



Effect of Cost Accounting Information on Firm Value: A Study of Small and Medium Size Enterprises in Anambra State, Nigeria

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ABSTRACT

This study is carried out to determine if cost accounting information has any effect on the value of business entities. The study focused on small and medium size enterprises that are operating within Anambra state. Primary data was obtained from the SMEs sampled for the study by means of questionnaires administered to four key officers in each company. Data obtained for the study was presented by means of table while Z test was employed to test the hypotheses of the study. The result of the analyses confirmed that cost accounting information has some significant effect on firm value. Our study thus, recommended that all business entities to have in place an effective cost accounting system so that management is availed with cost accounting information that will help in making strategic decisions. Again, small size firm that could not afford a robust cost accounting system could have a specialty department dedicated to provide cost accounting information for the costs that are of high quality in order to make the optimal resolution and thereby lower firm cost

Keywords: Cost accounting information, contribution margin, sales value and Customers satisfaction

INTRODUCTION

It is widely held that private sector entities play pivotal roles for sustainable economic growth and development in every nation. The role of the private sector particularly the Small and Medium size Enterprises (SMEs) to economic growth sustainability cannot be overemphasized. The Small and medium scale enterprises (SMEs) sector has been recognized worldwide for its role in economic advancement through various ways such as job / employment creation, wealth generation and poverty reduction (Baskar T, 2018). The SMEs being a fundamental part of the economic fabric in most developing countries play a very important role in furthering growth, innovation and prosperity.

According to the Central Bank of Nigeria, (2019) Small and Medium Enterprises possess great potentials for employment generation, improvement of local technology, output diversification, development of indigenous entrepreneurship and forward integration with large scale industries. They are therefore critical to the development of any economy. Proper documentation of the operating activities of the enterprises is very important so as to have bases for performance measuring. The accounting systems show the books, records, voucher, and files and related supporting data resulting from the application of the accounting process. It involves the design of documents and transactions flow through an organization. While the financial accounting system is concerned with capturing of business transactions in such a manner that will lead to the preparation of financial statements, the cost accounting system is designed to track cost of business activities, analyze them and provide cost information to management.

The cost accounting system is an important resource of an organization as it works to provide management practice with necessary information for decision-making (Langfield-Smith et al, 2009). It also plays a key role in the provision of an integrated vision of the organization to align its capabilities and resources available to them, and their areas of work for the purpose of optimizing use of these resources in the case of the use of data and information in an efficient and effective manner. For an organization, the decision to set prices has a direct impact on the revenue it can earn. It is worthy to note that an efficient price relies on market forces of demand, competition and costs. Price and volume are the two components of the revenue equation, and the choice to focus on one will directly affect the other (Adeniji 2011). If the price is set too high customers' loyalty may be adversely affected, but a high price may also associate with desirability to the customer. If a business can achieve an efficient price for its product revenue will be maximized. Thus cost accountants must understand the functions of the business's value chain, from manufacturing to marketing to distribution to customer service (Azad, R. & Akbari, F. (2016) especially when the company is operating in a highly competitive environment.

Cost accounting is a task of collecting, analyzing, summarizing and evaluating various alternative courses of action. Its goal is to advise the management on the most appropriate course of action based on the cost efficiency and capability. Cost accounting provides the detailed cost information that management needs to control current operations and plan for the future. Business entities have realized that information is a costly assets and have questioned the necessity of acquiring additional information. Cost accounting information is the output of the cost accounting system. It is considered as one of the important requirement for effective decision making by management. Given the important roles of SMEs in an economy, it becomes quite

reasonable to examine factors that affect their performance which is a major determinant of their survival and growth. This study is aimed at assessing the effect of cost accounting information on the performance of SMEs in Nigeria.

While most literature have dealt with Management accounting information and firms performance, others talked about Financial accounting information and firm performance. This study is set out to examine the extent to which information from cost accounting system has helped in adding value to the Small and Medium size Enterprises operating in Nigeria.

The purpose of this study is to examine the effect of cost accounting information on performance of SMEs.

