study. Using Taro Yamani's formula (Okorie as cited in Imeokparia, 2013) 65 quoted manufacturing firms were sampled for the study.

Primary data used for the study were collected through questionnaire administration to the financial accountants, cost accountants, management accountants, chief accountants/ finance directors and the chief internal auditors of the 65 manufacturing firms sampled for the study. In all, a total of three hundred and twenty five (325) copies of questionnaires were sent out. Out of the copies of questionnaire administered two hundred and forty – four (244) copies were retrieved but only two hundred and thirty three (233) copies were validly used. The valid figure represents 71.7% success rate of return of copies of questionnaire administered.

VARIABLE MEASUREMENT

Dependent variable

Customer value enhancement

Customer value enhancement was measured in this study using four items developed from the review of literature and it was measured in the questionnaire using four items developed from the review of literature and anchored on a seven–point Likert scale ranging from - strongly disagree (1) to strongly agree (7).

INDEPENDENT VARIABLES

Activity-Based Costing Application (ABCA)

This variable which represents the implementation of Activity Based Costing (ABC) was measured in the questionnaire using seven items developed from literature and anchored on a seven–point Likert scale ranging from - strongly disagree (1) to strongly agree (7).

Activity – Based Management Capability (ABMC)

This variable represents the implementation of Activity Based Costing Management (ABCM) and was measured in the questionnaire using six items developed from literature and anchored on a seven–point Likert scale ranging from - strongly disagree (1) to strongly agree (7).

Life-cycle costing orientation

This variable represents the implementation of Life-cycle costing technique and was measured in the questionnaire using six items developed from literature and anchored on a seven–point Likert scale ranging from - strongly disagree (1) to strongly agree (7).

PLS-SEM Model Specification

In PLS-SEM, models are usually specified in pictorial, hence, the model for this study is depicted in SEM format in Figure 3.1. From the figure the pathways are shown with the use of arrows. An arrow starts from the exogenous (independent) variable - Activity- Based Costing Application (ABCA), Activity- Based Management Capability (ABMC), and Life Cycle Costing Orientation (LCCO) and pointing to the endogenous (dependent) variable - Customer Value Enhancement (CVE).

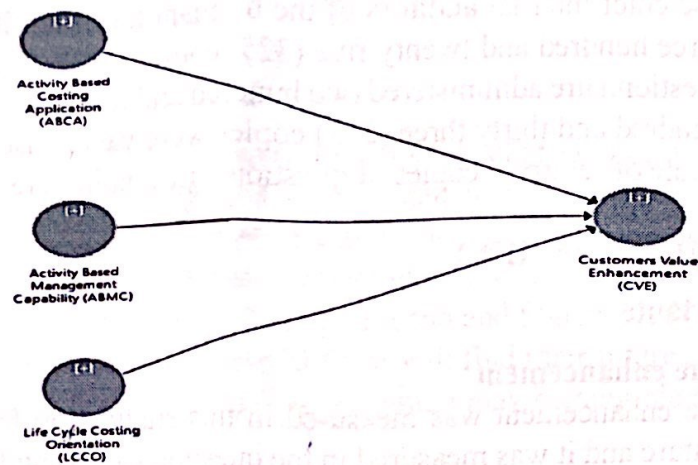


Figure 1: PLS - SEM Model of the Study

METHOD OF ANALYSIS

The data collected were analyzed and hypotheses tested using the Partial Least Square - Structural Equation Modeling (PLS - SEM) with the aid of SmartPLS 3.0 software (Ringle, Wender & Becker, 2015). PLS algorithm was used in determining the measurement model, while bootstrapping method was used in assessing the structural model (Hair, Sarsted, Hopkins & Kuppelwieser, 2014). SEM as a second generation regression is an alternative to ordinary least squares regression and canonical correlation. It was used because it is possible to determine several measures of reliability and validity tests (Baines & Langfield-Smith 2003; Homburg 1992). Besides, PLS version of SEM was employed because it allows for smaller sample and makes no requirement of data normality for its use.

ANALYSIS AND DISCUSSION OF RESULTS

PLS - SEM Analysis and Testing of Hypotheses

The data collected were analysed using PLS – SEM and this was achieved with the aid of SmartPLS 3.0 software in these two steps:

First, the use of PLS algorithm in SmartPLS 3 to produce these preliminary test results (validity and reliability tests) - indicator reliability test, constructs internal consistency reliability test, construct reliability and validity test and discriminant validity test. These preliminary results were used in evaluating the measurement model.

