RESEARCH ARTICLE

Strategic Management Accounting Practices among Indigenous Nigerian Manufacturing Enterprises

Michael Olusegun Ojua*

Covenant University, Ota, Nigeria

*Corresponding author: Michael Olusegun Ojua: michaelojua@gmail.com

Abstract:

The primary objective of this study was to review the extent of application of Strategic Management Accounting Practices (SMAP) by local Nigerian manufacturing enterprises in the making of effective decisions by business managers and accountants. Using a sample of ten manufacturing enterprises, fifty professional accountants and business managers working in the organizations were used in this study. In addition, questionnaires were used for gathering primary data. The Pearson Product Moment Correlation Coefficient and multiple regression analysis were adopted as the main statistical tools for this analysis. The first hypothesis shows a ranking of -0.58 which is less than 0.5 level of confidence. On the other hand, the second hypothesis shows that the sampled enterprises were hindered by inherent barriers in utilizing the benefits of SMAP resulting in the p value of 0.061 which is greater than 0.05. The results of this study indicated significant disapproval of SMAP among professionals working in indigenous manufacturing enterprises. The findings of the study may have implications on the management staff and accountant of the enterprise. Thus, this is because they revealed the below average knowledge of the workings of SMAP. As a result of this research, one is able to conclude on the need for managers to employ SMAP to enable them identify, accumulate, and manage the costs of their activities to ensure accuracy in their decisions making.

Introduction

In today's competitive world, the lifecycle of products is shortened due to the effect of consumers' multiple choices; that is, enterprises have to work harder to develop less opportunity of new products to recover costs and earn returns before the decline of the product (Cadez & Guilding, 2008; Sidhu & Roberts, 2008). Hence, an important critical activity of an enterprise is its strategic drive which will make it compete well in the marketplace through an effective decision making. The major challenge of management accounting has been that its traditional tools such as standard costing, variance analysis, budgeting, and cost volume profit analysis are either no longer adequate to today's manufacturing companies, or they are mere theoretical in nature which have created gaps in practice, especially in the manufacturing sector (Ahmad & Leftesi, 2014; Abdel-Kader & Luther, 2008). While management accounting information has always provided business managers with internal data for decision making, it seldom incorporate critical information obtained from competitors. As a result, there is the need for Strategic Management Accounting (SMA). The Chartered Institute of Management Accountants (CIMA), in 2005, described SMA as a form of management accounting (MA) whereby emphasis was placed on information which relates to factors external to the enterprise, as well as non-financial information and internally generated information (Cadez & Guilding, 2008). Generally, SMA can be viewed in two perspectives, namely: as a set of strategically-oriented accounting, and the involvement of accountants in corporate strategic decision-making processes. Subsequently, the application of SMA tools is known as Strategic Management Accounting Practices (SMAP). The SMAP is a set of accounting tools that provide accurate and timely information to various aspects of an enterprise's decision making needs, including strategic costing, target costing, competitors accounting, consumer accounting, strategic decision, planning, control and performance management, and evaluation (Alsoboa, Nawaiseh, Karaki & Khattab, 2015). Tillman and Goddard (2008) in their study described SMA as the use of management accounting systems in evaluating strategic decision-making. MA techniques, among others, are activity based costing, attribute costing, brand value budgeting, benchmarking, competitive position monitoring, competitor cost assessment, environmental management accounting, life cycle costing, quality costing, strategic costing, target costing, kaizen costing, value chain costing, strategic pricing, and customer accounting (Cinquini & Tenucci, 2010; Ramljak & Rogosic, 2012).

SMAP, though has been in use in most developed economic set up as a tool of strategic decision making (Alsoboa et al., 2015; Ojra, 2014), its impact on indigenous Nigerian manufacturing enterprises has been limited and is even non-existent (Egbunike, Ogbodo & Onyali, 2014; Fagbemi, Abogun & Uadiake, 2013). However, local Nigerian enterprises still apply MAP which cannot cope with the dynamic business environment, making the adoption of contemporary costing

method inevitable in order to make competition formidable in a globalized economy (Fagbemi et al., 2013). While strategic decision making is aided by timely information and data which promote increased production, the non-availability of such continuously results to limited growth, stagnation, or the collapse of the sector (Ojra, 2014).