The specific objectives include:

- i. To investigate the effect of cost accounting information on contribution margin of SMEs in Anambra state, Nigeria
- ii. To investigate the effect of cost accounting information on sales value of SMEs in Anambra state
- iii. To assess the effect of cost accounting information on customer satisfaction

Research Questions

- i. To what extent has cost accounting information improved the contribution margin of SMEs in Anambra State?
- ii. To what extent has cost accounting information improved sales value of SMEs in Anambra State?
- iii. To what extent has cost accounting information helped in achieving customer satisfaction?

Research Hypotheses

- H₀₁. Cost accounting information has no significant effect on contribution margin of SMEs in Anambra state.
- H₀₂ Cost accounting information has no significant effect on sale value of SMEs in Anambra state.
- H₀₃ Cost accounting information has no significant effect on customer satisfaction of SMEs in Anambra state.

Review of Related Literature

Cost accounting is the process of recording, classifying, analyzing, summarizing, and allocating costs associated with a process, after that developing various courses of action to control the costs. Its goal is to advise the management on how to optimize business practices and processes based on cost efficiency and capability. Cost accounting provides the detailed cost information that management needs to control current operations and plan for the future (Edward, 2013).

Various aspects of cost accounting abound (1) Activity Based Costing (ABC)- a system of costing that allocates overhead costs to cost objects by first allocating resources to activities that consumed it and thereafter allocates activities to the cost object that cause the activities to be performed (Ezeala G., Nzewi U & Ezekwesili T, 2022). It utilizes cost drivers to attach activity costs to outputs (Chartered Institute of Management Accountants, 2005). (2) Environmental Accounting- a field that identifies use of resources, measures and communicates costs of a company's impact on the environment. Costs include costs to clean up or remediate contaminated sites, environmental fines, penalties and taxes, purchase of pollution prevention technologies and waste management costs (United Nations, 2003). (3) Project Accounting- a specialized form of accounting that corresponds to the ever-evolving needs of project delivery, which helps adequately track, report and analyze financial results and implications. This includes the practice of creating financial reports specifically designed to track the financial progress of projects, which can then be used by managers to aid project management (Lachal 2016). Project accounting include: a separate accounting system or cost centre to track and report project specific transactions, with project revenues, costs, assets and liabilities identified and allocated to the project. (4) Resource Consumption Accounting (RCA)- a dynamic, integrated, and comprehensive management accounting approach that provides managers with decision support information for enterprise optimization. RCA is a relatively new management accounting approach based largely on the German management accounting approach Grenz Plan Kostenrechnung (GPK) and also allows for the use of activity-based drivers. (5) Standard Cost Accounting- a traditional cost accounting method introduced in the 1920s, Edward N et al (2014) as an alternative for the traditional cost accounting method based on historical costs. (6) Target Costing- an approach to determine a product's life-cycle cost which should be sufficient to develop specified functionality and quality, while ensuring its desired profit. It involves setting a target cost by subtracting a desired profit margin from a competitive market price (Cooper & Slagmulder (1997). (7) Life Cycle Costing- the total cost of ownership over the life of an asset (Association of Local Government Engineers, 1988). The concept is also known as "Life-cycle cost" (LCC) or Lifetime cost, (National Housing Federation, London Region, 2010).

Basic cost elements

Cost elements are those things that bring cost into being; they include Raw Material, Wages and other overhead costs.

Contribution Margin

This represents the portion of sales revenue that is not consumed by variable costs and so contributes to the coverage of fixed costs. Contribution margin analysis is a measure of how growth in sales translates to growth in profits. It is calculated by subtracting variable cost per unit from selling price per unit.

Sales Value / Revenue

Revenue may be referred to as the gross receipt that accrues to an entity from the normal trading activities. It is a calculation or estimation of periodic income based on a particular standard accounting practice or the rules established by a government or government agency (Carcello, 2008). Sale revenue is computed by multiplying the number of unit of goods sold by selling price per unit.

Customer Satisfaction

Customer satisfaction is a measure of how products and services supplied by a company meet or surpass customer expectation. It is defined as the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals (Farris, Neil, Philip & David, 2010). In a nut shell, it is the ability of a company to retain existing customers (Gitman & Carl, 2005).

