

Management Accounting Practices and Internet Financial Reporting of Listed Manufacturing Companies in Nigeria.

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ABSTRACT

The study explores the effect of management accounting practices on internet financial reporting of listed manufacturing companies on the Nigeria stock exchange (NSE). It employed the descriptive research design using panel data set from the financial reports for a 10 years period between 2010 to 2019, of the sampled companies. The population of the study is the whole listed manufacturing companies that have website address which cut across health manufacturing, consumer goods manufacturing, industrial goods manufacturing and conglomerates companies, numbering 65 companies, the sample size for this study is 42 companies that have active website address, and is derived using the purposive sampling technique. The trusted search engines used to source for data for this study includes; www.google.com, www.proshare.com, africanfinancials.com, to establish the real website of the sample companies. The multiple linear regression method and the ordinary least squares models were used to analyze data collected. The study adopted the Internet Disclosure Index as proxy for dependent variable, while the independent variables were cost of resources supplied, economic value added and modified cost volume profit. The result of the study showed that a positive significant relationship exists between cost of resources supplied and internet financial reporting disclosures, that economic value addition showed a negative significant relationship with internet financial reporting disclosures, a positive insignificant relationship exists between modified cost volume profit and internet financial reporting disclosures each in the sampled companies. It is therefore, recommended based on these findings that Companies in this sector should endeavor to manage their cost of owning a website so as to maintain the benefit of internet financial reporting, the value additions in respect to using internet financial reporting must be adequately analyzed so that the purpose of using it will not be defeated, and that a well-planned cost-volume-profit analysis be carried out to ensure that the huge bill involved with financial reporting is defrayed within the companies' margin of safety.

Keywords: Management accounting practices, Internet disclosure index, cost of resources supplied, economic value added, modified cost volume profit.

Businesses all over the world are attempting to keep up with this trend in order to be relevant and stay in operation, both nationally and even worldwide. The conventional way of conducting business is virtually extinct, yet many businesses are still at ease using it. Since a few decades ago, factors such as increased global competition, shorter product life cycles, information technology advancements, the expansion of the service sector, environmental changes, and various innovations have made doing business easier. Regardless of the size of the company, providing effective services and putting a strong emphasis on customer satisfaction will almost certainly keep it on top. Practices in management accounting are now an essential instrument for providing the financial data required for reporting. This is because any inaccurate information provided to the management for decision making can go a long way to mislead the firm because management depends on the source data coming from the use of cost and management accounting techniques for data generation.

Most manufacturing companies in Nigeria regardless of the fact that management accounting department is

established have found it difficult to take advantage of accounting information system using available emerging tools to properly coordinate and assist management in making appropriate, timely, effective and efficient business decisions in terms of (financial, investment and dividend), that will add value to the various stakeholders. Some manufacturing firms in Nigeria have collapsed due to consistent loss making that has eroded shareholder's funds (Okpala et al., 2018). The losses being experienced by most firms may be due to the fact that they are so engrossed and are carried away by total dependence on the traditional management accounting techniques probably, without realizing that the business world has gone digital and that modern techniques of management accounting are being applied by most organizations in their business operations; or probably because they do not want to come out of their comfort zones, or because of the cost implication in implementing the techniques, or because of their aversion to change, or the complexity of the emerging tools; without proper cost management accounting technique implementation, operations are bound to lag and losses become unavoidable. The effectiveness and the operations of management accounting department in the manufacturing sector in Nigeria is worrisome if most of the firms in this sector are collapsing, as a result of inability to break-even because of the fierceness of the activities of competitors in the industry who knows how to apply the non-traditional emerging tools to align their business to fit to the global best-practices for efficiency, profitability, and competitiveness. Financial reporting using the company's website on the internet is gaining popularity in our contemporary world, and is growing in use worldwide, because it is cheaper and easier to use for information dissemination as regard the firm's position and condition, which becomes easily accessible by interested parties. This study aims to explore the gap that cost and management accounting data are non-relevant in financial reporting and that they are subservient to financial accounting data in financial reporting. It also will ensure to connect the silent missing link in relation to the usefulness of proper cost management accounting practices in providing information internally for management decision making that will enhance a good and reliable financial reporting, of course when financial reporting is mentioned what comes to mind is the financial aspect of accounting without any recourse to the cost management segment of accounting, which portends the dominance of financial accounting over management accounting representing irrelevance of management accounting data to financial reporting, precluding the fact that any faulty information supplied at the planning stage means that the organization will continue with such error for the foreseeable future, as a matter of fact, both financial and cost management accounting are highly interdependent, it is because of this that the researcher intends to draw the attention of the management and users of firms' financial statement to the usefulness of proper implementation of management accounting practices tools.

The major objective of this study is to examine the relationship between management accounting practices and internet financial reporting in the manufacturing companies listed on the Nigeria stock exchange; while other specific objectives of the study are: to examine the effect of the activity-based costing, the extent to which economic value-added, and the extent to which modified cost volume profit analysis method, are related to the quality of internet financial reporting.

CONCEPTUAL FRAMEWORK

Management Accounting Practices

Daoud and Triki, (2013) mentioned that the new management accounting techniques include activity-based costing, target costing, kaizen costing, balance scorecard and others; they posit further that management accounting practices in developing country of Nigeria was still concerned with the process of cost determination and financial control using budget. Hilton (2005) found that some foreign companies were ineffective in the use of costing tools and that the coal Singapore companies were reluctant to use advanced management accounting techniques such as Total Quality Management (TQM) and Activity Based Costing (ABC).