This paper investigates the extent to which indigenous manufacturing enterprises in Nigeria adopt SMAP in their decision making process. Ojra (2014) reported that the usage of SMA techniques is influenced by perceived environmental uncertainty (Market Turbulence), organizational technology, size of the enterprise (larger enterprises are more likely to adopt SMAP), and prospector type strategy. Generally, SMAP has a direct positive relationship with non-financial and operational performance. Perceived Environmental Uncertainty (Competitive Intensity) has a positive influence on management ability to make timely decisions so as to avoid been left behind in the marketplace (Alsoboa et al., 2015; Ojra, 2014; Ramljak & Rogosic, 2012).

This study is important for two reasons. First, currently the use of SMAP is unavoidable especially among local manufacturing enterprises in Nigeria due to their abysmal performance over the years, and as a result of faulty decision making occasioned by reliance on the outdated traditional management accounting information (Egbunike et al., 2014; Rababa'h, 2014; Akenbor & Okoye, 2012). Also, relationship between SMAP adoption and benefits accruable to enterprises have resulted in mixed research findings (Alsoboa et al., 2015; Ojra, 2014; Ahmad & Leftesi, 2014; Ramljak & Rogosic, 2012; Mbawuni & Anertey, 2014). In covering this research gap, this paper makes contributions to the literature on the subject matter. Furthermore, it provides evidence on the reaction of business managers and accountants on the adoption of SMAP as compared to the traditional management accounting methods. In addition, it has potential implications for business policy-makers and the extent to which improved business information provided by SMAP affects the viability of indigenous manufacturing enterprises.

The research questions on which this paper attempts to provide answers to are: (i) Is there any significant relationship between the adoption of SMAP by indigenous Nigerian manufacturing enterprises and operational effectiveness? (ii) Are there factors militating against the adoption of SMAP among indigenous Nigerian manufacturing enterprises?

Literature Review

SMA can be described as a process of using management accounting systems (explicit and quantitative information) to support strategic decision-making of a business in a competitive economy (Puolamäki, 2004). Consequently, researches had always being concerned with the use of accounting techniques and how it is linked with SMA over the years (Tillman & Goddard, 2008; Puolamäki, 2004; Guilding, 2000). In one of these researches, Guilding et al. (2000) identified twelve (12) SMAP. Thus, the conclusion was that most enterprises adopted competitor accounting and strategic pricing as the most widely used techniques. It also gives a verdict that most accountants are not conversant with SMA. The

inadequacies of MA have been highlighted over the years by researchers (Rababa'h, 2014; Upton, 2012; Abdel-Kader & Luther, 2008). As a result, this has increased its low implementation percentage by enterprises. The basic distinction between SMA and Management Accounting (MA) is that the former is designed to serve a group of users within and outside the organization. It also provide them with the data and information necessary for them to take decisions related to these organizations, while the latter is the sub-accounting system, which serves the internal management of the organization and assist in performing the functions of planning, control, decision-making, and performance evaluation of its operational activities (AlMaryani & Sadik, 2012). Management accounting tends to be more tactical than strategic. Its traditional tools are not futuristic nor market focused for competition, but they are mere time-bound data that will elapse if the underpinning theories are evaluated empirically (Guilding et al., 2000). Therefore, there is a need to look for methods and techniques which can lead to better relationship between strategy and operational effectiveness. By externally focusing on the market, SMA integrates in-sights from MA and marketing within a strategic management framework (Ojra, 2014). Several researchers agree that the adoption of SMAP by enterprises in any economy will have direct impact on customer value, shareholders wealth, and organizational innovativeness (Alsoboa, 2015; AlMaryani & Sadik, 2012; Egbunike et al., 2014; Fagbemi et al., 2013; Akenbor & Okoye, 2012; Guilding et al., 2000). The outdated features of traditional management accounting practice and the lukewarm attitude towards the adoption of SMAP have been identified as the cause of competitive loss of Western enterprises to Japanese enterprises who had adopted SMAP very early (Mbawuni & Anerty, 2014; Fagbemi et al., 2013). SMAP involves longer-term evaluation, with a significant effect on the organization. Although they may have an internal element, they also have an external element (Langfield-Smith, 2008). These distinctions show that MA is more concerned with the activities within the organization ignoring the external influences which is very important to the growth of the business. Conversely, Shah, Malik and Malik (2011) made an attempt to review the link between MA and SMA as it relates to decision making function. They found that successful diffusion of SMA is still not overwhelming. Another research linking SMAP with management control practices opined that MA techniques create short term benefits, and they are not competitively far reaching in today's ever changing business environment (Bahadar, 2011). In the view of Siivonen (2014), the application of basic business strategies on MA principles will achieve same results as SMA. Thus, this supports the opinion of several researchers that SMA is an upgrade of MA with infusion of marketing and operation principles for achieving strategic goals (Shah et al., 2011; Roslender & Hart, 2014; Alsoboa et al., 2015).