Empirical Review

Iyibildiren & Karasioglu (2017) conducted a study which was aimed at to explore the applications related to performance measurement and management accounting in the enterprises operating in Konya Organized Industrial Zone. A study was conducted on a sample of 385 enterprises operating in Konya Organized Industrial Zone. The relationships between usage of the instruments of management accounting, performance measurement and importance level of performance scorecard were used by researchers to proxy perception towards the business performance. To test the harmony of the variables with each other, their capacity of explaining each other, and the statistical significance of the variables and the model, researchers employed Pearson's correlation coefficients analysis and regression analysis with the aid of SPSS. Findings showed that the variables of use of management accounting, performance measurement, and importance of performance scorecard are significant in explaining the perception towards business performance

Bukunmi, Olusola & Adebayo (2018) assessed the effectiveness of accounting information as a tool for management decision in manufacturing companies in Osun state, Nigeria. Data were sourced primarily with the aid of structured questionnaire from one hundred and fifty top management staff statistically selected from the selected manufacturing companies in Osun State, Nigeria. They employed t-test statistical tool with the aid of Statistical Package for Social Sciences (SPSS) version 20 to analyze data for the study. Result of data analyses carried out confirmed a positive relationship between accounting information and management decisions in manufacturing organizations. Based on this, the study recommends that adequate awareness and effective utilization of various accounting tools should be incorporated into decision making processes as this will impact on human resources investment and enhance appropriate strategies for introduction of new products into markets.

Saeidi (2014) evaluated the impact of accounting information systems on financial performance. Primary data was obtained by means of questionnaires administered on top managers of company under study. Data for the study was analyzed using t-test with the aid of Statistical Package for Social Sciences (SPSS). Findings showed that accounting information systems has some significant effect on firm's financial performance.

Al-Mawali (2013) assessed performance consequences of management accounting system information usage in Jordan. Data were collected from manufacturing companies listed in Amman Stock Exchange. Primary data was obtained by means of questionnaire administered on top managers of the 65 sampled companies under the study. To test the study's hypothesis, a two-step hierarchical regression was used. The findings from this study showed that there exist a contingent relationship between management accounting system information and organizational performance. The results of this study provided ample confirmation on the role of the usage of management accounting system information in enhance the manufacturing companies performance in Jordan.

Alahdal, Alsamhi & Purusty (2016) examined the effect of Cost Accounting System in the pricing decision making in industrial companies of Taiz City, Yemen. Researchers sourced primary data from the sampled companies with the aid of questionnaire administered to the cost accountants, auditors and managers of financial department of each company. Researcher carried out frequencies and percentages, SMA, Standard deviation, t-test, Cronbach's alpha test with the help of the Statistical Package for Social Sciences (SPSS) to analyze data for the study. The results indicate that (1) the cost of the accounting system applied in industrial companies provides quality accounting information (2) there is an impact of this information on the pricing decision-making (3) there are areas in which pricing decisions much depend on the information provided by the cost accounting systems. This study contributes to the literature by providing an analysis of the role of cost information in pricing decisions within industrial companies in the Taiz city, Yemen.

Ameen, Ahmed & Hafez (2018) assessed the impact of management accounting and how it can be implemented into the organizational culture. Using descriptive analysis the researchers concluded that management account is of great value to organizations. They recommended that management accounting be adopted as a culture within the organization.

Ebipanipre & Ihenyen (2014) carried a study to determine the effect of environmental cost accounting information and strategic business decision in Nigeria. Secondary data was employed and a linear model was specified. Findings indicated that environmental cost accounting information as it relates to strategic business decision is value-relevant. The study, based on the findings, recommended firms to constantly reposition their accounting system in order to provide information on environmental costs so that the true costs in an organization can be ascertained and properly allocated. The study further recommended that due attention should be paid to waste management costs, employee health costs, investment financing costs, compliance and environmental costs and all environmental related costs by manufacturing concerns since they influence strategic decision.

Boyd & Cox (2010) examined the effect of cost accounting information on optimal decision making. They compare the results of using four different cost accounting systems (traditional cost accounting, activity-based costing, direct costing, and throughput accounting) in a resource-constrained production environment in order to make two categories of decisions that managers frequently use cost accounting information to make. The research design includes a survey of manufacturing managers to determine what decisions cost accounting information is used to make, and a simulation model to determine the results of the decisions. The results of the four cost accounting models are compared with a linear programming solution. The study found that the through-put accounting model in all cases made the same decision as the linear programming model, but the other three cost accounting systems generally produced suboptimal results. They concluded that for a cost accounting system to provide information for optimal decisions, it must (1) be aware of production constraints, and (2) not use allocated costs.