Most of the management accounting practice tools that were in use in the mid-1980s had been developed in 1925, and for the next 60 years there was virtually a halt in management accounting innovation. By the mid-1980s, firms were using management accounting systems that were obsolete and no longer relevant to the changing competitive and manufacturing environment. During the late 1980s, criticisms of current management accounting practices were widely publicized in the professional and academic literature. In response to the criticisms, considerable progress has been made in modifying and implementing new techniques that are relevant to today's environment and that will ensure management accounting regains its relevance.

According to Ajibolade (2013) and Bhimani and Bromwich (2010), new management accounting practices that are more sophisticated than traditional techniques have been developed and it has been suggested that they be used for practices by firms in order to be able to compete in the industry. Askarany and Smith (2008); Waweru and Uliana (2008), itemized some of the new practices to include activity-based costing, balanced scorecard, target costing, life cycle costing, total quality management, just in time, throughput accounting, margin of safety, and back-flush accounting, among several others. However, despite the heavy criticisms of the traditional techniques and a lot of benefits ascribed to modern practices by many authors, the extant literature shows that the traditional techniques are still being used in advanced, emerging, and developing economies, whereas the new techniques have not been fully embraced by many firms (Ajibolade, 2013; Askarany, et al., 2007; Badem, et al., 2013). From its traditional emphasis on financially-oriented decision analysis and budgetary control, management accounting has evolved to encompass a more strategic approach that emphasizes the identification, measurement, and management of the key financial and operational drivers of shareholders' value (International Federation of Accountants, 1998; Institute of Management Accountants, 1999).

After several decades of neglect, specifically since the advent of crude oil in 1970s, the attention of the Nigerian government has now been shifted to resuscitating manufacturing sector as a way out of the economic recession which the recent persistent shortfall in oil revenue has caused the country (Badem et al., 2013). Nigeria is a mono-economic nation which heavily relies on oil revenue; accounting for about 80% of government revenue and 90 % of foreign exchange earnings (Anyachie & Areji, 2015). The reliance on oil revenue has led to a significant setback to other sectors including manufacturing sector.

Accounting Information System

The limitation of accounting information systems (AISs) over the years to mere preparation of financial statements for legal purposes and the production of historical accounting and financial information for the privileged stakeholders have been redefined by the introduction of some sophisticated systems of information technology for use. The mission of the AIS has risen from the simple provision of formal and financial information to encompass a broader range of information (Chenhall, 2003).

Accounting information technology is a man-made information technology which utilizes computer and related resources in collecting data, process the data into information and make the information available for decision-making. It is a computer-based method for tracking accounting activity in conjunction with information technology resources (Adejola, 2017).

The use of enterprise resource planning (ERP) technology has facilitated the embodiment of this new vision. An ERP is a complex set of computer applications designed to integrate the processes and functions within the same company. This system is able to present a holistic vision of the company's business by sharing a common and integrated database. The amount of information has become more important, and the data are updated and relevant. The AIS provides both historical and forecasting accounting information that covers financial accounting, management control and financial analysis (Daoud & Triki, 2013).

Activity Based Costing

According to Drury, (2015), activity-based costing is a system of cost allocation that aims to use mainly cause-and-effect cost allocations by assigning costs to activities.

Hilton (2005) describes activity-based cost accounting system as a two-stage procedure used to assign overhead costs to products and services produced. In the first stage, significant activities are identified, and overhead costs are assigned to activity cost pools in accordance with the way the resources are consumed by the activities. In the second stage, the overhead costs are allocated from each activity cost pool to each product line in proportion to the amount of the cost driver consumed by the product line.

Kaplan and Cooper, (1998), sees ABC as a costing method that is designed to provide managers with cost information for strategic and other decisions that potentially affect capacity and therefore “fixed cost”. That it is used to determine product costs for special management reports; and that the system is ordinarily used as a supplement to the company’s usual costing system. They made it clear that most organizations that use ABC system have two costing systems – the official costing system that is used for preparing external financial reports and the activity-based costing system that is used for internal decision making and for managing activities.

Activity-based costing studies emphasize the ability of non-volume related measures to predict overhead usage (Cooper and Kaplan, 1991). ABC systems measure the cost of using resources and not the cost of supplying resources and it highlights the critical role played by unused capacity (Drury, 2015). The relationship between activity resources supplied and activity resources used for each activity was formalized using the following equation by Drury (2015): Cost of resources supplied = Cost of resources used + Cost of unused capacity. That is ($CRS = CRU + CUC$). To further explain:

Cost of resources utilized comprised of cost incurred that is associated to direct materials, direct labour, and overhead expenses in the manufacturing process;

Cost of unused capacity includes the cost incurred in those resources not consumed for the period, and they are cost of closing inventories and the amount paid in advance for resources and services not yet consumed and rendered respectively.

The design of ABC systems involves four stages, which are: (i) identifying the major activities that takes place in the organization, (ii) assigning costs to cost pools/cost centers for each activity, (iii) determining the cost driver for each major activity; (iv) assigning the cost of activities to products according to the product’s demand for activities.

Activity based costing allocates costs of activities to cost objects, such as products and services (Gosselin, 1997). ABC systems are models of resource consumption (Drury 2015).

The growing desire among organizations to understand their costs and the behavior of factors that drive these factors has brought about confusion on how to go about understanding costs and distinguishing among competing cost measurement methodologies, like activity based costing, standard costing, throughput accounting, project accounting, target costing etc. a closer look at the various costing methodologies shows that they do not necessarily compete, rather they can coexist, be reconciled and blended (Institute of Management Accountants, 2014).

Traditional Costing and ABC systems.

