Management Accounting Practices and the Performance of Small and Medium-Sized Enterprises in Akwa Ibom State, Nigeria

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Research Article

Abstract

Purpose: *The study was designed to examine the effect of Management Accounting Practices (MAPs) on the performance on Small and Medium Scale Enterprises (SMEs) in Nigeria.*
Method: *The survey research design approach was employed using a structured questionnaire to gather data from 40 purposively selected SMEs operators for the population pool. Data were analyzed using descriptive and inferential statistical tools using SPSS version 20.*
Result: *Results showed a strong positive correlation between the dependent variable (firm performance) and independent variables (Costing System, Budgeting System, Performance Evaluation System, Decision Support System, and Strategy Management Accounting System).*
Implications: *The study recommends that the SMEs should avail themselves more with contemporary MAPs to ensure the profitability and sustainability of the businesses.*

Keywords: SMEs, MAPs, Sustainability, Performance**.**

1. Introduction

Small and Medium-Size Enterprises (SMEs) constitute a major part of businesses in the world today. They provide over fifty percent (50%) employment opportunities, sales, and other economic activities put together. Therefore, SMEs are important tools in sustaining economic growth and development among nations (Musa & Aisha, 2012; Ogujiuba, Fadila, & Stiegher, 2013,). Other avenues SMEs contribute to an economy include encouragement and development of entrepreneurship, utilization of labor-intensive technologies, reducing unemployment, generation of quick and rapid investment returns to operators; development of both inter and intraregional linkages; and improvement in the socio-economic objectives of different economies.

Mitchell & Reid (2000) further argued that SMEs provide such values to any economy because of how flexible the business is, which makes it easy to operate in any economy. To enhance these values, SMEs across different countries need to be strengthened. There is, therefore an increased attempt by the sector's shareholders, government, and government agencies as well as donor organizations to develop policies, programs, and strategies that would support and promote SMEs' activities through an integrated approach (Aris, 2017). In response, myriads of policies and programs, in different capacities, have been put in place to encourage SME operators in Nigeria. Regardless of these efforts, SMEs in Nigeria continue to fail over time. For instance, it is on record that 80% of SMEs fail within the first two years of commencement of operation (Yoshikwa, 1994; Boachie-Mensah & Marfo-Yiadom, 2005 and Aris, 2017). There has been a lot of researches to unravel the rationale for the continued failure of SMEs among scholars (Watson & Everett, 1996; Etim, 2013). The factors responsible for the failure as revealed by several studies borders on five specific areas; inability to cost their products (poor costing system), poor budgeting skills, inability to evaluate performances, inability to use decision support systems, and poor strategic management accounting skills (Wichman, 1993; Firth, 1996; Van-Triest & Eishahat, 2007; and Galbraith, 2013). Another important factor is poor Management Accounting Practices (MAPs), which involve costing techniques, budgeting, performance evaluation, and strategic management accounting (Hooper, Koga, & Goto, 1999). Past studies are of the view that MAPs are the means through which firms could become efficient and improve in their corporate performance (Ghosh & Chan, 1997; Lybaert, 1998; and Mitchell & Reid, 2015). In particular, MAPs could be of significance to SMEs in terms of efficient information – processing systems to management in planning, controlling, and decision-making (Reid & Smith, 2014).

Equally, effective application of MAPs could as well help firms by being competitive in the market, coping with market dynamics, thereby enhancing both their survival propensity and performance (Mia & Clarke, 2009 and Reid & Smith, 2014). Truly, merely practicing MAPs may not guarantee success across firms, yet, not implementing and practicing it may ultimately ruin the performance and competitive advantage of firms (Folk, Ray, & Eric, 2012). The implementation of MAPs in firms directs attention to problem areas and provides strategies for addressing them. These are the two major functions of accounting.

1.1 Statement of the Problem

In Nigeria, there exist a dearth of studies on the usage of MAPs across SMEs. This is possible given the small structure of SMEs in the country. Gradually, these affect SMEs' operations as it robs them the full advantages that effective practice of MAPs offers. More so, there is little or no evidence to suggest that there is a correlation between practices of MAPs and improve the performance of SMEs in Nigeria, especially Akwa Ibom State.

The case of lack of a record on SMEs' practices of MAPs has increased the chances of growth policies and strategies not yielding the expected benefits. This gap has consciously affected the concerted efforts of policymakers in the country in formulating policies that might improve SMEs' smooth functioning. Consequently, with the significant economic importance of SMEs' growth

and sustainability, there is a need to examine these facts and ascertain the missing links to reduce the mortality rate and enhance the sustainability of SMEs.