The second step was the use of the SmartPLS algorithm to obtain the β values and R^2 ; and SmartPLS bootstrapping process used to obtain the t – statistic and the p – values which indicate the significance value of the β . Values produced at the second stage were used in evaluating the structural model that defines the relationships among the construct variables.

Evaluation of Measurement Model (Preliminary Tests)

The following tests results (Indicators reliability test, construct reliability and validity tests, convergent validity test and discriminant validity tests) are used in evaluating the measurement model of the study.

Indicators Reliability Test

The indicator reliability test was measured by indicators loading and indicators reliability. From Table 1, all the indicators used in this model have loadings ranging from 0.796 to 0.915 and are above the required threshold of 0.70 (Ringle, 2006). Also from same table, the indicators reliability which is the square of the indicators loadings ranges from 0.634 to 0.837, which are above the common threshold criterion of 0.50 (Hair *et al*, 2014). These results show that all the indicators are reliable and the measurement model is strong. The implication of these results is that all the indicators are reliable and the measurement model is strong.

Table 1: Indicator Reliability

Latent Variable	Indicators	Loadings	IndicatorReliability
Activity Based Costing Application (ABCA)	ABCA1	0.825	0.681
	ABCA2	0.834	0.692
	ABCA3	0.811	0.658
	ABCA4	0.846	0.716
	ABCA5	0.847	0.717
	ABCA6	0.805	0.648
	ABCA7	0.806	0.650
Activity Based Management Capability (ABMC)	ABMC1	0.849	0.721
	ABMC2		0.797
	ABMC3		0.80
	ABMC4	0.869	0.755
	ABMC5	0.853	0.728
	ABMC6	0.839	0.704
Customers Value Enhancement (CVE)	CVE1	0.898	0.806
	CVE2	0.915	0.837
	CVE3	0.900	0.810
	CVE4	0.856	0.733
Life Cycle Costing Orientation (LCCO)	LCCO1	0.796	0.634
	LCCO2	0.871	0.759
	LCCO3	0.902	0.814
	LCCO4	0.855	0.731

Source: Researcher's SmartPLS 3.0 Results

CONSTRUCT INTERNAL CONSISTENCY RELIABILITY

Table 2 shows the constructs (variables) consistency reliability tests results. These are: – Cronbach's Alpha and Composite Reliability (CR) tests. From the table, the Cronbach Alpha and the Composite Reliability (CR) values of all the latent variables in the study were above the required value of 0.70 (Hair, Ringle & Sarstedt, 2011). These results show that internal consistency reliability has been demonstrated.

CONVERGENT VALIDITY

Convergent validity was tested using Average Variance Extracted (AVE) test. From Table 2, the AVE values of all the constructs in this model are greater than 0.5 stipulated by Hair *et al.*, (2011). This result shows that convergent validity is confirmed and the model is adequate.

Table 2: Construct Reliability and Validity

Latent Variable	Cronbach Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Activity Based Costing Application (ABCA)	0.922	0.924	0.681
Activity Based Costing Application (ABCA)	0.934	0.936	0.752
Customers Value Enhancement (CVE)	0.915	0.918	0.797
Life Cycle Costing Orientation (LCCO)	0.904	0.910	0.723

Source: Researcher's SmartPLS 3.0 Results

Discriminant Validity

The Heterotrait – Monotrait (HTMT) ratio the modern method of testing discriminant validity (Henseler, Ringle and Sarstedt (2015), was carried out to confirm that the manifest variable in any construct is relevant to the designated latent variable. Table 3 shows the result of HTMT ratios for each pair of latent variables, the values are all below the criterion of HTMT_{0.90} as a cutoff, hence, the results therefore indicates that discriminant validity was met in this study using HTMT ratio. Overall, all the latent variables or constructs have been appropriately measured and so could be used for further analysis.