Ojra (2014), in his literature review, concluded that SMA is still lacking in numerous areas of development without clear definition. Thus, this has resulted in a multitude of conceptually different research approaches and directions. Over the years, several researches have been carried out on the importance of SMAP and the extent of usage of the techniques by various tiers of enterprises. A review of relevant literature on the subject matter shows that SMA tools relevance determines the usage from one country to the other. A tool generally applicable in one country may not be usable in another. Ramljak and Rogosic (2012), in their review of SMAP in Croatia, asserts that SMA tools are complementary and

their combined effect is very useful for cost control. This was after considering the activities of large enterprises using activity based costing. Tillman and Goddard (2008) discovered that the SMA application in Small and Medium Enterprises (SMEs) in Europe is higher than expected with wide usage across productive sectors of the economy. Also, he found that the SMEs which operate in high-complexity environment use SMA techniques more extensively to achieve higher financial performance. Consequently, Cinquini and Tenucci (2006) pointed out that the SMA techniques usage in Italy appears to be greater than what might have been presumed in previous period though still below European usage. To buttress this view, Ahmad and Leftesi (2014) Libyan manufacturing enterprises as a yardstick of investigative analysis discovered that virtually all the enterprises rely heavily on traditional management accounting techniques. On the other hand, the adoption rates of advanced tools were rather low, slow, and similar than those presented in other developing countries. Thus, this reveals that Libyan enterprises were still between stage one and two in IFAC-based model. The reasons advanced for the low adoption rate are institutional factors, the attributes of adopters, and the simple attributes of MA techniques. Conversely, Alsoboa et al. (2015), in their examination of SMA adoption in Jordan and future implications of private enterprises, reveal that twelve out of the nineteen acknowledged SMA techniques were adopted by Jordanian enterprises. However, no impact on the characteristics of the general and financial managers was found in such adoption.

Cadez and Guilding (2012) examined the effect of strategic choices, market orientation, and company size on two distinct dimensions of strategic management accounting (SMA) and, in turn, the mediating effect of SMA on company's performance. They advanced a model and tested it using structural equation modelling and using the data collected from a sample of 193 large Slovenian companies. The validity of the quantitative data findings was appraised using qualitative data collected in ten exploratory interviews. The study findings support contingency theory's tenet of no universally appropriate SMA system. Hence, this is with factors such as company size and strategy which have a significant bearing on the successful application of SMA. Holloway (2006) in his assessment of relevant SMA literatures on budgeting, corporate governance and decision making, asserted that effectiveness, but not efficiency, should be the aim of well-constructed decision outcomes among SMAP complaint enterprises irrespective of their sizes and other characteristics.

In Nigeria which is the focus of the research, several scholars (Egbunike et al., 2014; Fagbemi et al., 2013; Akenbor & Okoye, 2012; Ajibolade, 2008; Adelegan, 2001) found a higher than normal preference for MAP among enterprises operating in the economy. Achimugu and Ocheni (2015) discovered that MAP are not applied in the public sector organizations. This is because they are more concern with the welfare effects of their actions rather than the profit/benefit or value generation from their actions. Hence, a more progressive SMAP will not work in such environment. The paper recommends that such organizations should adopt the application of modern cost evaluation techniques to suit the purpose for which they were established, especially in reducing wastes in the management of public expenditures in Nigeria. The rapid growth in manufacturing and product development have increased obsolesce and reduction in the life span of hitherto profitable products, increasing the cost of production

above the cost budget (Fagbemi et al., 2013). The use of techniques like target costing and activity based costing (ABC) is beneficial to the adopting enterprises to either increase streams of income or reduce cost incurable on 'fading' products (Fagbemi et al., 2013).