1.2 Research Objectives and Hypothesis

The primary objective of the study is to assess the influence of management accounting practices on SMEs' performance in Nigeria. The specific objectives are to:

i. Examine the different MAPs employed by SMEs in Nigeria.
ii. Identify the factors that influence the application of MAPs in Nigeria SMEs
iii. Determine the relationship between MAPs application and the performance of SMEs in Nigeria.

The hypothesis for the study is stated in the null form:

H_o: *There is no significant relationship between MAPs adoption and the performance of SMEs in Nigeria.*

1.3 Significance of the Study

This study outcome will be of immense significance in terms of theory and practice. In terms of the theory, this study would help in enriching theories on MAPs in two main ways. First, the study will provide a practical suggestion on how best MAPs can be used. Second, the study will provide a different view of existing studies on MAPs, especially on how the practices of MAPs can affect the performance and survival of SMEs in the country. Accordingly, the study will be of relevance to researchers and students as it will serve as reference material for those carrying out similar studies. It will also provide the necessary ingredient for further studies on issues relating to accounting practices and the survival of the SMEs sub-sector.

2. Review of Related Literature

In this section, the concepts of SMEs and MAPs are reviewed.

2.1 Concept of SMEs

Small and Medium Scale Enterprises (SMEs) in Nigeria are characteristically different most times. This form of business can be found in different endeavors such as arts, agriculture, engineering, and even in local and foreign markets. The owners may either be rich or not rich, but it requires different levels of skills, competencies, capabilities, and capital for it to remain functional in any economies of the world. Over time, such features of SMEs have yielded myriad definitions with different meanings among academic scholars.

Some of these definitions are considered hereunder. The definition of SMEs varies accordingly from one country and institution to another. Nevertheless, any attempt to define the concepts is often done using indices such as; the number of individuals employed, total sales, and total assets owned by the operators. However, due to the ease with the use of data on the number of individuals employed, it is a common index that is often used. Even with that, there is still no universal agreement with regards to the maximum or minimum of persons that should be employed in different SMEs. For instance, the EU and a large number of OECD countries are of

the view that SMEs should employ between 200-250 individuals while Japan and the USA set their ceiling to 300 and 500 employees respectively. This viewpoint on SMEs is also affected by the geographical difference between one country and the other. Supporting this assertion, Lybaert (2016) stated that, the geographical replacement, as well as the country's policies on SMEs, influences the meaning of SMEs.

The same challenge is faced concerning different institutions that have been designed to support SMEs in different countries. In Nigeria, SMIEIS (2006) is of the view that SMEs are small businesses that employ a minimum of 1.5m capital and 2m Naira without the inclusion of working capital but excluding the cost of land. Equally, SMEDAN (2005) defines SMEs as businesses that employ between 10-49 workers; has an annual turnover of 5-49m naira, while a medium scale business is one that employs 50-199 workers with an annual turnover of 50-499m naira. Undoubtedly, one can see that the definitions of SMEs are not harmonious as it varies, among groups, countries, and institutions.

2.1.2 Importance of Small and Medium Enterprises (SMEs) to the Economy

The importance of SMEs to different economies is widely recognized as it is the predominant business in different countries (Rwigema & Karungu, 1999). In developed economies like the USA and the United Kingdom, small enterprises play important role in the economy while in developing economies, the prosperity and success of SMEs are well documented (Rwigema & Karungu, 1999). Because of that, Rogerson (2016) submit that the activities of SMEs play a huge role in growth, development, job creation, and poverty reduction. In Nigeria, SMEs account for an increased level of output and employment opportunities. SMEs contribute to the industrial growth of the economy through the optimal usage of raw materials and intermediate goods as well as local technologies.

Altogether, SMEs play a huge role in the development of the country and are still doing so. However, there is a growing concern by SME stakeholders that the sector is not contributing optimally to the economy due to the obvious challenges that they face. In this regard, Mead & Liedholm (1998) confirmed that on average, there are more SMEs closures than there is in their expansions, with approximately only 1% of micro-enterprises growing from five or fewer employees to ten or more.

