EFFECT OF MODERN MANAGEMENT ACCOUNTING PRACTICE ON LISTED CONSUMER GOODS' COMPANIES IN NIGERIA

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Abstract
This study aims to investigate the application of modern management accounting techniques and the challenges confronting its application in the unlisted consumer goods' firms in Nigeria. One set of questionnaire was structured and used to gather the primary data. 56 firms representing 30% of the population were sampled and 38 of them returned the completed questionnaire. Descriptive statistics, one sample t-test and Spearman correlation were used to analyse the data. It was found out the most of the new techniques have not been known as only Total Quality Management, Customer Accounting, Throughput Accounting and Back-flush Accounting have only been partially or fully used. Lack of management support is the most prevailing challenge revealed, followed by lack of awareness of those techniques and preference for financial/historical information. The findings of this study indicates that consumer goods firms in Nigeria are still addicted to practicing management accounting techniques, though in conjunction with a few of the modern techniques. Empirical evidence from the study suggests a moderate and positive relationship between firm size and modern management accounting techniques.
Key words: *Accounting, Techniques, Application, Management, Consumers.*

Introduction

Inefficiency in the application of given any set of working tools constitute potential impediment capable of affecting the economy of any organization, talk less of operating ventures in that economy, with the worst-hit likely to be the developing countries (Ajibolade, 2013). In his words, Riahi-Belkaoni (1994), posited that it is the inefficient application/under-employment of any given resources in a production process that is capable of leading that nation to create the right or wrong products. Efficiency of the consumer goods firms is inevitable for the sector to make meaningful contributions toward solving the nation's economic problems (Ajibolade, 2013); management accounting has been suggested as a solution to inefficiency for providing information that can assist managers in fulfilling the goals of the organizations (Horngren, *et al.,* 1994).

The last three decades has seen the traditional cost and management techniques being confronted with a lot of criticisms from various authors. The critics claims that management accounting has lost its relevance due to the innovations and dynamism of business environments (Johnson and Kaplan, 1987). The critics of the conventional techniques did not only point out the inefficiencies of the d techniques but also advocated for modern management accounting techniques.

Abnitio, the traditional techniques available to management accounting experts for information provision to managers are perhaps the standard costing, variance analysis, absorption costing, marginal costing, Cost Volume Profit Analysis and Process costing among others (ICAN, 2014); Ashfaq, Younas, Usman & Hanif, 2014; Ajibolade, 2013 Ekibatani & Sangeladji, 2008), but these traditional techniques have lost their "salt/relevance" in the modern day business environment (Johnson and Kaplan, 1987). The traditional management accounting system has been criticised for being subservient to financial accounting and hence produces information that is too late, too aggregated and too distorted to be relevant for managers' planning and control decisions (Waweru, 2010; Johnson & Kaplan, 1987; Kaplan, 1984). This criticism has generated a lot of controversies about the usefulness of management accounting in the 21st century business environment. In a bid to address the weaknesses of the traditional management accounting techniques, the critics of traditional have advocated for modern techniques such as Balanced Score Card, Activity-Based- Costing/Activity-Based-Management (ABC/ABM), and Life cycle Costing, Target Costing, Just-in-Time (JIT), Kaizen Costing and the host of others. However, from recent studies, it has shown that the traditional techniques are still being used in many nations of the world such as Turkey (Badem, Ergin, and Dury, 2013), UK (Dugdale, Jones and Green, 2005), US (Rosemary and Cheryl, 2004), and Bangladesh (Mazunder, 2007; Yeshmin and Fowzia, 2010), among others.

It is worrisome that despite the severe criticisms of traditional management accounting techniques and the acclaimed benefits of the modern techniques, the practice of modern management accounting techniques in many parts of the world is still very low. This study unearths the application of the modern management accounting techniques in Nigerian consumer goods firms and found out that modern management accounting techniques have not been in practice as only Total Quality Management (TQM), Customer accounting, Throughput accounting and Back Flush accounting have been either fully or partially applied. The study as found out that lack of management support, lack of awareness of those techniques and preference for financial/ historical information are responsible for low application of the modern techniques. The current management accounting practices among the consumer goods firms in Nigeria principally include a mixture of traditional management accounting and some modern techniques. Evidence from this study also suggests a positive moderate relationship between firm size and modern management accounting techniques. In the right of these, the researchers formulated the below mentioned hypotheses to guide the investigation of the study:

Ho_1: Consumer goods' firms have not applied modern management accounting techniques.