Cohen & Kaimenaki (2011) did an empirical analysis of cost accounting systems structure and information quality properties. In their study, the researchers expressed cost accounting systems structure is defined in terms of the level of detailed information existence, the cost disaggregation according to behaviour, the scope of variances calculation and the frequency of cost information provision. In a similar way, they viewed cost information quality usefulness by the users in terms of relevance, accuracy, timeliness, usability, compatibility with their needs, up-to-datedness, reliability and thoroughness for decision-making purposes. In order to investigate the existing relationships, data were gathered from 119 leading Greek manufacturing companies via a questionnaire survey. Using correlation statistics, researchers were able to test the relationships among cost accounting systems structure and information quality properties through an integrated framework of cost system design and use. The empirical findings indicate that the majority of cost accounting systems structure characteristics exert a statistically significant positive influence on cost information quality dimensions. Only the systems' ability to disaggregate costs according to behaviour and their capability to generate customized to user specifications reports were not found to be statistically significantly associated with information quality.

Ai-Khadash & Feridun (2016) assessed the impact of strategic initiatives in management accounting on corporate financial performance. They investigated the link between the practice of Activity Based Costing (abc), Just-in-Time (jit), and Total Quality Management (tqm) as strategic initiatives and the improvement in corporate financial performance of industrial shareholding companies in Jordan. Primary data was obtained from financial managers of the 59 companies under study. Researchers employed Ordinary Least Squares Regression analysis to test the association between the awareness level of the importance of using the initiatives and the level of adopting these initiatives. It is also used to identify the improvement in Return on Asset as a mean of financial performance which is associated with the initiatives. Analysis shows that 26.8% of the companies under consideration use at least one of the strategic initiatives. In addition, the awareness level of the importance of using the strategic initiatives is found to be significantly high among the financial managers, but such awareness is not reflected in the implementation of these initiatives. Furthermore, strong evidence emerges that the use of strategic initiatives leads to improvement in financial performance of the companies under consideration.

Ezejiofor (2016) Analysis of Cost Management on Performance of manufacturing companies in Nigeria. Secondary data were extracted from five years Annual accounts and reports of five (5) food production companies. Researchers employed Simple Regression Analysis was used with the aid of SPSS version 20.0 in ascertaining the significant effect between cost management, operating profit and earnings per share of sampled firms. The study revealed that there is a significant effect between cost management, operating profit and earnings per share in Nigerian corporate firms. Based on the findings, the study recommends that Nigerian corporate firms should adopt modern strategic cost management method for effective operation to enable them to be at advantage in competing with their contemporaries in foreign country.

Maziriri & Mapuranga (2017) examined the impact of management accounting practices on the business performance of small and medium enterprises within the Gauteng province of South Africa. The study was positioned within a quantitative research approach and data was collected from 380 SME managers who were selected by means of the probability simple random sampling technique. The hypothesized relationships in the research model were assessed using multiple regression analysis with the aid of the Statistical Package for the Social Sciences (SPSS), version 24.0. Result from the data analysis showed that management account practices positively influences the business performance of SMEs.

Mustafa & Kasa (2016) assessed the use of managerial accounting as a tool for decision making by manufacturing companies in Albania. Researchers conducted semi structured interviews in major ten manufacturing companies in the main industrialized areas of Albania to obtain primary data for the study. By way of descriptive analysis the researchers arrived at their findings. The analysis revealed that managerial accounting techniques are not widely used in Albanian

manufacturing companies. The study highlighted some points as being reasons for non application of managerial accounting techniques. Reasons such as Not knowing the importance of the accounting techniques, thinking and considering them as a waste of time, lack of skilled staff and most of the decisions are taken by the owner himself alone were mentioned.