Furthermore, various writers (Achimugu & Ocheni, 2015; Alsoboa et al., 2015; Akenbor & Okoye, 2012; Ahmad & Leftesi, 2014) agreed on the various tools available to adopters of SMA. Thus, the usefulness of these tools includes but is not limited to:

Life Cycle Costing: This tool helps to figure out the size of the cost of production in the phases of product development. It provides ways of reducing cost and indicates ways to value profitability accurately. In general, these phases may include design, introduction, growth, decline, and eventually abandonment. Value chain analysis evaluates and co-ordinates cost on each phase of product development in order to figure out ways of satisfying the customers, minimize cost, and increasing the efficiency of activities. It is extension of the activity based costing approach in which costs are allocated to the activities required to design, procure, produce, market, distribute, and service a product. Activity Based Costing assumes the activities performed to be the main object in calculating costs and fixing the effectiveness of a business process. However, those activities are considered the ultimate causes of indirect costs. Just In Time analysis justifies competitiveness of the enterprise by minimizing cost of operation that do not add value to the product and ultimately the resources of the enterprise.

Kaizen Costing: Accumulates cost reduction strategy on each production phase until the full life cycle of the product was achieved.

Target Costing: This is a method applied during product and process design or planning. It involves estimating a cost calculated by subtracting a desired profit margin from an estimated price to arrive at a desired production, engineering, or market cost. It is a preventive cost that is fixed to ensure that a goal is achieved along with the market cost. Thus, the product was then designed to meet that cost.

Quality Costing: These are costs estimated or fixed based on selective information obtained periodically. Decisions are not based on quantitative factors. Quality costs can be classified into three categories: prevention, appraisal, and failure costs. Quality cost reports are produced for the purpose of directing management attention to prioritize quality problems.

Conclusively, SMAP, a veritable tool of effective management decision, is not accepted going through the various literatures available to the researcher especially in the developing and emerging economies of the world (Langfield-Smith, 2007). The reasons for this unfortunate situation are: first, paucity of fund to install and implement an effective accounting system and internal control mechanism that will incorporate SMAP (Fagbemi et al., 2013). Most of the enterprises are more engaged with the mandatory adoption international financial reporting standards (IFRS) ignoring the basis. Also, the knowledge of SMAP is virtually non-existent among accountants working in small enterprises (Akenbor & Okoye, 2012; Upton, 2012). In addition, most educational institutions are not offering such in their accounting curriculum, but instead, the traditional MAP are still in vogue. Hence, there is a labour gap. It is expected that accountants

should have good knowledge of management and marketing for SMAP to be fully understood (Fagbemi et al., 2013; Akenbor & Okoye, 2012). Thirdly, SMAP application depends on the nature of the enterprise adopting it. Since there are no standards of adherence, it is difficult for smaller enterprises to adopt a realistic one. Costing activities for management use are mere ad hoc functions without any known standard. Hence, SMAP is difficult to implement. Fourthly, the marketing department of some business organizations carry out some attributes of SMAP like balanced score card, value-chain analysis, cost management, and customer profitability analysis. Therefore, they do not see the need to install SMAP (Akenbor & Okoye, 2012). Fifthly, the management attitude is another factor affecting the adoption of SMAP. Akenbor & Okoye (2012) reported a 1987 survey carried out among accounting information preparers and users in the United States. However, they suggest that most business managers still believe more in the traditional MAP and they place less emphasis on SMAP in their decision making process. The major obstacles plaguing the effective adoption of SMAP are management policies and priorities, habit, and a lack of understanding of alternative methods (Langfield-Smith, 2007). In another survey, Shank (2007) discovered that accountants in most enterprises were more pre-occupied with other accounting functions than SMAP leaving non accounting staff to perform pseudo SMA functions. Hence, this limits the benefits derivable by the enterprise. Lastly, fear of the unknown among other staff performing pseudo SMA functions in the enterprise has increased resistance to SMAP. Marketing staff are afraid their jobs are on the line with accountants taking over some of their core duties. As a result, they are willing to frustrate the installation of SMAP (Akenbor & Okoye, 2012; Fagbemi et al., 2013).

Based on the foregoing, the following hypothesis was proposed:

H$_1$: There is no significant relationship between the adoption of SMAP by Nigerian manufacturing enterprises and operational effectiveness.