Ho_2: There is no relationship between firm size and the diffusion of modern management accounting techniques.

The paper is organised as follows' the next section reviews relevant literature with regards to context justification and provide a theoretical background for the study, respectively. Next describes the sample data and empirical methodology. The last section summaries the main results, offers conclusion and recommendations.

Review of Related Literature

Conceptual reviews

Traditional management accounting

Traditional management accounting techniques are said to have lost their relevance in the 21st century business. That it is subservient to financial accounting and consequently produces information that is too late, too aggregated and too distorted to be relevant for managers' planning and control decisions (Kaplan, 1984, Johnson and Kaplan, 1987). However, despite the heavy criticisms advanced against the traditional management accounting techniques, the extant literatures show that they are still being widely used, while the modern techniques are still unpopular in some places despite a lot of advantages credited to them (Badem, Ergin, & Dury, 2013; Dugale, Jones & Green 2005; Rosemary & Cheryl, 2004).

Diffusion of innovation theory

Rogers and Scott (1997), defines innovation, as simply "an idea perceived as new by the individual and diffusion as the process by which innovation is communicated through certain channels over time among the members of a social system, or a special type of communication concerned with the spread of messages that are perceived as new ideas.

Size is the most ambiguous influencing factor in diffusion of innovation (Askarany & Smith, 2008). Firm size can be determined based on different parameters and number of employees is one criterion for determining size of firms and categorising firms to small, medium and large firms (Askarany & Smith, 2008). The influence of firm size on innovation has produced mixed result; as some claim that large firm adopt innovation faster than small firms because of their ability to afford capital, to put up with the costs of innovation and bear the risk of failure (Brown (1981, cited in Askarany & Smith, 2008); but according to Nooteboom (1994), small firms bring technological change to the market more quickly than large businesses when there is less bureaucracy, greater motivation, better survey of the entirety of the project, and greater proximity to the market associated to small firms, however, while Fieldman (1994), posits that small business are the prime source of technological change in certain industries.

Nimtrakoon and Tayles (2010), found out that larger firms in Thailand obtain higher benefit from both contemporary and traditional MAPs than smaller firms. Ahmad and Zabri (2012), also states that both Malaysian small and medium firms made extensive use of traditional management accounting practices (MAPs) and only selectively use modern MAPs, while medium firms uses as twice as many small firms. Evidence from Australia suggests the existence of a significant positive association between business size and both the diffusion of production innovation, and the diffusion of ABC in organisations Askarany & Smith, (2008). The mixed results on the effect of firm size on innovation makes this study to propose the following null hypotheses:

Methodology

This section is intended to show a systematic approach which the researcher uses to achieve the objectives of the study. It comprises the population, sampling technique, sample size, research instrument and statistical techniques of the study.

Population and Sampling Design

The population for this study comprises unlisted consumer goods firms in Nigeria; they are the micro, small and medium scale firms in Nigeria. This is based on the definitions of Louis and Annette (2005), and Parker and Torres (1994), that a micro-firm is defined as having no more than 10 employees; a small firm with 11-50 employees; and a medium firm with 50 to 100 employees have over 100 employees Forsaith and Fuller (1995), posit that many firms are neither small nor large Such firms are not publicly listed, yet financial markets do not require personal guarantees for firms' financing. Osteryoung and Newman (1992), describes such firms as medium size firms. The contribution of micro, Small and Medium firms to Nigerian economy cannot be overemphasized as the sector created 89.9% of the total new jobs created in Nigeria in 2009 (Bunyasi, Bwisia & Namusonge, 2014), and contributed 59% of total Gross Domestic Product (Rok, 2009) .

The study population incudes one hundred and seventy nine (179) unlisted consumer goods firms in Nigeria. Since there is a high concentration of consumer goods firms in the Industrial Areas of Lagos State, the researcher used industrial area as the study area and purposively sampled 56 firms. The purposive method was used to collect sample as a result of inconsistencies in data reporting of firms to the bureau of statistics in Nigeria.