2.1.3 Problems Experienced by Small and Medium Enterprises (SMEs)

The constraints faced by SMEs cuts across different issues, and in Nigeria include increased cost of transportation and communication, competitive rivalries, periodic change in consumers' demand, regular technological innovations, and new rules like labor standards which keep changing and SMEs operators are expected to abide by both in local and foreign markets. Multinational enterprises seeking out new markets and investments offer capable SMEs the opportunity to launch themselves into global value chains through subcontracting linkages, while those that are unable to do so increasingly face the danger of losing their existing markets. Competition within the developing world for export markets, foreign investment, and resources is also intensifying.

Naicker (2016) categorized the challenges faced by SMEs as Economic-based problems and enterprise-based problems. Economic-based problems relate to the economic condition in a given country as well as changes in other macro-economic variables such as "a change in those economic conditions, say economic downturn, which would affect SMEs operations heavily in the country" (Berry, Sweeting, Gota, & Taylor, 2002). Enterprise-based problems are mostly internal challenges that are a human resource in perspective. Features of enterprise-based problems are: "poor staff planning, multi-functional management, high employee turnover rate, inadequately trained employees, low productivity, difficulties in recruiting quality staff, labor markets, skills of the employees, managerial skills and styles, organizational cultures" (Williamson, 2000; Berry *et al*., 2002; Rogerson, 2004; Watson, 2004; Naicker, 2006; Watt, 2007; Lybaert, 2016).

Elsewhere, Naicker (2006) and Haung & Brown (1999) added the marketing factors to include: "Stiff competition and poor competitive skills among SMEs operators, small market share, low demand of products, poor marketing skills, nonstrategic location of the business and inability to identify the target market."

2.1.4 Concept of Management Accounting and Management Accounting Practices

Scapens (1991) opined that there are various definitions of what management accounting is. But for this study, we adopt the definition of the Chartered Institute of Management Accounting (CIMA) (2005) which states that Management accounting provides useful information to the management of an organization that would be useful in achieving the following: formulate a business strategy as well as make informed strategic decisions, design long, medium and short term strategies for an organization, evaluate the capital and fund structure of an organization, design reward models for executive and shareholders of an organization, take informed operational decisions, take control of operations to ensure effective and efficient use of organizational resources, evaluate as well as report the performance of management and stakeholders of an organization, protect all assets of an organization and implement corporate governance, risk management, and internal control measures.

The above overwhelming definition gives a clear idea of what Management Accounting Practices (MAPs) are meant in any organization whether large, medium, or small. Some of these areas under Management Accounting Practices (MAPs) include:

2.1.4.1 Costing

The information generated from products could be used for different purposes such as pricing decisions, cost control, evaluation of production processes, and transfer pricing (Bjornenak, 1997; and Van-Triest & Elshahat, 2007). Of recent, Activity-Based Costing (ABC) is a common application by most firms (Abdel-Kader & Luther, 2006; Joshi, 2011), while Absorption and marginal cost techniques have also been used over time for producing costing data. (Chenhall & Lang-Field-Smith, 1998; Etim, 2019).

2.1.4.2 Budgeting

Budgeting is widely perceived as an integral part of any corporate organization (Hansen & Vander Stede, 2004). Previously, the rationale for having a budgeting system in any organization is simply for uptake rates and the purposes underlying its use. Recent studies have revealed that the main rationale for budgeting practices in an organization is to plan for the future performance of the organization; planning the future position of an organization; design of future cash flows; futuristic planning of firms daily operations and for cost control (Abdel-Kader & Luther, 2016; Joshi, 2011; Szychta, 2018). Some of the budgets SMEs might prepare are cash budget, sales budget, overhead budget, capital budget, purchases budget, among others. These budgets are meant to foster smooth operations and enhancement of performance.

2.1.4.3 Performance Evaluation

Emmanuel, Otley, & Merchant (1990) posit that performance evaluation is a vital aspect of management accounting as it provides strategic information that corporate managers could use in achieving the goals of their organization (Jusoh & Parnell, 2018). Given that, organizations have sought to develop comprehensive management systems such as balanced scorecard and performance hierarchies that could help provide information to this regard (Hall, 2018), the big question is: which of these methods of performance appraisals do organizations supposed to adopt? (Ittner & Larcker, 1998). In making decisions on that regard, non-financial and financial measures have been applied such as Value Based Management (VBM); ABC and activity-based management; balanced scorecard; bench making; strategic enterprise management (SEM); Six-sigma; Return on Investment (ROI); Economic Value Added (EVA) and other profitability measures (Ghosh & Kai-Chan, 1997; Yasin & Lisboa, 2004; Abdel-Maksound, Asada & Nakagawa, 2008; Abdel-Kader & Luther, 2016; Jusoh & Parnell, 2018). The rationale for performance measures is to motivate managerial and employee performance in organizations.