The traditional costing systems were developed in the early 1900s and are still widely in use today. These costing systems tend to use arbitrary cost allocations. ABC systems began to be implemented only in the

1990s. The ABC systems uses mainly cause-and-effect cost allocations with the aim to avoid arbitrary allocations, but they both adopt identical approaches to assigning indirect costs to cost objects (Drury, 2015). Drury observed further the differences between traditional system and the ABC system that; whereas, the traditional systems allocate indirect costs to cost centre which are normally departments, but ABC systems allocate indirect costs to cost centre based on activity rather than based on departments, since there many more activities than departments, meaning that ABC will have greater number of cost centre. It has become obvious that traditional cost system relies on arbitrary allocations of indirect cost, in this case they rely extensively on volume-based allocations, but very many indirect costs are not volume-based, so if volume-based allocations are used, a high-volume product will be assigned a greater proportion of indirect costs than they consumed and vice versa, meaning that traditional system will over-cost high volume products and vice versa. In contrast, ABC system recognizes that many indirect costs vary in proportion to changes other than production volume, by identifying the cost driver that cause the cost to change and assigning costs to cost objects on the basis of cost driver usage, costs can be more accurately traced. It is claimed that this cause-and effect relationship provides a superior way of determining relevant costs (Drury, 2015). Organizations have been adopting activity-based costing (ABC) systems, in order to overcome the over-generalizations of traditional costing systems, with their excessively simplified cost allocations and resulting lack of visibility for indirect costs These systems are based on cost modeling that traces an organization's expenses—both direct and indirect—to the products, services channels, and customers that cause those expenses to be incurred (Cokins, 2003).

According to Kaplan and Cooper (1991), the objective of traditional cost accounting systems, is to value inventories and cost of goods sold for external financial reports in accordance with the generally accepted accounting principles (GAAP). In activity-based costing (ABC) system the objective is to understand overhead and the profitability of products and customers and to manage overhead. As a consequence of these differences in objectives, “best practice” activity-based costing system differs in a number of ways from traditional cost accounting.

In activity-based costing:

1. Non-manufacturing as well as manufacturing costs may be assigned to products.
2. Some manufacturing costs may be excluded from product costs.
3. A number of overhead cost pools are used, each of which is allocated to products and other costing objects using its own unique measure of activity.
4. The allocation bases often differ from those used in traditional costing system.
5. The overhead rates or activity rates may be based on the level of activity at capacity rather than on the budgeted level of activity.

These differences from traditional cost accounting systems can dramatically impact the apparent costs of products and the profitability of products and customers. Reports generated by this system do not conform to generally accepted accounting principles (GAAP). Consequently, an organization involved in activity-based costing should have two cost systems – one for internal use and one for preparing external reports, this will help the auditor and accountant to have a useful reference point as to whatever unclear issues that may arise for comparison and clarification.

Economic Value Addition (EVA)

Grant (1996) revealed that economic value-added concept might have permanently replaced the way real profitability is measured. EVA as a financial or management accounting tool focuses on the difference between a firm's operating profit after-tax and its weighted cost of capital. Luber (1996) affirmed an increase in the market value addition (MVA) for a positive EVA over a period of time, whereas negative EVA will make MVA to nosedive as the market loses confidence in the competence of a firm to ensure

favorable returns on the invested capital. EVA has changed the way real profitability is measured. Bardia (2002) posited that in a dynamic business environment, an uninformed investor finds it increasingly challenging to keep track of the operations of his investments. EVA help to assist the investors in evaluating the performance of the firm and monitoring their investments. Though EVA provide explanations to corporate owners and managers about the wealth creation in the firm; Dash et al. (2014) argue that European corporate managers are still behind in understanding value creation, and that corporate managers still stick with the conventional financial performance measures, even though it cannot tell whether there, is value created in the business, or otherwise. Investors, who supply the finance that the organizations need to operate, are entitled to be informed about the wealth generation process and progress of the company and as such a management accounting system that best explicitly and accurately inform the stakeholders of this useful information will be welcomed.

The discovery of EVA as financial/management accounting tool for measurement is becoming increasingly accepted, due to the fact that the traditional tools are limited in what explanation they offer on certain market or firm situations; for example, earnings per share can explain the capital market only, and cannot explain the capital budgeting, in a similar vein, net present value is capable of explaining capital budgeting, but cannot explain target profit return; contrariwise, with EVA one can achieve more than one presentation, it can explain net asset, capital market, and capital budgeting concurrently. Subsequently, managers are spared from calculating three separate financial measures for the different performances, EVA as a tool is equipped in explaining the three different performances and it is outstanding among other management accounting tools (Stewart, 1997; Dash, et al. 2014).

The net operating profit after tax (NOPAT) is calculated by multiplying a firm's operating income by 1 minus the corporate tax rate.
$$\text{NOPAT} = \text{Net Operating Profit} \times (1 - \text{Tax rate})$$

In a situation where the income statement is not available and where the operating income of the company becomes difficult to determine, the net operating profit after tax can be calculated by adding back the interest payments as follows;
$$\text{NOPAT} = \text{Net Profit} + \text{Net Interest} \times (1 - \text{Tax rate})$$

For every firm, operating profit and net profit are two very significant variables. Operating profit provide information about the operating efficiency of the company, while net profit is a measure of overall profitability of a company.

The overall cost of capital, also known as weighted average cost of capital (WACC) is a financial ratio that measures a firm's cost of financing and acquiring assets by comparing the debt and equity structure of the business. In other words, it measures the proportion of debt and equity employed in the business as well as the true cost of borrowing money or raising funds through equity to fund new capital investment and expansions in accordance with the firm's present debt and equity level. This ratio to the management is a vital tool which assists them in deciding and making choice on the best financial source to use to finance new project.

The weighted average cost of capital (WACC) is computed by taking the aggregate of the market value of the firm's equity multiplied by the cost of equity capital and the total market value of debt multiplied by the cost of debt, for which the resultant value is the overall cost of capital or weighted cost of capital (Accounting-course, 2019).