Data Collection

A well-structured questionnaire was prepared to elicit the primary data from the respondents and personally administered to the Management Accountants/ head of accounts/Finance units of the sampled firms and in some cases to the receptionists for onward delivery to the appropriate units. The 56 sample size represents 31.28% of the population which is an appropriate size according to Mugenda and Mugenda (2003). A copy of the questionnaire was dropped with each firm and 48 useful copies were competed and returned.

The questionnaire was divided into eight parts. The first part consists of 4 questions bordering on the personal information about the respondents specifying their academic and professional qualifications, specialization and position. The second part contains 4 corporate characteristics including age of the firm, type of products, number of products, type of market and firm size. The third part comprises questions on application of the modern techniques ranging from no application to full application. No application was assigned 0, Desire to apply but face difficulty was assigned 1, Desire to but still in preparation stage was assigned 2, partial application was assigned 3 and full application was assigned 4. For the purpose of the hypotheses testing, one sample t-test was computed for the difference between the actual mean of application and the hypothesized mean of application which is equal to 2. The fourth part asked question about perceived impact of the modern techniques while the fifth part comprises questions on the usage of traditional techniques. The usage was scaled from very often to never which were assigned 5 to 0 respectively. The sixth part contains questions on the perceived relevance of the traditional techniques, the seventh part constitutes questions on the challenges encountered when trying to apply the techniques and the eighth part was made up of questions on possible solutions. Descriptive statistics comprising mean, standard deviation and frequency were used and ne sample t-test and Pearson Correlation were also used for the purpose of hypotheses testing.

Results

This section consists of both descriptive and inferential analysis.

Descriptive Analysis

Table 1. Modern Management Accounting Techniques as Perceived

Status	Frequency	Percent	Valid Percent	Cumulative Percent
Quite Satisfactory	16	37.2	37.2	37.2
Fairly Satisfactory	15	34.9	34.9	72.1
Unsatisfactory	12	27.9	27.9	100.0
Total	**43**	**100.0**	**100.0**	

Field Survey, 2022.

From the Table one, only few respondents (16= 37%) of the respondents opined that the modern techniques are quite satisfactory. However, all the respondents are satisfied with the traditional techniques.

Table 2.= Reasons for Low application of modern management accounting techniques

Reasons	Rank
Historical information is given more importance	3rd
Lack of Awareness	2nd
Modern techniques are not applicable	8.5th
Extra Cost involved	8.5th
Lack of specialists	8.5th
Lack of Technological advancement	5th
Lack of Management Support	1st
Lack of awareness of the benefits attached to the modern techniques	4th
Resistance to Change	5.5th
Type of Product, No of Product and Type of Market	10th
Type of Industry	8.5th

Field Survey, 2022.

In table 2, Lack of suitable technological advancement that can match the application of modern techniques and resistance to change are ranked 4th while extra cost involved, lack of specialist, non-applicability of the techniques and type of industry are very far from likely reason as they are ranked 8.5th, while the type of industry is the most likely reason for low application as it appears at the bottom of the ladder. However, this finding contradicts the finding of Saaydah and Khatatneh (2014), in Jordan where involvement of extra cost is the most prevailing reason, followed by lack of specialists; and the findings of Mazumder (2007), in Bangladesh, where lack of awareness by the top management who placed more emphasis on financial information, that involvement of extra costs are the first prevailing difficulties.

Table 3: The Perceived benefits of Traditional Techniques

	Frequency	Percent	Valid Percent	Cumulative Percent
Quite Satisfactory	16	37.2	37.2	37.2
Valid Fairly Satisfactory	27	62.8	62.8	100.0
Total	**43**	**100.0**	**100.0**	

Field Survey, 2022.

In Table 3, the prevailing factors preventing the application of the modern cost and management accounting techniques is lack of management support, giving rise to lack of awareness of the modern techniques and preference for historical or financial information which rank 2nd and 3rd respectively.

Table 4.= Perceived Solution to Low application of Modern Techniques

Reasons	Rank
Seminar and Workshop	1.5th
Awareness among top management	1.5th
Emulation of techniques being used by the competitors	3rd
Getting up-to-date information from the professional bodies	4th
Introducing Management Audit more extensively	5th

Field Survey, 2022.