Rizgar, Sardar & Kareem (2015) verified the impact of management accounting techniques on achieve competitive advantage. The study covered seven Iraqi for soft drink firms a survey was conducted using a quantitative approach where the researchers distributed 64 questionnaires to select respondents. Management accounting techniques which was the independent variable consists of six tools, namely, Total Quality Management, Business

Process Reengineering, Activity Based Management, Activity basic cost, Target Costing and Just in Time. They expressed the dependent variable in terms of cost leadership, differentiation and focus. Primary data was sourced with the aid of questionnaires. They employed the entropy maximum general method to analyze the questionnaire survey. The findings reveal that there is a significant positive relationship between Management Accounting Techniques and competitive advantage.

METHODOLOGY

Research Design

This study adopted the expo-facto research design. An expo-facto research design is considered appropriate and suitable for this study due the fact that it examines the past effect relationship between the two variables. Our study seeks to find out the effect of cost accounting information on the performance of small and medium size companies.

Population of the study

The population of the study comprises of small and medium size enterprises registered with Corporate Affairs Commission, Anambra, Nigeria. Twenty three SMEs which were identified to be operating in Anambra state formed the population of this study.

Sampling technique and sample size

Due to the population size which is less than 50, the researcher decided to cover the whole SMEs so identified to be operating in Anambra state.

Method of data collection

The researcher obtained primary data through questionnaire administered to the 65 respondents which cut across the eighteen companies sampled for this study. The list of sampled companies is shown in appendix 1.

A five points likert scale was used to obtain data from respondents in such a way that respondents indicate in the questionnaire the extent to which they agree, disagree or undecided to each statement put before them by the researcher. Weights were assigned to each point in the scale as shown below.

Strongly Agree (SA)	= 5 points
Agree (A)	= 4 points
Undecided (U)	= 3 points
Disagree (DA)	= 2 points
Strongly Disagree (SD)	= 1 point

Sample element

The sample element comprise of the accountant, the production manager, the cost accountant and one other senior officer in each of the entities. For each company identified, the researcher administered four questionnaires. Thus our population element is made up of ninety-two (92) respondents (ie 23 * 4).

However, out of the 23 companies identified, only 18 granted us audience to administer our questionnaires which amounted to seventy-two respondents (ie 18 * 4). However, seven out of the seventy-two questionnaires administered were not returned, thereby leaving us with sixty-five (65) completed and returned questionnaires.

Method of Data Presentation and Analysis

Data collected for the research work was presented with the use of tables while Z-test statistical tool was used to test hypotheses of the study.

Application of Z-test is employed when a researcher desires to test if there is any significant difference between the means of two populations.

Z-test is considered appropriate for this study because the researcher wishes to determine whether the mean of the sample (responses) differ significantly from the hypothesized mean of 3 that represents the population mean. A mean score of 3 and above is considered to be an acceptable mean score while a mean score of any other number below 3 is considered unacceptable mean score and therefore rejected.

The rule is to accept the null hypothesis and reject the alternative hypothesis if Z-test calculated is less than the Z-test obtained from the statistical table at 5% level of significance. From the table, Z-score at 5% level of significance gave a value of 1.64.

Z-test statistics = [sample mean (x) – population mean/ standard deviation]/square root of n.

Where:

Sample mean = [summation x]/n

Population mean = $\mu = \frac{\sum NR \cdot n}{n}$

NR= Number of Respondents

n= number of questions

Standard Deviation (SD) = $\sqrt{\frac{\sum (x - \bar{x})^2}{n}}$

Decision rule

The rule is to accept the null hypothesis and reject the alternative hypothesis if the Z-test calculated is less than the Z-test obtained from the statistical table. But if the Z-test calculated is greater than the Z-test from the statistical table, then we reject the null hypothesis and accept the alternative hypothesis. Again, accept null hypothesis if Sig value in the ANOVA results is more than 0.5 and reject null hypothesis if Sig value is less than 0.5

Data Presentation And Analysis

Data extracted from our questionnaire is presented in tables in appendix 1, 2 and 3 below while

the analyses was done using mean and standard deviation. ANOVA and Z-test were used to test the hypothesis because the sample size was above thirty (30). The test was based on 5% level of significance.