H$_2$: There are no factors militating against the adoption of SMAP by Nigerian manufacturing enterprises.

Research Methods

The survey research method was adopted in this study. Survey research is concerned with identifying real nature of problems and formulating relevant hypothesis to be tested. The reason is that the researcher wants to reach to data on all manufacturing enterprises operating in the Agbara Industrial Estate, Ogun State, Nigeria. Based on this reasons, data was collected at a particular point in time. Hence, the research involved cross-sectional survey research design. The research population comprised of wholly owned Nigerian enterprises (excluding multinational enterprises because their parents companies have influence on their accounting systems. Hence, it is assumed that SMAP is in use). Consequently, a survey of the sampled enterprises was carried out in respect of the topic and narrowed down to the food and beverage sector of the manufacturing industry. The reason for taking a sample size of food and beverages is to ensure robustness of the study and because the large number of staff engaged by the enterprises.

Relevant statistical tools such as the percentages and tables are used for the data analysis. The first hypothesis was analyzed using a survey questionnaire with a 5 point Likert scale response options of Strongly Agreed (SA), Agreed (A), No Effect (NE) Disagree (D), and Strongly Disagreed (SD) with weights of 5, 4, 3, 2 and 1, respectively. It was structured in line with the first research question and hypothesis 1 of the study. Pearson Product Moment Correlation Coefficient was used for the purpose of data analysis. It measures the relationship between the use of SMAP and operational effectiveness of the surveyed enterprises. The survey consisted of 150 identical questionnaires shared among chief executive officers, marketing heads, and accountants of surveyed enterprises. A total of 35 questionnaires were not returned, with the main reasons given for non-completion being inadequate knowledge of the subject matter company policy. A total of 115 questionnaires were returned. 5 of which were not usable, thus leaving a usable response rate of 73.33%. The list of SMAPs used in the questionnaire was developed based on many prior similar studies such as Fagbemi et al. (2013) and Shah et al. (2011).

According to Saunders et al. (2007), the likely response rate for business surveys is between 30-50% for self-administered questionnaires. Thus, the response rate of our study is above expectation. A pilot survey was adopted for the reliability test and it yielded a correlation coefficient of 0.64. The second hypothesis was analyzed with the use of primary data and analyses, using Ordinary Least Square (OLS) with the aid of SPSS 20 for both primary and secondary data analysis.

Model Specification

The model of this research explains the separate influence of the independent variables in order to determine if certain factors hinder the appropriate adoption of SMAP among Nigerian manufacturing enterprises. The independent variable SMAP was formed by adopting the scales consisting of 17 terminologies applicable to investigate SMAT usage intensity. Effective decision making, a subjective scale used by Aksoylu & Aykan (2013) for perceived performance, was adopted. In order to measure the relationship, this study adopted the model in Fagbemi et al (2013) with some modifications in the research paper titled "Appraisal of the adoption of cost management techniques in selected Nigerian manufacturing companies". Consequently, the model assumes:

$$\mathbf{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$$

$\mathbf{Y}$ = SMAP adoption

β_0 = constant, β_{t-6} = co-efficient

X_1 = Funding complexity (FUND_COMP)

X_2 = Knowledge of SMAP (KNOW_SMAP)

X_3 = Enterprise's characteristics (FIRM_CHAR)

X_4 = Activities of other departments (OTHER_DEPT)

X_5 = Management Attitude (MGT_ATTIL)

X_6 = Fear of change (FEAR_CHAN)

The model formulated above explains the separate influence of the independent variables in order to establish the effect on decision making. In addition, the expected relationship of the variable is a linear relationship of which one determines the other. The model is consistent with contingency theory in which people's behaviour is affected by influences in their environment.

Data Presentation, Analysis, And Interpretation

Test of Hypothesis

Hypothesis 1: There is no significant relationship between the adoption of SMAP by Nigerian manufacturing enterprises and effective decision making

Table 1. Responses on operational effectiveness of SMAP in manufacturing setting.