As shown in Table 4, five proposed solutions to the problem of application were posed to respondents to assess; seminar and workshop on the importance and benefits of the techniques and awareness of those techniques were given equal and highest consideration. This was followed by emulating the competitors by applying the techniques which the competitors have successfully applied. Getting up to date in formation from the professional bodies' newsletters and magazines was also considered relevant and the 4th in the list, while introduction of management audit more extensively was considered the least.

Table 5.= The Degree of Application of Traditional Techniques

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Standard Costing	43	1	5	3.21	1.505
Variance Analysis	38	2	5	3.26	1.057
Absorption Costing	43	1	5	2.56	1.777
Marginal Costing	43	1	5	3.44	1.666
Financial Statement Analysis	43	3	5	4.77	0.649
Fund Flow Analysis	43	1	5	3.70	1.655
Cash Flow Analysis	43	4	5	4.60	0.495
Cost Volume Profit Analysis	43	3	5	4.26	0.978
Sensitivity Analysis	43	1	5	2.56	1.777
Simulation Analysis	39	1	5	2.38	1.786
Process Costing	43	1	5	2.53	1.764
Budgetary Control	43	1	5	3.12	1.815
Opportunity Costing	43	1	5	2.53	1.764
Capital Budgeting techniques	43	1	5	3.02	1.739
Differential Costing	43	1	5	2.26	1.482
Valid N(likewise)	34				

Field Survey, 2022.

Table 5 clearly points out that Financial Statement Analysis and Cash Flow Analysis are being used very often by the firms. Likewise, Cost Volume Profit Analysis and Fund Flow Analysis are being used often times. All other techniques are also being used but sparingly.

The status of modern management accounting techniques shown in Table 6 are discussed as follows:

Table 6: Application of Modern Cost and Management Accounting Techniques

S/N	Techniques	N	Mean	SD	DF	t	Sig
1	Balance Score Card	43	1.16	1.7	42	3.2	0.061
2	Activity Based Costing	43	1.65	1.8	42	1.25	0.217
3	Total Quality Management	43	2.79	1.78	42	2.92	0.006
4	Life Cycle Costing	43	1.16	1.8	42	3.4	0.058
5	Target Costing	43	1.49	1.63	42	2.1	0.59
6	Throughput Accounting	43	2.23	1.78	42	0.03	0.04
7	Back Flush Accounting	43	2.14	1.72	42	0.534	0.48
8	Just in Time System	43	1.4	1.93	42	2.06	0.056
9	Kaizen Costing	43	1.37	1.83	42	2.26	0.079
10	Benchmarking	43	1.6	1.45	42	1.77	0.84
11	Value Chain Costing	43	1.12	1.74	42	3.34	0.092
12	Customer Accounting	43	3.13	0.34	42	20.80	0.000

Field Survey 2022.

Table 6 clearly reveals that only Total quality Management, Customer Accounting, Throughput Accounting and Back flush Accounting have been partially or fully applied by consumer goods firms in Nigeria, since their mean values 2.79,3.13, 2.23 and 2.14 respectively are greater than 2(the hypothesized mean). Their P-values which are also less than 0.05 indicates that the nu hypotheses could be rejected which implies that they have been applied by the firms.

Since the actual means of Balance Score Card, Activity Based Costing, life Cycle Costing, Target Costing, Just in Time, Process Reengineering, Kaizen Costing, Benchmarking and value chain costing are 1.65, 1.16, 1.49, 1.4, 1.65, 1.37, 1.60 and 1.12, respectively, it means they have neither been partially nor fully applied (their mean values are lower than 2 which is the hypothesized mean); though consumer goods firms in Nigeria desire to apply them, they have not been able to apply them because of the difficulties concerning their applications Their p-values which are more than 0.05 as imply that the null hypothesis which assumes they have not been applied cud be accepted.

Table 5 and 6 clearly show that the current management accounting practices among the consumer goods firms in Nigeria are mostly traditional techniques with only some of them combining the traditional techniques with some modern techniques. Financial Statement Analysis, Cash flow Analysis and Standard Costing are the prevailing traditional management accounting practices.

Table 7.= Relationship between Firm size and diffusion of Management Accounting Techniques Correlation

Firm Size		Activity Based Costing	
Activity Based Costing	Pearson Correlation	1	0.524
	Sig. (2-tailed)		0.476
	N	4	4
Firm Size	Pearson Correlation	0.524	1
	Sig. (2-tailed)	0.476	
	N	4	4

Field Survey 2022.