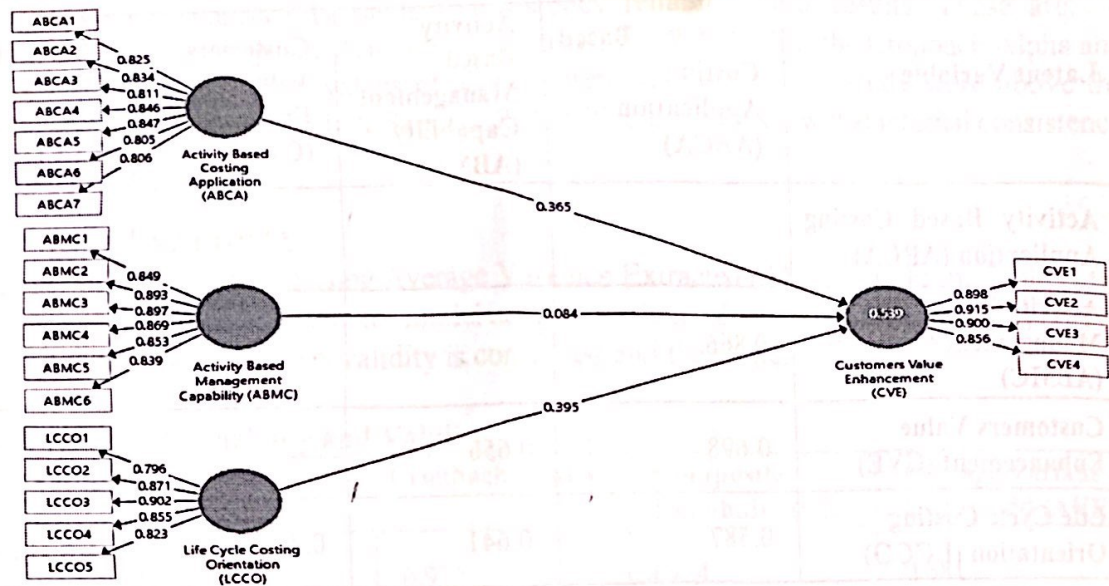


Figure 2: (SmartPLS 3.0 Algorithm results)

Assessment of Path Coefficient of the Structural Model and Test of Hypotheses

The results of the bootstrapping process in PLS – SEM can be seen in Table 4 and the appendix. From the table, the path coefficients, and their p- values can be seen.

TESTING OF HYPOTHESES

Hypothesis 1: Activity based costing (ABC) does not significantly influence Customer value enhancement (CVE)

The result in Table 4 shows that Activity based costing (ABC) has a significant positive influence on Customer value enhancement (CVE) ($\beta = 0.365$, $p < 0.01$). This indicates that Customer value enhancement varies in the same proportion with changes in Activity based costing, thus showing a significant positive relationship between the two variables. Hence, hypothesis one is not accepted.

Hypothesis 2: Activity based management (ABM) does not significantly influence Customer value enhancement (CVE)

This hypothesis defines the relationship between Activity based management and Customer value enhancement. As can be seen in Table 4 Activity based management has a positive insignificant influence on Customer value enhancement (CVE) ($\beta = 0.084$, $p > 0.10$). The results clearly show a very weak relationship between the hypothesized variables. Hence the hypothesis two accepted.

Hypothesis 3: Life cycle costing (LCC) does not significantly influence Customer value enhancement (CVE)

From Table 4, Life cycle costing (LCCO) has a direct positive significant influence on Customer value enhancement (CVE) ($\beta = 0.395$, $p < 0.01$). This implies that Customer value enhancement

varies in direct proportion to Life cycle costing orientation (LCCO) thus showing a significant positive relationship between the two variables. Hence, hypothesis three is not accepted.

Table 4: Path Coefficients with Significance Value1

Paths	Hypothesis	Coefficient (β)	Standard Deviation	T- Stats (β /Std Dev.)	P -Values	Significant?
ABCA -> CVE	¹	0.365	0.100	3.650	0.000*	Yes
ABMC -> CVE	²	0.084	0.108	0.778	0.439	No
LCCO -> CVE	³	0.395	0.084	4.702	0.000*	Yes

Note: * $p < 0.01$

Source: Reearcher's Smart PLS 3.0 Results

DISCUSSION OF RESULTS

Activity based costing and Customer value enhancement

The result of testing of hypothesis (H_{01}) is that activity based costing significantly influence customer value enhancement. This implies that the implementation of activity based costing in the sampled companies leads to customer value enhancement. One of the goals of strategic cost management is to enhance the value received by customers so that the firm can continue to make profit. It is only when customers are having value for their money that they will continue to patronize the company's product. This findings is consistent the study of El - Dyasty (2007) who reported that ABC technique implementation ensures customer value enhancement which could translate to increase in firm's performance.