2.1.4.4 Decision Support System

Wu, Boateng, & Drury (2007) posit that quality decisions by corporate managers are vital especially in today's highly volatile business landscape. Decision Support System (DSS) in any organization could either be short-term or long-term in perspective. Abdel-Kader & Luther (2016) submit that for short-term DSS, corporate managers could rely on Cost-Volume-Profit (CVP) analysis, product profitability analysis, customers' profitability analysis, and inventory control models. For longer-term DSS, corporate managers could as well use Internal Rate of Returns (IRR) and Payback Periods (PBP) and other methods that depend on discounted cash flow. Equally, techniques such as sensitivity analysis increased required rates of return, game theory, and Monte Carlo Computer-based simulation has also been useful for making decisions under deep uncertainty, while the earlier methods are used under conditions of certainty. (Kiammer, Koch & Wilner, 2018; Shields, Chow, & Kao, 2017 and Hermes, Smid & Yao, 2017). The DSS is supposed to assist managers to deal with the volatile business environment which pervades all sectors of the economy.

2.1.4.5 Strategic Management Accounting

The last tool of MAPs considered in this study is strategic management accounting (SMA). Chapman (1997) defined the concept as "the gathering, making available and analyzing financial information regarding the firm's products, markets and competitors, costs and monitoring the firm's strategies and that of the competitors over some time. The three basic scopes of SMA are: generating information that has to do with the competitors, exploring new strategies to reduce cost among firms, and aligning the accounting system practiced in the organization with the firm's strategic position. Cadez & Guilding (2018) added five (5) more dimensions which are: (1) costing, (2) planning, control and performance measurement, (3) strategic decision making, (4) competitor accounting, and (5) customer accounting. This practice is meant to give the organization a competitive edge over competitors.

2.2 Theoretical Framework

In past accounting studies, various theories have been propounded to assess the correlation between MAPs and the performance of SMEs. In this study, the contingency theory was considered as discussed hereunder:

2.2.1 Contingency Theory

The contingency approach is applied to MAPs on the ground that no accounting system could be applied in all situations (Chapman, 1997; Chenhall, 2003; Gerdin & Greve, 2004), rather, the application of a given accounting system depends on the prevailing situation in that organization (Otley, 1980). Though not identified, however, past accounting studies have tried to explain the evolvement and application of contingency theory by examining contingent variables which include the environment in which the organization operates, technology, size, firm's structure, and strategy. These variables are both internal and external to an organization (Halma & Laats, 2002).

Successful identification of these contingency variables could be traced back to the development of some management theories. For instance, the inevitable changes that firms undergo saw the development of the application of contingency theory (Otley, 1980). This attempt was initiated with the works of Bums and Stalker (1961), Otley (1980), Lawrence & Lorsch (1967). Championing that study, Chenhall (2003) tried to ascertain how such organizational structure affected certain production indices like unit production, small-batch, large batch, mass production, and process production. He revealed that given how dynamic the business environment was, the firm's preferred organizational structure that is flat. Altogether, technological innovations, technology, and demands caused by the inter-dependency among functional units led to much anxiety that was experienced in the environment.

2.3 Empirical Review

After 1990, a Plethora of studies emerged discussing the modern usage of MAPs in today's organization. These studies stemmed from the fact that most accounting systems practiced then