Table 8.= Firm Size and application of ABC

Firm Size	No of Employees	Frequency	Application of ABC	% of Firm applying ABC
Micro	1-10	7	1	1/7 = 14.29%
Small	11-50	12	3	3/12 = 25%
Medium	51-100	15	4	4/15 = 26.7%
Large	100 and above	9	3	3/9 = 33.3%
Total		**43**	**11**	

Field Survey, 2022.

Inferential Analysis

Activity Based Costing was used as proxy for modern management accounting techniques. The reason for choosing ABC is because it is the most popular modern management accounting techniques (Kaplan, 1986, Kaplan, Anderson & Steven, 2007). Out of the 43 firms that responded, only 11 of them have fully applied ABC. The firm size based on the number of employees and their applications of ABC are show in Table 8. Out of the 43 firms that responded, 7(16%) are micro firms, 12(28%) are small firms, 15(35%) are medium size firms while 9(21%) are large firms. The correlation coefficient of 0.524 indicates a moderate and positive relationship between firm size and application of modern management accounting techniques more than smear firms.

Discussion

The overall objective of this study investigated the application of modern cost and management accounting techniques. The researcher tested the application of 13 modern management accounting techniques and found that only four of them have been either partially of fully applied. The applied modern techniques are Total Quality Management, Customer accounting, Throughput Accounting and Back Flush Accounting while the frequently used traditional techniques are Financial Statement Analysis and Cash Flow Analysis. The study further reveals that the current management accounting practice in the consumer goods firms in Nigeria is mostly traditional, while some of them practice a combination of traditional and some modern techniques.

The low application of the modern techniques could be linked to the various difficulties that confront the firms when attempting the application. The most prevailing difficulty is the lack of management support that resulted in lack of awareness of the techniques, and preference for Financial/historical information. Contrary to the findings of Saaydah and Khatatnch (2014), and Mazumder (2007), where extra costs are involved, lack of specialists, lack of awareness that preference for Financial /historical information are the prevailing difficulties, this study shows that the involvement of extra costs and lack of specialists are not perceived as the prevailing challenges. However, this study lends credence to their study by confirming that preference for financial information is perceived as one of the prevailing difficulties. This is evident in the high frequency of using Financial Statement Analysis and Cash Flow Analysis.

The researcher also found that 12 firms which represents 28% of the respondents submit that the performance of the modern techniques is not satisfactory while 15(35%) perceived that their performance is fairly satisfactory and 16(37%) submit that there's performance of traditional techniques. On the contrary, all the respondents submit that the performance of traditional techniques is satisfactory. It appears that most respondents prefer traditional techniques to modern techniques. This could be linked to the financial and quantitative data which the traditional techniques provide and the challenges they face when trying to apply the modern techniques.

The findings of this study establish a relationship between firm size and application of modern management accounting techniques. This study lends credence to the findings of Askarany and Smith (2008); Ahmad and Zabri (2012), and Brown (1981), which says that larger firms apply technological innovation faster than small firms but contradicts the findings of NoteBoom (1994) and Fieldman who posited that smaller firms are the prime sources of technological innovation.

Findings and Conclusion

This study finds out that modern management accounting techniques have not been sufficiently applied by the consumer goods firms in Nigeria; hence they currently practice traditional management accounting techniques and some of them combining both traditional techniques and the modern techniques. The main reasons for the low application of the modern techniques include lack of management support, lack of awareness of the techniques as a result of which they are giving preference to Financial/historical information. Evidence from this study shows that positive and moderate relationship exists between firm size and application of modern management accounting techniques, as larger firms apply the modern management accounting techniques more than smaller firms.

In conclusion therefore, this study investigated only the unlisted consumer goods firms, hence, caution should be exercised to avoid generalizing the outcome of this study.

Recommendations

Based on the findings of this study, the researcher recommends for vigorous seminars/workshops/conferences, compulsory and regular reading of professional newsletters and magazines to be made available for both staff and the management by the management of the firms. The researcher also recommends that management of the firms should as a point of duty copy from their competitors by applying those techniques that have enabled their competitors to have an edge over their contemporaries, if they are truly representatives of their establishments.

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