Modified Cost-Volume-Profit (MCVP) Analysis

Is a management accounting technique for analyzing the effect of operating and marketing decisions on profit based on the consideration of the relationship between variable costs, fixed costs, unit selling price,

and how they predictably alter as the activity level (the output level) changes (Hayder & Al-Masoodi 2018). The modification of cost volume profit analysis is in the inclusion of the cost of capital into CVP analysis; like alternate managerial accounting techniques, CVP does not normally embrace the cost of capital as one of its measurement components but it is zero or nonexistent. However, from the point of view of economics no profit is earned by a firm unless there is excess of operating income after taxes over the cost of capital employed in generating the operating income. A firm's economic income can be measured by deducting the cost of capital from operating profit after taxes used to generate the profit (Hayder & Al-Masoodi 2018). The traditional CVP model can be derived mathematically by specifying the association between a product's accounting profit and its sales quantity, price, and costs. The resultant equation is used to measure a product's financial attributes, including breakeven sales quantity and or the sales required to earn a target profit or profit margin. A modified CVP model incorporating the cost of capital can similarly be developed to make analysis feasible. A product's economic income is identified, when the cost of capital is incorporated into a product as an expense, then the excess of the product's revenue and expenses becomes the economic income. Hayder and Al-Masoodi, (2018) posited that over a period of product's life, the economic income must be discounted to the commencement of production of the product unlike accounting profit. It therefore means that a CVP analysis including the cost of capital as a component of its equation variable is based on an equation of the relationship between the discounted economic value of a product and its quantity of sales, cost, price, cost of capital, and its investments. To develop this relationship, the following modified notation will be used:

Sales revenue – variable expenses + Fixed expenses + Cost of fixed capital + Cost of working capital. (Hayder & Al-Masoodi 2018).

Cost-volume-profit analysis (CVPA) is used when determining the effect of changes in costs and volume on a company's operating and net profit. It is a tool used to disclose the relationship between various ingredients in profit planning such as unit sales price (S_p), unit variable cost (V_c), and fixed cost (F_c), sales volume and sales mix in case of multiproduct organization. CVPA assumption is that all the above elements are constant and closing stock is nil (Adeniji, 2015). Mixed costs must be split into their fixed and variable components using high-low method, scatter plot method or regression method as appropriate. CVP analysis reports the relationship between sales volume, costs and profit known as break-even point (BEP). The BEP technique has many applications for the purpose of the CVP analysis (Hayder & Al-Masoodi 2018). From the assertion above it will be obvious to state that the relationship is a discounted cost volume profit analysis to capture the reality of the concept of balance scorecard in agreement with what was stated by Kaplan and Norton (1992) that managers want a balanced presentation of both financial and operational measures and that what you measure is what you get.

Cost of fixed capital: Fixed capital can be defined as the stock of tangible, durable fixed assets such as properties, plants and equipment owned or used by firms for a period ranging beyond an accounting year. Fixed capital includes; all the firm owned physical infrastructures, the value of land improvements, and buildings. According to Hayes (2020), cost of fixed capital is the cost of the portion of total capital outlay of a business invested in physical assets such as factories, vehicles, and machinery that stay in the business almost permanently or, more technically, for more than one accounting period, in-order words; the costs of properties, plants and equipment.

Therefore, *mathematically* cost of fixed capital ratio can be depicted by;

$kFC = TFC/TA \times WACC$; where; kFC = cost of fixed capital, TFC = total fixed capital, TA = total assets.

Cost of working capital: Working capital funds day-to-day operations and represents a company's ability to pay its current liabilities with its current assets; the cost of working capital of a firm is its current liabilities

expenses in relation to its current assets' funds. In the manufacturing sector, for instance, according to Pelberg (2019), who described WCC as the costs incurred in converting raw materials to finished goods. A substantial component part of the budget of the manufacturer is traceable or committed to the buying and storage of raw materials. The objective of working capital management is to maximize operational efficiency and reduce cost of capital as far as possible. According to Pelberg (2019), cost of working capital (*kWC*) refers to the costs of maintaining daily operations at an organization. These costs are concerned with two different factors: the short-term debt position and the current portion of long-term debt of the firm, which generally, is the portion of debt due and payable within the next 12 months of an accounting period. The current portion of debt (payable within 12 months) is critical as it represents a short-term claim to current assets and is often secured by long-term assets. Common types of short-term debt are bank loans and lines of credit, both types of costs can be found on the company's balance sheet in the current liabilities section.

Therefore, mathematically cost of working capital ratio can also be depicted by;

$kWC = (CA-CL)/CA \times WACC$; where; *kWC* = cost of working capital, CA = current asset; CL = current liabilities.

Internet Financial Reporting

Very many authors have given various definitions to Internet Financial Reporting which is used by different researchers (Oyelere, Laswad, & Fisher, 2003; Ashbaugh, Johnstone, & Warfield, 1999; Craven & Marston, 1999; FASB, 2000; Chan & Wickramasinghe, 2006; Momany & Al-Shorman, 2006). At a glance, IFR refers to the disclosure of company's financial information through the internet in a company's website. Ashbaugh et al. (1999), posit that a company is said to carry out IFR if: (1) the company's website is used to report comprehensive financial statement which includes endnotes and audit report; (2) the firm's annual report can be accessed by connection to the Internet. Craven and Marston (1999) made use of annual report details and the summary of annual report as financial disclosure measurement through the Internet. On the other hand, FASB (2000) defined Internet practice as the method for operation, technique and other practices that are created to maximize the usage of website ability in channeling business information. According to Poon and Li (2003), internet financial reporting refers to the use of the firms' Web sites to disseminate information about the financial performance of the corporations.