Test of hypothesis one

To what extent has cost accounting information improved contribution margin of SMEs in Nigeria. The response to this question is shown in Table 1 below:

Table 1: Responses as to whether cost accounting information improves contribution margin of SMEs in Nigeria

S/N	STATEMENT	SA [5]	A [4]	U [3]	D [2]	SD [1]	Total	No. of Respondents	Mean Score	Decision
1	Company keeps track of material costs purchased for production	23 (115)	31 (124)	9(27)	1 (2)	01(1)	269	65	4.138462	Accept
2	production Labour and other direct costs are separately identified and documented	21 (105)	31 (124)	11 (33)	2 (4)	0 (0)	266	65	4.092308	Accept
3	Company has a unit / department that tracks production cost and make report to management	23 (115)	34 (136)	6 (18)	1 (2)	1 (1)	272	65	4.184615	Accept
4	Company keeps record of contribution per unit of product	24 (120)	35 (140)	5 (15)	0 (0)	1 (1)	276	65	4.246154	Accept
5	there is steady increase in contribution per unit of product	22 (110)	38 (152)	5 (15)	0 (0)	0 (0)	277	65	4.261538	Accept

Source: Research instrument

Hypothesis One

H₀: Cost accounting information has no significant effect on contribution margin of SMEs in

H₁: Cost accounting information has some significant effect on contribution margin of SMEs in Nigeria.

This hypothesis is tested with the data in table 1a above together with appendix 2a.

Mean of sample (x): $\frac{\sum X}{n} = \frac{1360}{5} = 272$

Mean of population (u): $\frac{\sum NR \cdot n}{n} = \frac{1360}{5} = 272$

Standard deviation (SD): (summation X-Bar square / square root of n)

SD = 86/ square root of 5 = 17.2

Z-test calculated = [mean of sample – population mean] / SD

Z-test calculated = [272.8 – 195] / 17.2 = 4.477

Z-test from the statistical table at 5% level of significant = 1.96

Decision

Since the Z-test calculated above (i.e. 4.477) is greater than the Z-test from the statistical table (i.e. 1.96) at 5% level of significant we therefore reject the null hypothesis and accept the alternative hypothesis which states that cost accounting information has some significant effect on contribution margin of SMEs in Nigeria.

Test of hypothesis two

To what extent has cost accounting information improved sales values of SMEs in Nigeria. The response to this question is shown in Table 2 below:

Table 2: Responses as to what extent cost accounting information has improved sale value of SMEs in Nigeria

S/N	STATEMENT	SA [5]	A [4]	U [3]	D [2]	SD [1]	Total	No. of Respondents	Mean Score	Decision
6	Company has a competitive selling price	24 (120)	34 (136)	6 (18)	1 (2)	0 (0)	276	65	4.246154	Accept
7	Company determines selling price with reference to all direct costs	23 (115)	31 (124)	10 (30)	0 (0)	1 (1)	270	65	4.153846	Accept
8	Company has steady increase in gross revenue	21 (105)	31 (124)	11 (33)	2 (4)	0 (0)	266	65	4.092308	Accept
9	Company fixes selling price after due consultation with the cost accountant	24 (120)	35 (140)	4 (12)	1 (2)	1 (1)	275	65	4.230769	Accept
10	Company conducts regular review of production cost	22 (110)	38 (152)	4 (12)	1 (2)	0 (0)	276	65	4.246154	Accept

Source: Research instrument

Hypothesis Two

H₀: Cost accounting information has no significant effect on sales value of SMEs in Nigeria

H_i: Cost accounting information has no significant effect on sales value of SMEs in Nigeria

This hypothesis is tested with the data in table 2 above together with appendix 2b.

Mean of sample (x): [summation of X] / n = 1363/5 = 272.6

Mean of population (u): [3*65*5] / 5 = 195

Standard deviation (SD): [(summation X-Xbar) square / square root of n]

SD = [79.2 / square root of 5] = 35.42

Z-test calculated = [mean of sample – population mean] / SD

Z-test calculated = [272.6 – 195] / 35.42 = 2.19

Z-test from the statistical table at 5% level of significant = 1.96

Decision

Since the Z-test calculated above (ie 2.19) is greater than the Z-test from the statistical table (ie 1.96) at 5% level of significant we therefore reject the null hypothesis and accept the alternative hypothesis which states cost accounting information has some significant effect on sales value of SMEs in Nigeria.