Responses	5	4	3	2	1	Mean	Computed mean	SD
Awareness of the concept of SMAP is high in the manufacturing sector. Hence, SMAP was adopted with trained staff.	5 5%	10 9%	15 14%	30 27%	50 45%	2.00		1.73
Traditional MAPs is still in use by management for decision making process.	55 50%	30 27%	5 5%	10 9%	10 9%	4.00		1.73
SMAP is better than MAP from available literature on the subject matter.	10 9%	12 11%	18 16%	53 48%	17 16%	2.50		1.47
MA techniques like breakeven point, standard costing, process costing, and budgeting are helpful tools to management.	40 36%	30 27%	10 9.5%	20 18%	10 9.5%	3.63		1.54
Your company replaced MAP with SMAP to make production and decision making effective.	20 18%	20 18%	0 0%	55 50%	15 14%	2.77	2.98	1.43

Source: Researcher's computation

Applying the Pearson Product Moment Correlation Coefficient (r), the responses is further grouped into (X) strongly Agreed and Agreed, and (Y) Disagreed and strongly disagreed sides. The mid-point (no effect) is neither here nor there. That is, it assumes a zero (0) coefficient. Taking these points as X and the responses as Y, it is expressed as:

$$r = \frac{n\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{n\left[\Sigma x^2 - (\Sigma x)^2\right]\left[n\Sigma y^2 - (\Sigma y^2)\right]}}$$

We have the following result: n=10, Σx=232, Σx^2 =7594, Σy=270, Σxy=4734, Σy^2 =10448
Applying the formula above:
r=-15300/26,427.7

r=-0.58

Decision: The r calculated of -0.58 is less than 0.5 level of significance. The first hypothesis H1 is hereby accepted. Hence, there is no significant relationship between the adoption of SMAP by Nigerian manufacturing enterprises and its operational effectiveness. This is further justified by the computed mean in table 1 of 2.98 which is less than the expected mean of 3, and a standard deviation of 1.43.

Hypothesis 2: There are no factors militating against the adoption of SMAP by Nigerian manufacturing enterprises.

Table 2. Responses to factors affecting the adoption of SMAP

Responses	5	4	3	2	1	Mean	Computed mean	Std dev
The paucity of fund is a major challenge to the adoption of SMAP. As a result, most enterprises are fund strapped.	75 68%	10 9%	15 14%	10 9%	0 0 %	4.36		1.97
Inadequate knowledge of SMAP is limited due to information gap by professionals and authorities(see back page for the seventeen tools)	55 50%	30 27%	5 5%	10 9%	10 9%	4.00		1.73
The size of the enterprises are relatively small and do not require the adoption of SMAP for decision making.	53 48%	17 16%	17 16%	13 11%	10 9%	3.81		1.63
Marketing department of most enterprises perform similar functions specified in SMAP	30 27%	30 27%	20 18%	20 18%	10 10%	3.45		1.47
The Management of my enterprise prefers MA techniques and other qualitative factors to SMAP	60 55%	40 36%	5 4.5%	5 4.5%	0 0%	4.41		2.00
SMAP being a new business decision tool is seen by business managers as non-tested and fear failure.	48 44%	32 29%	10 9%	10 9%	10 9%	3.89	3.99	1.67

Source: Researcher's computation

Table 3. Barriers to SMAP adoption: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.672	0.452	0.433	0.02201

Table 4. Barriers to SMAP adoption: ANOVA

Model	Sum Squares	Df	Mean square	F	Sig
Regression	3.2643	5	1.2110	11.770	0.05[*]
Residual	0.0830	1	0.0543		
Total	3.3473	6	1.2653		

*Predictors:constant,all variables in the model

Dependent variable is SMAP

Table 5. Barriers to SMAP adoption: Coefficients*

Model	Unstandardized Co-efficients		Standardized Co-efficients	t	Sig
	β	Std Error	β		
Constant	9.3214	0.015		0.0041	
Funding complexity(FUND)	2.3216	0.0010	0.175	0.0087	0.006
Knowledge of SMAP (KNOW)	1.409	0.0034	0.248	0.0666	0.007
Enterprise's characteristics (CHR)	1.3421	0.048	0.314	-0.665	0.035
Activities of other departments (DEPT)	1.6540	0.1706	0.784	-0.533	0.003
Management Attitude (MGT)	1.2101	0.0043	0.653	-	0.001
Fear of change (FEAR)	2.6709		0.788		