Internet financial reporting is now very popular among all categories of companies both medium and large in the developed world providing an expansive number of financial data online. However, majority of this information has a lot to do with the manual or print version of financial reports, often with little effort to facilitate the decision usefulness of the data, providing only the 'first generation' of online reporting (ICAEW, 2004). The implementation of IFR has created new challenges to management and internal auditors who are responsible for establishing and reviewing the necessary controls, respectively (Poon & Li, 2003).

Dimensions of IFR Disclosures

According to Khan et al., (2013), views on existing literature have shown that there are nine main dimensions regularly used by researchers. Among the dimensions regularly used to measure the level of IFR is content and presentation; content; timeliness, technology and customer support. By the way, dimensions used by researchers to measure IFR are inconsistent. The inconsistencies lead to different findings in factors that influence IFR practice among companies, within the overall dimension, Pirchegger and Wagenhofer (1999) dimension turn out to be the ones frequently used by researchers (Lybaert, 2002; Davey &

Homkajohn, 2004; Pervan, 2006; Chan & Wickramasinghe, 2006). Based on IFR inspection, Pirchegger and Wagenhofer (1999) categorize the criterion catalogue to evaluate company's website into four main dimensions, namely: content, timeliness, technology and client support.

EMPIRICAL REVIEW

Activity Based Costing

Pavlatos and Kostakis, (2015), their study was to investigate the economic crisis impact in Greece on the management accounting practices in the Greek industry and to verify the trend shifts of different accounting techniques, in usage, and their importance before (2008), and during (2013) the country's economic crisis. The empirical data collected was from 301 firms belonging to different Greek industries, the collected data were completed in full, and returned, the questionnaire regarding the perceived importance and actual usage of various management accounting techniques for these two periods was structured. Included in the survey were sixty-two (62) techniques which were later broken into five (5) panels: cost accounting, planning–budgeting, decision support systems, performance evaluation, and strategic analysis. In order to parsimoniously reduce the variables to fewer manageable units for the survey, they employed factor analysis. It was established that during the crisis, the usage of ABC systems, and their importance in planning, strategy, and SMA techniques increased simultaneously, the level of importance, and traditional cost accounting techniques usage, decreased. The technique discovered to still being popularly used is the budgeting techniques.

Effiong, and Akpan, (2018), studied the effect of Activity Based Costing (ABC) on corporate productivity. The study used the survey descriptive design method to achieve the objectives of the study. The study population was from 1,356 staffs of manufacturing firms in Nigeria. The study sample was 309 staff, derived randomly using the Taro Yamane formula. The questionnaire instrument was used for data collection for the study, were analyzed with the ordinary least square (OLS) regression method. The outcome of the research showed a significant positive relation between ABC method, and production process efficiency. finally, it was suggested that, instead of using one variable; like direct labour to allocate overheads, ABC can conveniently make use of several cost drivers to effectively, and more accurately generate a reliable foundation to allocate overhead costs. It was recommended that in order to facilitate competitive edge and improve productivity by manufacturing firms especially, a thorough understanding of the operations of ABC technique, and its mode of implementation is highly imperative.

Economic Value Added

Ahmad and Zabri (2013), the research study was about management accounting practices (MAPs) proposing that MAPs have important roles to play to ensure the efficiency in the management of the firm to improve performance. Notwithstanding the claims; empirical evidence in SME is in limited supply to verify the positive association of using MAPs in small and medium enterprises (SMEs). This study addresses the gap and reported the outcome obtained from a survey of Malaysian firms in the SME sector. In particular it aims to demonstrate a positive relationship between the use of MAPs and the performance of firms in SMEs sector. A postal questionnaire was conducted to 500 Malaysian medium-sized enterprises in the manufacturing sector which elicited 110 useable responses. The data provided some proof of the existence of a significant relationship between using MAPs and firm performances. It therefore shows that, MAPs play very important roles in managing SMEs for better efficiency and effectiveness in the management of their operation processes.

Gichaaga, (2014) investigated into the effects of management accounting practices on the financial performance of manufacturing companies in Kenya. The descriptive statistical survey design was adopted; a

target population of 455 manufacturing companies in Kenya was considered appropriate for the study. The sample size was derived using the stratified random sampling method since the population in different manufacturing firms was considered heterogeneous, implying that a simple random sampling is unrepresentative. The study involved 46 manufacturing companies Nairobi, both qualitative and quantitative data were collected from the primary data source. The analysis was done using Statistical Package for Social Sciences (SPSS), allowing the researcher to present the information in form of tables and figures. It was discovered from the study that information for decision making purposes is most commonly used for management accounting practice by the majority of Kenya manufacturing companies in addition to budgeting, costing, strategic analysis, performance evaluation, size and leverage. The study also identified some key factors of management accounting practices in the manufacturing companies in Kenya which include the management accounting functions that exert significant influence on the performance and risky areas that require improvements and return on equity, ROE (Net income/Average Equity) has been enhanced due to the application of management accounting practices. The study recommends that there should be more awareness among firms of the importance of information for decision making practices as this is the most highly used management accounting practice amongst the manufacturing companies in Kenya.