are unable to meet the current managerial demands coupled with the uncertainty surrounding the use of modern MAPs tools that were developed (Drury, Braund, Osborne, & Tayles, 1993).
Drury *et al.* (1993) carried out a study on MAPs among 3030 manufacturing firms. Results from the study showed a gap between accounting practices and theory. In a similar study, Abdel-Kader & Luther (2016) conducted a study on MAPs among food and drink industries in the UK. Results from the study showed that, though traditional accounting practices were used in those industries, yet, there is still evidence of a gap between current accounting practices as written in accounting textbooks and the actual accounting practice among organizations.
Andersen & Rohde (1994); Bruggeman, Slammulder & Waeytens, (1996); Pierce & O'Dea, (1998); Szychta, (2018); and Hyvonen, (2007) carried out a study of such nature. These studies found that traditional accounting approaches were still in operation, however, the firms studied have made huge efforts in adopting new MAPs. These studies suggest that successful adoption of new MAPs would complement the traditional approaches rather than replacing them.
Confirming this position, Hyvonen (2007) carried out a study on MAPs among manufacturing firms in Finland. The study revealed that traditional MAPs like product profitability analysis and budgeting would still be useful in the future with little changes to cope with the demands of the current business landscape.
Shield, Chow, & Kao (2017) extended the study to include both the U.S and Japanese firms on the adoption of MAPs among firms. It was discovered that there are few areas where firms across these countries shared some similarities in their usage of MAPs. For instance, there were similarities with which those firms make use of direct costing and absorption costing to accumulate their cost of production. However, one common area of obvious differences among firms in these countries was in capital budgeting models in making informed decisions. That is, U.S. firms made use of Net Present Value (NPV) and Internal Rate of Returns (IRR) while Japanese firms periodically made use of payback techniques.
In their study, Scarbrough, Nanni, & Sakurai (2011) revealed that there is the use of MAPs in manufacturing environments among Japanese firms. They showed that Japanese firms did not introduce any newer MAPs approach as experienced with the western manufacturers. Rather, the firms made use of some cost accounting techniques like target costing and other performance-enhancing methods for effective cost control and decision making.
In one of such studies, Smith (2007) compared the accounting methods used in Australia with those adopted in the U.S and Canada. He revealed that Australian firms made less use of MAPs vis-à-vis firms that operate in the U.S and Canada. Altogether, there were high adoption rates of other accounting approaches like budgeting, target costing, and value chain analysis than there is in MAPs among Australian firms.
Islam & Kantor (2005) carried out a study to assess the quality of MAPs adopted in most Japanese firms. They revealed that a lack of understanding as to how western MAPs operate has slowed the MAPs development in China. This corroborates with the finding in the study carried out by Wu *et al.* (2007).
Ghosh & Kai-Chan (1997) carried out a study on MAPs among the manufacturing and services sector in Singapore. The results revealed that more than 80 percent of the firms studied made use

of capital budgeting while 56-80 percent of the firms made use moderately of long-term planning and other traditional MAPs techniques. There was a low adoption rate of the complex methods due to lack of awareness of new techniques; a lack of expertise, and perhaps, more importantly, a lack of top management support. This was supported in the study conducted by Nimtrakoon (2019), which produced similar results.

Elsewhere, Waweru, Hoque, & Uliana (2018) carried out a study on MAPs on four African retail companies. Findings from the study showed that there were moderate changes in the firm's adoption of MAPs in areas like activity-based cost collocation systems and the use of Balance Scorecard (BSC) for performance appraisal.

From a large proportion of past studies reviewed on MAPs and firms' performance, most were conducted in developed countries while few of such studies exist in developing countries such as Nigeria. This furthered the interest to carry out this study on MAPs and the performance of SMEs in Akwa Ibom State, Nigeria.

3. Research Methods

The methodology adopted for this study is explained under appropriate sub-headings: A survey research design was adopted in the course of this study. This involves the use of a structured questionnaire to elicit responses from operators of SMEs in Akwa Ibom State.

3.1 Data collection

This study focused on the registered and active SMEs only which were 72 in number (AKS Ministry of Economic Development, 2019). The questionnaire copies were distributed to 72 SMEs located throughout the major towns of Akwa Ibom State. After excluding incomplete and invalid questionnaires, the research ended with 40 valid and usable copies of the questionnaire representing a 56 percent response rate.

3.2 The questionnaire

The questionnaire was divided into two (2) sections: the biographic section and the variables section. The variable section includes five independent variables and one dependent variable. The independent variables are costing system, budgeting system, performance evaluation system, decision support system, and strategic management accounting system while the dependent variable was performance. A five-point Likert Scale ranging from 1 to 5 is used to measure how frequent and which MAPs are used by these firms, and their effects on the performance of the studied SMEs. A mean of 2.5 above is regarded to measure satisfaction on the test variables. The test of validity and reliability of the instrument to ensure content and internal consistency was carried out using the Cronbach alpha reliability test with a coefficient of 0.756. This coefficient shows the instrument is suitable for use in the study.