barriers to SMAP adoption

Table 2 indicated the peculiarities of the various respondents. The funds required to set up the SMAP accounting system is scarce and most business owners are not willing to commit their scarce resources to such venture. 77% of respondents alluded to this fact, with a mean of 4.36 which is greater than the expected 3. However, it is further shown with the estimated co-efficient of 2.32, hence funding is a big challenge to the adoption of SMAP. The knowledge of the subject matter is limited with only 18% having limited knowledge of the seventeen terms attributable to SMA. Hence, adoption will be difficult to implement without proper training. The respondents acknowledged that the enterprise's size is important to the adoption of the SMAP with 64% of the respondents linking the adoption of SMAP to the size of the manufacturing companies. The activities of the marketing department of some enterprises are similar to the SMAP. Hence, 54% of the respondents did not see the need for such duplication. The various enterprises' management still rely on MA tools for decision making and do not see any different benefits in adopting SMAP as a replacement. This can be seen in 91% of respondents who agreed with the assertion, the highest mean of 4.41, and standard deviation of 2. The respondents buttressed the faith in MA techniques with 73 % of them expressing fear of failure due to SMAP status of non-tested tools.

In table 3, the R^2 unadjusted is 0.452, while the adjusted R^2 is 0.433. Thus, this shows a fair prediction power of all variables of 45.2% under review. Table 4 shows the F statistics calculated as 11.77 at the degree of freedom 5. Also, the F statistics tabulated value is 4.22 with a p value of 0.061 which is greater than 0.05 showing a proof that the hypothesis 2 is disproved and subsequently

rejected. Hence, the factors enumerated in the model are militating against the adoption of SMAP in Nigeria's manufacturing enterprises.

The findings of this study are consistent with various researches done by experts in Strategic Management Accounting (Rababa'h, 2014; Egbunike et al., 2014; Fagbemi et al., 2013; Aksoylu & Aykan, 2013; Akenbor & Okoye, 2012; Shah et al., 2011) in which certain factors must be in place before SMAP can be adopted for appropriate benefits. It can be seen that variables were statistically significant as shown in table 5. Therefore, the model of this study will look like this:

$$\mathbf{SMAP}=9.32+0.175FUND_b+0.248KNOW_b+0.314CHAR_b+0.784DEPT_b+0.653MGT_b+0.788FEAR_b$$

Conclusions and Recommendation

The application of Strategic Management Accounting tools has become very important for all organizations, especially the manufacturing ones in order to survive and grow in the face of the ever competitive, complex, and changing business environment. The aims of this study is to examine the extent of usage of SMAP in the decision making process of Nigeria's indigenous manufacturing enterprises. It also aims to examine the barriers militating against its adoption, given its many benefits in advanced economies where its application is seamless. The first hypothesis formulated was tested using the data obtained from the questionnaires distributed to accountants and business managers of sampled enterprises. It was tested using Pearson Moment Correlation Coefficient. Since the calculated value of -0.58 is less than 0.5, the first hypothesis was accepted. Thus, it was concluded that there is no significant relationship between the adoption of SMAP and decision making system by indigenous Nigerian manufacturing enterprises. The second hypothesis was tested using OLS to ascertain the factors militating against the adoption of SMAP among the sampled enterprises. It was discovered with F statistics tabulated value of 4.22 with a p value of 0.061 which is greater than 0.05. Hence, the hypothesis was rejected and there are barriers to the adoption of SMAP.

The results show that the adoption rate of SMAP among Nigerian manufacturing enterprises is not only low, but knowledge about its tools and importance is not appreciated. It means that the attendant benefits accruable to other enterprises that adopted the principle are absent in enterprises reviewed. This, therefore, calls for dual policy shift to first broaden the limited knowledge of SMAP through training. It further carries out a comparative review of MA and SMAP in terms of the impact on production and decision making which will further convince the management of the enterprises.

It is recommended that manufacturing enterprises, especially the local ones, put in place appropriate measures to adopt SMAP to ensure efficient and realistic decision making process that will bring about wealth maximization. Also, it is recommended that professional accounting bodies and educational institutions make concerted efforts to include SMA as a course in their training module to ensure professionals have fore knowledge of SMAP before practicing.

References

Abdel-Kader, M. and Luther, R. (2006).Management accounting practices in the British food and drinks industry. British Food Journal, 108(5), 336-357.