Activity based management and Customer value enhancement

The testing of hypothesis (H_{02}) defined the relationship between the above variables and from the result, it can be concluded that activity based management though positively relates to Customer value enhancement but has no significant impact on the latter. Hence, the implementation of activity based management (ABM) technique in the sampled companies did not lead to customer value enhancement. This finding is not consistent with the study of Blocher *et al.* (2001) who found that ABM application can improve the value for customers and profits of the company. It is also at variance with Hooshang (2004) who reported that ABM application can enhance customer's value through value chain analysis. The result of this current study could be due to the manner in which activity based management was implemented in the sampled companies. The technique implemented may not focus on customer value, hence the right result may not be achieved.

Life cycle costing and Customer value enhancement

The testing of hypothesis (H_{03}) resulted in the decision that Life cycle costing significantly influence Customer value enhancement in the sampled companies. Thus the implementation of life cycle costing (LCC) in the sampled firms do positively influence Customer value enhancement (CVE). The effective management of product cost and quality throughout its life span could lead to cost reduction and enhancement of customer value. This finding support Petrova and Zarudnev (2013) who found that a successful implementation of LCC provides customer value enhancement.

The finding is also consistent with Ilic, Milicevic, Cvetkovic (2010) and Bengu and Kara (2010) who found that life cycle costing application enhances customer value.

CONCLUSION AND RECOMMENDATION

Activity based costing, and life cycle costing techniques do have impacts on customer value enhancement; while activity based management technique has little influence on customer value enhancement. From the findings of this study it can be said that the implementation of strategic cost management will improve customer value enhancement in the market place.

Arising from this study, the following recommendations are made:

- i) To enhance customer value, manufacturing firms should deploy activity - based costing and life cycle costing techniques in their cost management systems.
- ii) Further study should be carried to validate the finding of this study which held that activity based management does not influence customer value enhancement.

REFERENCES

- Adigbole, E.A. (2018). Strategic Cost Management and Performance of Selected manufacturing firms in Lagos and Ogun states, Nigeria. *Unpublished Doctoral Thesis*. University of Ilorin, Nigeria.
- Arto, K. (1994). Life cycle cost concepts and methodologies. *Journal of Cost Management*, 8(3), 28-32.
- Asiedu, Y. & Gu, P. (1998) Product life cycle cost analysis: State of the art review. *International Journal of Production Research*, 36(4), 883-908.
- Baines, A. & Langfield-Smith, K. (2003). Antecedents to management accounting change: A structural equation approach. *Accounting, Organizations and Society*, 28, 675 - 698.
- Barney, J. (1991). Firm resources and sustained competitive advantages, *Journal of Management*, 17 (1), 99-120.
- Bekcioğlu, S., Gurel, E., & Kizilyalcin, D. A. (2014). Activity- based costing: an application in the olive sector. *The Journal of Accounting and Finance*, (62), 19-36.
- Bengu, H. and Kara, E (2010). Product life cycle costing methodology. *Banking and Finance Letters*, 2, (3), 325 – 333.
- Blocher, E., Staut, D., Stocius, K. and Chen, K. (2008). *Cost Management: A Strategic Emphasis*. Boston: Mc Graw-hill, Irwin.
- Blocker E, Stout, D. & Cokins, G. (2006), *Cost Management: A Strategic Emphasis* (4th Edition), Boston: McGraw-Hill, Irwin.
- Cooper, R. & Slagmulder, R. (1998). Strategic Cost Management: The scope of strategic cost management. *Management Accounting*, 79 (8), 16-18.
- Cooper, R. & Slagmulder, R. (2004): Achieving full-cycle cost management. *MIT Sloan Management Review*, 46 (1), 45-52.
- El-Dyasty, M. M. (2007). A framework to accomplish strategic cost management. Retrieved January 2, 2018, from http://papers.ssm.com/sol3/papers.cfm?abstract_id=704201