3.3 Model Specification

The study involves the use of a regression model to estimate the extent to which the identified independent variables impact on the dependent variable. The model in specific terms is stated as follows:

$SMEs\ Pf = \beta_o + \beta_1 C_s + \beta_2 B_s + \beta_3 P_{es} + \beta_4 DS_s + \beta_5 SMA_s + \mu$… model 3.1

Where;

SMEs Pf = Performance of SMEs measured in terms of sales trend

β_0 = Constant

$\beta_1 - \beta_5$ = Coefficient of independent variables expected to be positively signed

μ = stochastic error term

Cs = Costing system practices

PEs = Performance Evaluation System practices

DSS = Decision Support system practices

SMAs = Strategic management accounting system practices

4. Results and Findings

This section presents the data analyzed and the accompanying discussions.

4.1 Descriptive Analysis of Variables

The descriptive analysis is carried out using frequency and percentage count under the five (5) MAPs variables under study.

Table 1: Responses Regarding Costing System Practices

	Frequency, Percent					
	0	**1**	**2**	**3**	**4**	**5**
Costing to determine the price	0 00%	0 00%	2 5%	5 12.5%	17 42.5%	16 40%
Costing to determine product cost	0 00%	0 00%	3 7.5%	6 15%	20 50%	11 27.5%
Costing for cost control	0 00%	0 00%	3 7.5%	7 17.5%	16 40%	14 35%

Source: Field Survey Data, 2019/2020/Researchers' computation

From the result, the majority of the SMEs adopt costing practices in price determination, product costing, and cost control measures. Between 5% and 7.5% of the SMEs partly adopt MAPs relating to costing methods, 12.5% and 17.5% moderately adopt these MAPs methods, 40%, and 50% highly adopt MAPs method on costing system, while between 27.5 to 40% very highly adopt MAPs methods on costing system. The findings are corroborated by the study of Elhamma & Zhang (2013) which found a costing system such as product cost determination by SMEs among Moroccan enterprises. Although, the most common costing method revealed here is the product costing method, followed by price determination and lastly cost control among the SMEs investigated.

Table 2: Responses Regarding Budgeting System Practices

	Frequency, Percent					
	0	**1**	**2**	**3**	**4**	**5**
Cash budget preparation	0 00%	1 2.5%	4 10%	4 10%	15 37.5%	16 40%
Sales budget preparation	0 00%	19 47.5%	12 30%	5 12.3%	3 7.5%	1 2.5%
Purchase budget preparation	0 00%	17 42.5%	13 32.5%	5 12.5%	4 7.5%	2 5%

Source: Researchers' Computation from Field Survey Data 2019/2020

From the results in Table 2, the most commonly adopted budgeting system practices is cash budget preparation. The results reveal that SMEs rarely prepare sales and purchase budgets in their annual operations hence, not been able to forecast the trends on sales and purchase which might have to adversely affect operations particularly during periods of shock. This finding is at variance with those of Qi (2010) whose findings found formalized budgetary planning by Chinese SMEs.

Table 3: Responses on Performance Evaluation System Practices

	Frequency, Percent					
	0	**1**	**2**	**3**	**4**	**5**
Return on Investment (ROI) analysis	0 00%	16 40%	12 30%	9 22.5%	2 5%	1 2.5%
Profitability analysis	0 00%	14 35%	12 30%	5 12.5%	4 12.5%	4 10%
Customer analysis	0 00%	0 00%	3 7.5%	10 25%	11 27.5%	16 40%

Source: Researchers' Computation from Field Survey Data 2019/2020

The results in Table 3 show that the most commonly applied performance evaluation practices by SMEs are customer analysis perhaps to have an understanding of those that can be granted credits. Return on Investment (ROI) and profitability analysis are carried out by only between 2.5% to 5% of the SMEs sampled. These results are not corroborated by the findings of Joseph, (2015) and Quresh & Hassan, (2013) who acknowledged that performance evaluation is often carried out by entrepreneurs to appraise their performances.

Table 4: Responses on Decision Support System (DSS) Practices

	Frequency, Percent					
	0	**1**	**2**	**3**	**4**	**5**
Regular use: Cost volume profit analysis (CVP)	0 00%	0 0.0%	3 7.5%	14 35%	6 15%	17 42.5%
Inventory (stock) Control (IC)	0 00%	0 0.0%	2 5%	10 25%	15 37.5%	13 32.5%
Product analysis (PA)	0 00%	0 00%	2 5%	13 32.5%	11 27.5%	14 35%

Source: Researchers' Computation from Field Survey Data 2019/2020

Table 4 discloses the results of responses relating to the adoption of the Decision Support System (DSS) by SME operators showing that the MAPs variable is fully embraced by entrepreneurs in carrying out their decisions. These variables might have help operators of SMEs to determine operational output levels, inventory levels, and most profitable and moving products. The findings support those of Busenitz & Barney (1997) who assert entrepreneurs' use of decision-making biases in managing the enterprises.