Modified Cost Volume Profit

Enakirerhi, et al., (2020), investigated Firms' Profitability and Financial Reporting Quality: Pre and Post IFRS Adoption in Nigeria. The study is on firms' profitability and financial reports quality: before (pre) and after (post) IFRS adoption in Nigeria. The purpose of the research work is to examine how profitability affects the quality of earnings of business concerns together with the operational consequences of IFRS on the profitability of organizations in Nigeria. The study uses the quantitative method of analysis, the multiple regression analysis to examine the effect ROE and ROA on earnings quality and t-test of mean difference was used as a test for differences between the mean of pre and post IFRS adoption. The Jones's model was used to measure all the variables of earnings quality, discretionary accrual. The results of the tests showed that the effect of profitability on the earnings quality after the adoption of IFRS is mix depending on what measure of profitability was adopted. ROE has a negative significant effect while ROA has a positive insignificant effect on discretionary accruals (earnings quality), furthermore, it was discovered also that the operational influence of IFRS adoption on the profitability of firms is non-significant in relation to the return on equity of firms but significant influence on the return on assets of firms. Altogether, the adoption of IFRS has negatively impacted the profitability of firms listed on the Nigerian stock exchange.

Mokhtar, (2017), carried out research about the determinants of internet financial reporting where he looked at the link between firm size, profitability, leverage, auditor type, and internet reporting and investigate the moderating effects of masculinity, creation of disclosure index, the legal system, investor protection, economic development, and measurement proxies of independent variables. The research used meta-analytic review methodology for 59 research papers to synthesize the outcome quantitatively of previous study on the determinants of internet reporting. This review employed the procedure of Hunter and Schmidt (2004) used previously to conduct the analysis by adopting three known approaches to calculate the observed correlation variance, the weighted effect size, and sampling error variance and, eventually, testing for the nature of homogeneity and moderating effects. A significant positive relationship was seen to exist between auditor type, firm size, leverage, profitability, and internet financial reporting. Some theories were also revealed by the outcome of the findings such as: the agency theory, diffusion of innovation theory, political cost hypothesis, and signaling theory. The research work shows that all the variables used as proxies for the explanatory outcome, and all the determinants such as: economic development, creation of disclosure index, investor protection, masculinity, mediates the relationship between profitability, leverage and internet financial reporting.

THEORETICAL CLARIFICATION

Contingency Theory and management accounting practices

Sine and Krisch (2006), believe that management accounting practices are specific to the operations and environment of different organizations. Otley (1980) in his discovery submitted that no universally acceptable or applicable management accounting practice has been discovered yet using the contingency theory to management accounting practices. The choice of management accounting practices to use is specific to the prevailing circumstance the firm is faced with; contingency theory provide assistant to management in appropriate decision making by the use of certain factors, to determine management accounting practices type to use, such factors range from; includes the firms infrastructures, technological changes, and the organizational structure. Technology is a very important determinant factor in choosing a management accounting practice for a firm. For example, Szchta (2002), discovered that the decision to embrace modern management accounting techniques in Polish firms, was informed by technological advancement, whereas AL-Omiri and Drury (2007) discovered that a more modern cost systems is positively related to competitive intensity, cost information, size, and the financial sector. It has been discovered that the acceptance of activity-based costing was also related to the use of alternate innovative management accounting techniques such as the just-in-time, target costing technique, cost of quality, lean production, scorecard, and benchmarking in the service sector. Firms are in existence to make returns, due to this they are involved in competition at different available levels such as, price, customer service, and satisfaction, quality, delivery reliability, and assurance, because of these, the management accountants are faced with a lot of difficulty to develop and adapt updated management accounting methods in order to be relevant, and competitive on all sides. Management accountants needs to be more flexible and adaptive to the prevailing contemporary techniques to avoid becoming irrelevant, thereby creating a room for other professionals to take over that room in the immediate near future (Binnersley, 2008). Management accounting must adopt the most effective methods, in-order to provide the required information for both internal and external usage to the firm. The study done in Australians by Birkett (1989), informed us that the purpose of management accounting was to provide management with the relevant, reasonable, and necessary information as quickly, and accurately as possible to enable appropriate, and timely action to be taken. Accordingly, Mbogo (2011), submitted that prudent management accounting in respect of information analyses, integrating training, and managerial accounting capabilities of SME owners, and the managers results to a strong, positive significant influence on decision making, and eventually are critical for the growth and survival of SMEs.

The production theory

Koskela (2010) identified three production theories for creating products and services which are: Flow, Transformation, and Value generation.

Flow theory: Flow theory is focused on how value can be quickly delivered, keeping inventory as low as possible, and reducing total production latency. The quick production turnover enables the market to control what is wants. In this case production is heavily dependent on specific requests for a particular product within the production capacity of the firm or an indication of a very strong anticipation of such a request occurring. Flow is majorly concerned with increasing the production turnover.

Transformation theory: The transformation theory is the most used idea in today's business environment, it is based on the activity chain system of; input, process, and output (IPO) It is a reductionist which splits into individual manageable forms performed by specialists. Activities are well organized, structured, and controlled; and consistent with scientific management and traditional cost accounting techniques. It focuses on the optimization of the whole production phase through the minimization of the individual task, efforts and associated costs in-order to directly, and wholesomely produce maximum throughput, and the desired

customer value.

Value generation theory: this theory is generally concerned with providing maximum value or satisfaction to the customer. All tasks and activities measurement and evaluation are dependent the concept of value generation theory. Activities are carefully and systematically selected such that those activities that do not produce value are discarded. Production efficiency in this context is seen to be the efficient value delivery to the customers, with a definite focus on all round quality. In-order to avoid wastage, the firms is required to perform only those activities that deliver values to the customers. This theory is value focused, and optimizes the all-round process of delivering value, and leading a process of value generation optimization based on an overall context. The major focus of this theory quality, profits, and ROI, not costs. It is worthy of note, that a process which could be seen as efficient, and successfully carried out by the transformation theory might fall short of the value generation requirements.