- Hair, J.F., M., Ringle, C.M. & Sarstedt, M., (2011). PLS –SEM: Indeed a silver g research. *Journal of Marketing Theory and Practice*, 19(3), 139 - 151.
- Hair, J. F., Thomas, G., Hult, M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Washington DC: SAGE Publications.
- Hair Jr, J., Sarstedt, M., Hopkins, L., & Kuppelwieser, G. V. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106-121.
- Hansen, R. & Mowen M. (2000), *Cost management: Accounting a control*. (3rd ed.). Ohio: South Western College Publishing.
- Hilton, R., Maher, M., Selto, F. & Sainty, B. (2001). *Cost Management: Strategies for Business Decisions*, 3rd Ed. New York: Mc Graw Hill./ Irwin.
- Hooshang, M. B. (2004). Gaining and sustaining competitive advantage with activity based cost management system. *Industrial Management and data systems*. 104 (5), 377 – 383.
- Horngren, C., Foster, G. & Datar, S. (2000). *Cost Accounting: A Managerial Emphasis*, 10thed. New Jersey: Practice – Hall Inc.
- Illic, B., Milicevic, V. and CVetkovic, N. (2010). The Strategic Cost Management and the Product Life Cycle Concept. *Megatrend Review*, 7(1), 193-208.
- Imeokparia L.(2013). *Activity-Based Costing and the Performance of Manufacturing Industries in South-Western Nigeria*. Unpublished Doctoral Thesis in Business Administration, Babcock University, Nigeria. 1-2.
- Kaneko, P., Ussahawanitchakit, P and Muenthaisong, K.,(2013). Strategic target costing effectiveness and goal achievement: Empirical evidence from exporting gem and jewelry Business in Thailand, *International Journal of Business Strategy*, 13 (3), 127-157.
- Kaplan, R.S. 1992. In defense of activity based costing management. *Management Accounting*, November: 58-63.
- Kotler, P. (2017). Customer Value Management. *Journal of creating Value*, 3(2), 170-172.
- Krumwiede, K. & Roth, H. (1997). Implementing information technology innovations: the activity-based costing example. *S.A.M. Advanced Management Journal*, 62, (4), 4- 3.
- Kubáňková, M & Hyršlová, J. (2014). Life cycle perspective of R & D investment management: case study approach. *European Financial and Accounting Journal*, 9(3) 4- 24.
- Kumar A. & Shefabi, K.K. (2011). Strategic Cost Management-Suggested Framework for 21st Century. *Journal of Business and Retail Management Research (JBRMR)*, 15(2), 118-130.
- Lindholm, A & Suomala, P. (2005): Present and future of life cycle costing. *The Finnish Journal of Business Economic*, 54(2), 282-292.
- McNair, C. (2000). Defining and Shaping the Future of Cost Management. *Journal of Cost Management*, September/October, 28-32.
- McNair C.J, Polutnik, L & Silvi R (2001a). Cost management and value creation: The missing link. *European Accounting Review*, 10 (1) 33-50).
- McNair C.J, Polutnik, L & Silvi R (2001b). Customer value: a new kind of cost management. *The Journal of Corporate Accounting and Finance*, 12(3), 9-1
- Petrova, A.I & Zarudnev A.I. (2013). Strategic cost management. *European Researcher* 4(4), 1009-1013.

- Qian, L., & Ben-Arieh, D.(2008). Parametric cost estimation based on activity-based costing: A case study for design and development of rotational parts. *International Journal of Production Economics* 113, 805–818.
- Ringle, C. M. (2006). Segmentation for path models and unobserved heterogeneity: The finite mixture partial least squares approach. *Research Papers on Marketing and Retailing* 35, University of Hamburg, Hamburg.
- Sakurai, M. (1996). *Integrated Cost Management: A Companywide Prescription for Higher Profits and Lower Cost*, Portland, M Oregon: Productivity Press.
- Shank, J. & Govindarajan, V. (1989): Strategic Cost Analysis: The Crown Cork and Seal Case. *Journal of Cost Management*, Winter, 5-27.
- Teece, D.J. , Pinsno, G., & Shuen, A. (1991) Dynamic capabilities and strategic management, *Working Paper, Centre for Research in management*, Barkley.
- Theriou, N. G. , Aggelidis, V. , & Theriu, G. N., (2009), A theoretical framework contrasting the resources – based perspective and the knowledge – based view, *European Research Studies*, XII, I (3), 177-190.
- Tontiset, N. & Ussahawanitchakit, P. (2009). Effects of cost management effectiveness on cost information usefulness, corporate competitiveness and firm success: an emperical study of Thai Manufacturing Firms, *Journal of Academy of Business and Economics*, 9 (2), 91-101.
- Turney, P. (1996). *Activity-Based Costing: The Performance Breakthrough*. London: Peter B B Publication.
- Jlaga, W.& Eggert, A. (2002). Customer perceived value: A substitute for satisfaction in business market. *The Journal of Business and Industrial Marketing*, 17 (2-3), 10- 12.
- Woodward, D. G. (1997). "Life cycle costing-theory, information acquisition and application." *International Journal of Project Management*, 15(6): 335–344.