Adelegan, O.J. (2001).Management accounting practices in Nigerian companies assessed March 2015 from www.ifac.org

Ahmad, M. &Leftesi, A. (2014). An exploratory study of the level of sophistication of management accounting practices in Libyan manufacturing companies. International Journal of Business and Management 2 (2), 1-10.

Ajibolade,S.O.(2008).The impact of improved management accounting system on manufacturing Sector performance in Nigeria. A Ph.D. thesis submitted to the University of Lagos, Nigeria.

Aksoylu, S., & Aykan, E., (2013). Effects of strategic management accounting techniques on perceived performance of businesses. Journal of US-China PublicAdministration,10(10) 1004-1017.

AlMaryani, M. and Sadik, H. (2012). Strategic Management Accounting Techniques in Romanian Companies: Some Survey Evidence. Emerging Markets Queries in Finance and Business 387-396. Available online at www.sciencedirect.com

Alsoboa, S., Al Khattab,A.,and Al-Rawad, M.(2015). The extent to which the Jordanian private industrial companies Use SMA techniques. European Journal of Business and Management,7(7), 456-465.

Bahadir, A.(2011). The role of management accounting systems in implementing lean business strategies.A research paper presentation at Erasmus University, Rotterdam.

Cadez, S., & Guilding, C. (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. Accounting, Organizations and Society, 33(7-8), 836-863.

Cinquini, L., & Tenucci, A. (2006). Strategic management accounting: Exploring distinctive features and links with strategy. MPRA (Munich Personal RePEc Archive), No. 212, 1-26.

Cinquini, L., & Tenucci, A. (2010). Strategic management accounting and business strategy: A loose coupling? Journal of Accounting & Organizational Change, 6(2), 228-259.

Fagbemi,T. Abogun,S. & Uadiake,O.(2013).Appraisal of the adoption of cost management techniques in selected Nigerian manufacturing companies.KASU Journal of Accounting Research and Practice,2(2), 1-14.

Guilding, C., Cravens, K.S. and Tayles, M., (2000). An international comparison of strategic management accounting practices, Management Accounting Research, 11, 113-135.

Holloway, D.(2006). Strategic Management Accounting and Managerial Decision-Making Reconceptualised: Towards a Collaboratively Oriented Theory of Organizational Decision Enhancement - ODE, a Doctorate Thesis in Accounting, Murdoch University Australia.

Langfield-Smith, K. (2008). Strategic management accounting: How far have we come in 25 years? Accounting, Auditing & Accountability Journal, 21(2), 204-228.

Mbawuni,J. and Anertey,A. (2014). Exploring management accounting practices in emerging telecommunication market in Ghana. Accounting and Finance Research, 3(4),71-85.

Ojra, J. (2014).Strategic management accounting practices in Palestinian companies: Application of contingency theory perspective. A Ph.D. thesis submitted at Norwich Business school, University of East Anglia, UK.

Puolamäki.(2004).Strategic management accounting constructions in organizations. A Structuration analysis of two divisional strategy processes.Turun Kauppakorkeakoulu Sarja A-10.

Rababah, A. (2014). The implementation of management accounting innovations-the case of balanced scorecard implementation within Jordanian Manufacturing Companies., International Review of Management and Business Research, 3(1), 174-181.

Ramljak, B., and Rogoši ć, A., (2012). Strategic management accounting practices in Croatia. The Journal of International Management Studies, 7(2), 93-100.

Roslender, R., Hart, S. J., (2010), Strategic management accounting: Lots in a name? No. 1005, Accountancy Research Group, Heriot Watt University.

Saunders, M., Lewis, P. and Thornhill, A. (2007). Research Methods for Business Students, 4th edition, Financial Times Prentice Hall, Harlow.

Shah, H., Malik, A., & Malik, M. S. (2011). Strategic management accounting—A messiah for management accounting. Australian Journal of Business and Management Research,1(4),1-7.

Sidhu, B.K. & Roberts, J.H. (2008). The marketing/accounting interface: lessons and limitations. Journal of Marketing Management, 24(7-8), 669-686.

Tillman, K., Goddard, A., (2008), Strategic management accounting and sense-making in a multinational company.http://eprints.soton.ac.uk/346737/ (downloaded: 01.03.2016)

Upton, D. (2012). Experimental balanced scorecard research: Implications for practitioners. Management Accounting Quarterly, 13(4) 231-245.