Signaling Theory

As the name implies it is a theory that suggests the way firms are expected to provide easily understandable signal feelers to financial information users, to enable them take the right steps based on the information supplied by their agents in the statements. These information signals will be in the form of the activities of the management in realizing the goals of the firm, and the wishes of the providers of funds, (Handayani & Almilialia 2013). Signal theory is a useful instrument that can be used in predicting the quality of corporate disclosures, that is, by using the internet as a media for corporate disclosure, it can improve the quality of disclosure. It helps in enhancing the timeliness of the information in the financial statements presented by the management serving as a pivotal signal, to direct users of financial statements information to know if the agent, that is the management has acted in consonance with the laid down policies and procedures.

METHODOLOGY

The study employed the descriptive research design using panel data set from the financial report between 2010 to 2019, of the sampled firms to explore the effect of management accounting practices on internet financial reporting of listed manufacturing companies on the Nigeria stock exchange (NSE). This design is chosen because it contains already existing data structure which cannot be manipulated. The population of the study is the whole listed manufacturing companies that have website address which cut across health manufacturing, consumer goods manufacturing, industrial goods manufacturing and conglomerates companies, numbering 65 companies, the sample size for this study is 42 firms that have active website address, and is derived using the purposive sampling technique. The trusted search engines that will be used to source for data for this study includes; www.google.com, www.proshare.com, africanfinancials.com, to establish the real website of the sample companies. The data collected covers items relating to the sample companies' management accounting practice tools components of: activity-based costing proxy as cost of resources supplied, modified cost volume profit analysis, the economic value added, and safety margin of the firms. the multiple linear regression method and the ordinary least squares were used to analyze data collected. The study adopts the Internet Disclosure Index used in the work of Fodio, Abdullahi, and Musa (2016), Budisusetyo and Luciana (2008), which is close to the index developed by Cheng, Lawrence and Coy (2000), based on selected criteria.

The model specification for this study is stated as follows with some modifications from the model used by Fodio, Abdulahi, and Musa (2016), Ibrahim and Suleiman, (2016):

$$IFR = (f. CRS, MCVP, EVA)..... 1$$

The following model is developed from equation 1 above:

$$IFRD_i = \beta_0 + \beta_1 CRS_i + \beta_2 mCVP_i + \beta_3 EVA + \beta_4 LogIFRD_i + \beta \dots \dots \dots 2$$

Where;

IFRD_i = Internet Financial Reporting Dimension index of firms

CRS= Cost of Resources Supplied by firms as proxy for activity-based costing.

mCVP = Modified Cost-Volume-Profit Analysis by firms

EVA = Economic Value Added of firms

ε = Error terms.

The MAP Model

Computation of Activity Based Costing Proxy as Cost of Resources Supplied

Cost of Resources Supplied = Cost of Resources used + Cost of Unused Capacity.

$$CRS = CRU + CUC$$

Computation of Modified Cost-Volume-Profit-Analysis (mCVPA)

Sales – Variable Cost + Fixed Cost + Cost of Fixed Capital + Cost of Working Capital.

$$MCVP = S - [VC + FC + cFC + cWC].$$

Computation of Economic Value Added (EVA)

Economic Value Added = Net Operating Profit After Tax – Weighted Average Cost of Capital.

$$EVA = NOPAT - WACC$$

Computation of MAPM Value

$$MAPT = CRS + mCVP + EVA$$

Table 1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
IFRd	420	13.9	2.4454925	5	19
CRS	420	26.61486	55.99581	0.03	405.33
EVA	420	4.484238	15.69486	0.01	280.13
Mcvp	420	20.76824	64.61446	0.01	1052

The descriptive statistics table shows a mean value of internet financial reporting disclosures (IFRd) of 13.9, with a corresponding standard deviation of 2.45, with the minimum number of 5 and a maximum of 19 companies; meaning that the average value of (IFRd) in the manufacturing sector is 13.9 out of a maximum of 19. The value of the standard deviation is lower than the mean, but the data are farther from the mean. The table also showed a mean value of cost of resources supplied (CRS) of 26.61 and a corresponding

standard deviation value of 60, a minimum value of 0.03 and a maximum of 405.33, meaning that the average value of (CRS) in the sector is 26.61 from a maximum of 405.33, the value of the standard deviation is more than the mean, the margin indicates that the data are not dispersed from the mean, also the economic value addition (EVA) reported a mean value of 4.48, with a corresponding value of 15.69 standard deviation, a minimum of 0.01 and maximum of 280.13 values; this implies that the average value of (EVA) in the sector is 4.48, from a maximum of 280.13. The standard deviation value is higher than the mean, yet the data are not dispersed from the mean; likewise, modified cost volume profit (Mcvp) reported a mean value of 20.77, which corresponds to a standard deviation value of 64.61, minimum value of 0.01 and a maximum of 1052 values, this means that the average value of (Mcvp) in the sector is 20.77 out of a maximum of 1052 values, the standard deviation value is also higher than the mean, but it shows a closer affinity to mean.

Table 2 Correlation matrix

Variables	logIFRd	logCRS	logEVA	logMcvp
logIFRd	1.0000			
logCRS	0.1650	1.0000		
logEVA	-0.1646	0.0235	1.0000	
logMcvp	0.1143	0.5389	0.1864	1.0000

Table 2 revealed the correlation association between the dependent variable and the independent variables and the independent variables themselves. In the work of Gujarati (2004), high or intense correlation exist if the correlated values are greater that (>) 0.80, otherwise correlation is absent. Table 2 above, reveals that the associations between the variables are less than (<) 0.80, meaning that there is no intense correlation between the variables.

Hausman Test

Test: Ho: difference in coefficients not systematic

$$\chi^2(3) = (b-B)'[(V_b V_B)^{-1}](b-B) = 1.43$$

$$\text{Prob}>\chi^2 = 0.6981$$

Table shows the Hausman specification test to ascertain the most appropriate model to be used in the research estimation, the Null hypothesis is accepted because the probability statistics reported an insignificant value of 0.6981 being more than (>) 0.05; meaning that the random effect model is the appropriate model for the estimate.