Table 5: Responses to Strategic Management Accounting (SMA) Practices

	Frequency, Percent					
	0	**1**	**2**	**3**	**4**	**5**
Competitors Analysis	0 0%	1 2.5%	3 7.5%	3 7.5%	17 42.5%	16 40%
Exploration of new strategies	0 0%	0 0.0%	2 5%	3 7.5%	18 45%	17 42.5%
Substitute product mentoring analysis	0 0%	1 2.5%	3 3.7%	4 10%	17 42.5%	15 37.5%

Source: Researchers' Computation from Field Survey Data 2019/2020

Table 5 discloses the results of responses relating to MAPs regarding strategic management accounting practices adopted by sampled SMEs. The findings indicate wider adoption of these variables in the aspect of competitor analysis, exploration of new strategies as well as substitute product monitoring/analysis in managing SMEs perhaps due to the potency of competition and volatile operational environment. This is needed to enable SME operators to survive as well as weather down uncertainties prevalent with operational outcomes. This finding is supported by Parnell (2013), who confirms SMEs operators adopt SMA practices for high strategic clarity and performance.

Table 6: Small and Medium Scale Enterprises (SMEs) Performance Indices

	Frequency, Percent					
	0	**1**	**2**	**3**	**4**	**5**
Your sales volume/value in the past five (5) years has been satisfactory	0 0%	0 0%	3 7.5%	2 5%	18 45%	17 42.5%

Source: Researchers' Computation from Field Survey Data 2019/2020

Table 6 discloses that most of the sample SMEs operators have recorded substantially good sales volume and value over the past five (5) years which was one of the criteria used in selecting SMEs qualified for this study. We, therefore, infer that MAPs has helped in the performance of SMEs sampled. This is in furtherance of the findings of Abdel-Kader & Luther (2006) and Alleyne & Weekes-Marshall (2011) who differently found a positive relationship between MAPs and the performance of SMEs in the British food and drinks industry and manufacturing companies in Barbados.

4.2 Correlation Analysis

The correlation matrix in Table 7 shows the relationship between the variables of the study.

Table 7: Correlation Matrix

	SMEs Pf	Cs	Bs	Pe	Dss	SMA
SMEs Pf	1					
Cs	0.929**	1				
Bs	0.878**	0.812**	1			
Pe	0.813**	0.761**	0.914**	1		
DSS	0.829**	0.764**	0.1863**	0.666**	1	
SMA	0.919**	0.816**	0.775**	0.808**	0.727**	1

Source: SPSS Version 20 Output.

** Correlation significant at 0.05 level

The Pearson Product Moment Correlation analysis results show a strong positive relationship between SME's performance (dependent variable) and the independent variables (costing system, 0.929 (92.9%). Budgeting system 0.878 (87.8%); performance evaluation 0.813 (81.3%); Decision Support system 0.829 (82.9%), and strategic management accounting 0.919 (91.9%). This implies that the adoption of management Accounting Practices (MAPs) is relevant for the survival and sustainability of SMEs in the country.

Although there seems the existence of multicollinearity among the independent variables, the tolerance and variance inflation factor is all below 0.1, indicating that measured on an item by Item basis, there is the absence of multicollinearity and this suggests that the data set were fit for the analysis.

4. 3. Regression Analysis and Test of Hypothesis

The regression analysis output is presented in Table 8.

Table 8: Regression Analysis showing Effect of MAPs on Performance of SMEs

Variables	Beta	Cof. Value	Standard Error	T. Statistic	P-value
Constant	b_o	1.705	0.545	3.130	0.000
Cs	b_1	0.142	0.049	2.898	0.004*
Bs	b_2	0.104	0.056	1.8567	0.005*
Pe	b_3	0.109	0.748	0.146	0.003*
DSs	b_4	0.239	0.076	3.145	0.004*
SMA	b_5	0.164	0.049	3.347	0.002*

R^2 0.936 * Significant at 5% level.
Adjusted R^2 0.928
F – value 127.04
P-value 0.000
Durbin-Watson stat. 1.824

Source: Authors' Computation using SPSS. 20

Table 8 shows the regression coefficients estimating the effects of the independent variables on the dependent variable. The R^2 value of 0.936 (93.6%) suggests a strong positive relationship between the variables of the study. Also, the adjusted R^2 of 0.928 (92.8%) explains that variation

in SMEs performance among the sampled population is accounted for by the five (5) MAPs variables of costing system, budgeting system, performance evaluation system, decision support system, and strategic management accounting practices adopted, with 0.072 (7.2%) accounted for by other variables not captured in the model.