Test of hypothesis Three

To what extent has cost accounting information helped to achieve customer satisfaction for SMEs in Anambra state, Nigeria?

The response to this question is shown in Table 3 below:

Table 3: Responses as to what extent has cost accounting information helped to achieve customer satisfaction for SMEs in Anambra state, Nigeria.

S/ N	Statement	SA [5]	A [4]	U [3]	D [2]	SD [1]	Total	No. of Respondents	Mean Score	Decision
11	Company has a steady increase in customer base	21 (105)	31 (124)	11 (33)	2 (4)	0 (0)	266	65	4.092308	Accept
12	Company has a steady increase in sales volume	23 (115)	31 (124)	10 (30)	1 (2)	0 (0)	271	65	4.169231	Accept
13	Company encourages feedback from customer with regards to products price and after sale services	24 (120)	34 (136)	6 (18)	1 (2)	0 (0)	276	65	4.246154	Accept
14	Company has limited time within which customer complaint must be addressed	24 (120)	35 (140)	5 (15)	0 (0)	1 (1)	276	65	4.246154	Accept
15	Customer complaint about product price is copied to the cost accounting unit	22 (110)	38 (152)	5 (15)	0 (0)	0 (0)	277	65	4.261538	Accept

Source: Research instrument

Hypothesis Three

H₀: Cost accounting information has no significant effect on customer satisfaction of SMEs in Anambra state, Nigeria

H: Cost accounting information has no significant effect on customer satisfaction of SMEs in Anambra state, Nigeria

This hypothesis is tested with the data in table 3 above together with appendix 2c.

Mean of sample (x): [summation of X] / n = 1366/5 = 273.2

Mean of population (u): [3*65*5] / 5 = 195

Standard deviation (SD): [(summation X-Bar) square / square root of n]

SD = [86.8 / square root of 5] = 38.82

Z-test calculated = [mean of sample – population mean] / SD

Z-test calculated = [273.2 – 195] / 38.82 = 2.01

Z-test from the statistical table at 5% level of significant = 1.96

Decision

Since the Z-test calculated above (ie 2.01) is greater than the Z-test from the statistical table (ie 1.96) at 5% level of significant we therefore reject the null hypothesis and accept the alternative hypothesis which states cost accounting information has some significant effect on customer satisfaction in SMEs in Anambra state, Nigeria

Summary of findings, conclusion and recommendation

Summary

After the analysis of data collected for the study, the following findings were made:

- Cost accounting information has some significant positive effect on the contribution margin of small and medium size firms in Anambra state, Nigeria.
- Cost accounting information has some significant positive effect on the sales value of small and medium size firms in Anambra state, Nigeria.
- Cost accounting information has some significant positive effect in achieving customer satisfaction in small and medium size firms in Anambra state, Nigeria.

The researcher found that management of SMEs in Anambra state, Nigeria make use of cost accounting information in their decision making activities. This resulted in some positive impact on the performance of the SMEs as reflected in the contribution margin, sales value and customer satisfaction. This is in accord with Alahdal, Alsamhi & Prusty (2016) whose findings showed that cost accounting information is of great value to business organizations as it helps managers in making decisions; especially pricing decision. Furthermore, Ebipani & Ihenyen (2014), in their study, concluded that environmental cost accounting information as it relates to strategic business decision is value-relevant to business entities.

Conclusion and Recommendation

Based on the above summary of findings, we conclude that cost accounting information has some significant effect on firm value especially the small and medium size enterprises. Based on the conclusion above, the study hereby recommends as follows that:

- All business entities to have in place an effective cost accounting system so that management is availed with cost accounting information that will help them in making informed as well as strategic decisions.
- Small size firm that could not afford a robust cost accounting system could have a specialty department dedicated to provide cost accounting information for the costs that are of high quality in order to make the optimal resolution and thus lower cost

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Appendix 1

List of SMEs on which questionnaires were administered.