Breusch-Pagan LM Test

Estimated	results:		
		Var	sd = sqrt(Var)
	logIFRd	0.046141	0.2148047
	e	0.0138104	0.1175179
	u	0.0318109	0.178356

$$\text{Test} = \text{Var}(u) = 0$$

$$\text{Chibar2}(01) = 859.13$$

$$\text{Prob} > \text{chibar2} = 0.0000$$

The table above shows the Breusch and pagan langragian test to determine which model to be used in the research estimation, between random and pooled effect model the Null hypothesis is rejected because the probability statistics reported a significant value of 0.000 which is less than ($<$) 0.05; meaning that the pooled effect model is the appropriate model for the estimate.

Regression Analysis

logIFRd	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
logCRS	0.014099	0.0063456	2.22	0.027	.0016252	0.0265719
logEVA	-0.02095	0.0055762	-3.76	0.000	-.0319129	-0.0099909
logMcvp	0.008751	0.0062691	1.40	0.163	-.0035721	0.0210741
_cons	2.570096	0.014389	178.62	0.000	2.541812	2.598381
No of obs = 420						
F(3,416) = 8.86						
Prob > F = 0.0000						
R-squared = 0.6050						
Adj R-sqd = 0.5370						
Root MSE = 0.20837						

The coefficient of determination (R^2) from the above table is 0.6050, and the adjusted R-squared shows a value of 0.5370, this implies that only 60.5% of the dependent variables can be explained by the explained variable, while 39.5% of the independent variables captured by the error terms represent other independent variables not listed in this study. The value of the F-statistics isn 8.86 with a corresponding probability Prob(F-statistics) of 0.0000, meaning that all the variables jointly explained the dependent variable and has significant positive effect on management accounting practices of listed manufacturing companies in Nigeria.

From the following *hypothesis*:

Cost of resources supplied has no significant effect on internet financial reporting disclosures of listed manufacturing companies in Nigeria.

The regression analysis table shows a coefficient of 0.0149099 with a corresponding prob(0.027 $<$ 0.05), meaning that there is a positive significant relationship between cost of resources supplied and internet financial reporting disclosures of manufacturing companies listed in the Nigeria stock exchange, that is a 1% increase in cost of resources supplied will result in a 1.49% increase internet financial reporting disclosures of the sampled companies. The null hypothesis is **rejected**.

Economic value added has no significant effect on internet financial reporting disclosures of listed manufacturing companies in Nigeria

The regression analysis table also showed a coefficient of -0.02095 with a corresponding prob(0.000 < 0.05), meaning that there is a negative significant relationship between economic value added and internet financial reporting disclosures of manufacturing companies listed in the Nigeria stock exchange, that is a 1% increase in economic value addition will result in a 2.09% decrease in internet financial reporting disclosures of the sampled companies. The null hypothesis is *rejected*.

Modified cost volume profit has no significant effect on internet financial reporting disclosures of listed manufacturing companies in Nigeria.

The regression analysis table as well reported a coefficient of 0.008751 with a corresponding prob(0.163 > 0.05), meaning that there is a positive insignificant relationship between modified cost volume profit and internet financial reporting disclosures of manufacturing companies listed in the Nigeria stock exchange, that is a 1% increase in modified cost volume profit will result in a 0.88% increase in internet financial reporting disclosures of the sampled companies. The null hypothesis is *accepted*.

Multicollinearity Test

Variable	VIF	1/VIF
Mcvp	1.05	0.948106
CRS	1.04	0.962565
EVA	1.02	0.984658
Mean VIF	1.04	

The table revealed that the variance inflation factor (VIF) showed a tolerance (1/VIF) value that is uniformly less than (<) 1, which indicates the absence of multicollinearity among the independent variables, it is therefore, fit for the estimate.

Heteroskedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: residual

chi2(1) = 2.56

Prob > chi2 = 0.1097

The Chi-squared report from the heteroskedastic test table above showed a value of 2.56, with a corresponding probability 0.1097 or 10.97%, which is greater (>) than 0.05, therefore, the null hypothesis is accepted; indicating that the residuals are homoscedastic which is desirable.

CONCLUSIONS AND RECOMMENDATION

The study explored the effect of management accounting practices on internet financial reporting of listed manufacturing companies on the Stock Exchange of Nigeria. The result of the study from the data collected

were reported as followed that a positive significant relationship exists between cost of resources supplied and internet financial reporting disclosures in the sampled companies, this agrees with the work done by Effiong and Akpan (2018), which implies that the more consistent sampled companies report on the internet the more the cost, yet the better their activities are exposed to users and potential investors; it agrees with the apriori expectations. That economic value addition showed a negative significant relationship with internet financial reporting disclosures in the sampled companies, this finding is in consonance with the outcome of Gichaaga (2014), but disagrees with what Ahmad and Zabri (2013) found out in their study; this implies that though internet financial reporting is important, but maintenance cost can be impactful on the business profit. a positive insignificant relationship exists between modified cost volume profit and internet financial reporting disclosures in the sampled companies, this outcome is consistent with the result of the study by Enakirerhi et al., (2020), but inconsistent with the findings by Mokhtar (2018), this implies that modified cost volume profit is lowly relevant to internet financial reporting.

RECOMMENDATIONS

- Companies in this sector must endeavor to manage their cost of owning a website so as to maintain the benefit of internet financial reporting,
- The value addition in respect to using internet financial reporting must be adequately analyzed so that the purpose of using it will not be defeated,
- A well-planned cost-volume-profit analysis must be carried out to ensure that the huge bill involved with financial reporting is incurred within the companies' margin of safety.

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