The result of the overall model also appears robust with an F-value of 127.04, which is significant at a 5% level (P = 0.000). The Durbin – Watson statistic of 1.824 implies that the autocorrelation problem was not an issue in the data since it is close to the acceptable threshold of 2.00. We, therefore, reject the null hypothesis (Ho) and accept the alternative that "there is a significant relationship between MAPs adoption and performance of SMEs in Nigeria".

More so, the beta coefficients, t-statistic, and p-values for each of the independent variables reveals the following:

4.3.1 Costing System and SMEs Performance

Costing techniques as a MAPs spring up as a statistically significant estimator or forecast of SMEs performance ($\beta = 0.142$; $t = 2.898$; $p = 0.004$) in the regression results. The results establish that costing techniques has a positive influence on SMEs' performance. Also, the adoption of costing techniques enhances SMEs' performance. The findings are in line with the results obtained by Elhamma & Zhang (2013) that ascertain costing techniques contribute to better performance by enterprises.

4.3.2 Budgeting System and SMEs Performance

Budgeting system emerged as a statistically significant estimator of SMEs performance ($\beta = 0.104$; $t = 1.857$, $p = 0.005$). The findings show that the budgeting system by operators of SMEs improves their financial and operational performance. The findings corroborate with the results of Qi (2010) whose study was on budgeting and performance of SMEs in China.

4.3.3 Performance Evaluation and SMEs Performance

Performance evaluation measures are management and employees' appraisal techniques to assess efficiency and effectiveness in resource utilization. The regression coefficient indicates that performance evaluation measures in the study is a good estimator of SMEs performance ($\beta = 0.109$; $t = 0.146$; $p = 0.003$). The result implies that performance evaluation measures as MAPs adopted in SMEs enhance performance. This outcome is corroborated by the study of Joseph (2015).

4.3.4 Decision Support System and SMEs Performance

From the results of the regression analysis, the coefficients statistically are significant and good estimators of SMEs' performance ($\beta = 0.239$; $t = 3.145$, $p = 0.004$). The findings confirmed the established view that information for decision making an impact on performance. The cost-volume-profit (CVP) analysis, inventory control models, and product analysis as a decision support system of MAPs are suitable as performance enhancers.

4.3.5 Strategic Management Accounting and SMEs Performance

The strategic management accounting measures used in this study strongly predicted SMEs performance ($\beta = 0.164$; $t = 3.347$; $p = 0.002$) as the outcomes are statistically significant at 5% level. This result is confirmed by the findings of Parnell (2013), who affirms SMEs operator make use of clear strategic plans in managing their entities.

5. Conclusion and Recommendations

The main objective of this study was to assess the influence of management accounting practices (MAPs) on the performance of SMEs in Nigeria. The MAPs variables used were costing system, budgeting system, performance evaluation, decision support system, and strategic management accounting. Results confirmed that all the variables are good predictors of SMEs' performance, although with different levels of significance. We, therefore, make the following recommendations.

i. Cost control measures under the costing system should be strengthened to minimize incurring irrelevant costs that may end up increasing total production or service cost.
ii. SMEs should avail themselves with the preparation of relevant budgets such as sales budget, purchases budget, cash flow planning to understand the trends associated with their operations.
iii. Performance evaluation models particularly return on asset (ROA) or Return on Investment (ROI) and other shareholders' ratios should be embraced by SMEs since these measure relative returns rather than sales volume and value which measure absolute returns. This is necessary to avoid the depletion of owners' equity or capital.
iv. Other aspects of decision support system and performance evaluation measures such as inventory turnover period, accounts payable, and receivable period, as well as receivable and payable analysis should be studied and applied.
v. Other strategic management accounting measures such as product-life-cycle analysis, value chain analysis, industry, or sectoral analysis should also be applied to enhance understanding of the constantly changing business environment.

Further research could be conducted on the determinants of MAPs adopted by SMEs.

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