S/N	COMPANY NAME AND BUSINESS TYPE	LOCATION	No. of questionnaire administered
1	Adswitch Plc. Manufacturing & Marketing of Electrical Switchgear.	ANAMBRA	4
2	Juhel Pharmaceutical	ANAMBRA	4
3	Cometstar Cable and Wire Manufacturing Company Limited. Manufacturing of Electric cables and wires	ANAMBRA	4
4	Ibeto Group of Companies Cement Plc, Nnewi. Manufacturer of Cement and other building materials	ANAMBRA	4
5	Best Aluminium (Manufacturing) Co. Limited. Manufacturing of longspan aluminium roofing sheets.	ANAMBRA	4
6	Swiss Pharm. Manufacture of pharmaceutical products. No 1 Marine Road, Onitcha, Anambra State.	ANAMBRA	4
7	Onitsha Aluminium Manufacturing Company Limited. Manufacturing of aluminium cooking utensils, Corrugation of longspan roofing sheet, Fabrication of Doors and Windows.	ANAMBRA	4
8	Lento Nigeria Plc. Manufacturing of corrugated longspan aluminium roofing sheets, Step Tiles and Easy roofing Tiles	ANAMBRA	4
9	Chicason Group of Companies, Nnewi, Anambra. Manufacturer of A-Z Petroleum, Life vegetable oil etc.	ANAMBRA	4
10	Paucio Pharmaceutical Industry Nigeria Limited. Manufacturing of various pharmaceutical products	ANAMBRA	4
11	Emzor Pharmaceuticals. Manufacture of drugs and other pharmaceutical products. 5, Niger Bridge Road, Onitcha, Anambra State	ANAMBRA	4
12	Life Breweries Company Ltd. Brewing and Bottling of Beer and Carbonated Beverages	ANAMBRA	4
13	Sabmiller Company Ltd. Brewing and Bottling of Hero Beer, Castle Malt etc	ANAMBRA	4
14	Tummy-Tummy Industries Foods Ltd.	ANAMBRA	4
15	Crescent Springs Limited. Producer of Bottled and sachet water	ANAMBRA	4
16	Fino Plastics Industries Ltd. Plastics manufacturing company	ANAMBRA	4
17	Hardis and Dromedas Industry Nigeria Limited. Manufacturing of Cosmetics, Soaps, Weavon, Perfumes etc.	ANAMBRA	4
18	Amos Best Industry Limited. Manufacturing of Soaps, Perfumes, Cosmetics and Other Beauty Products	ANAMBRA	4

Source: Global market group & nigeriagalleria

Appendix 2a

Cost accounting information has no significant effect on contribution margin of SMEs in Anambra state, Nigeria

Question	SA [5]	A [4]	U [3]	D [2]	SD [1]	TOTAL (X)	Xbar	X-Xbar	X-Xbar square
1	115	124	27	2	1	269	272.8	-3.8	14.44
2	105	124	33	4	0	266	272.8	-6.8	46.24
3	120	136	18	2	0	276	272.8	3.2	10.24
4	120	140	15	0	1	276	272.8	3.2	10.24
5	110	152	15	0	0	277	272.8	4.2	17.64
						1364			98.8
						272.8			

Analysis of research instrument

Appendix 2b

Cost accounting information has no significant effect on sales value of SMEs in Anambra state, Nigeria

Question	SA [5]	A [4]	U [3]	D [2]	SD [1]	TOTAL (X)	Xbar	X-Xbar	X-Xbar square
6	120	136	18	2	0	276	272.6	3.4	11.56
7	115	124	30	0	1	270	272.6	-2.6	6.76

8	105	124	33	4	0	266	272.6	-6.6	43.56
9	120	140	12	2	1	275	272.6	2.4	5.76
10	110	152	12	2	0	276	272.6	3.4	11.56
						1363			79.2
						272.6			

Analysis of research instrument

Appendix 2c

Cost accounting information has no significant effect on customer satisfaction

Question	SA [5]	A [4]	U [3]	D [2]	SD [1]	TOTAL (X)	Xbar	X-Xbar	X-Xbar square
11	105	124	33	4	0	266	273.2	-7.2	51.84
12	115	124	30	2	0	271	273.2	-2.2	4.84
13	120	136	18	2	0	276	273.2	2.8	7.84
14	120	140	15	0	1	276	273.2	2.8	7.84
15	110	152	15	0	0	277	273.2	3.8	14.44
						1366			86.8
						273.2			

Analysis of research instrument