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Research Article

COST CONTROL AND MANAGEMENT PRACTICES AS DETERMINANTS OF EARNINGS PER SHARE IN LISTED MANUFACTURING FIRMS IN NIGERIA

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Abstract

This study examined the effect of Cost Account Management Practices and Earnings per Share of Quoted Manufacturing Firms in Nigeria. Panel data were sourced from annual reports and financial statements of quoted firms from 2014-2023. Panel data ordinary least square methods, cointegration, unit root and causality were used to analyse the dynamic effect of cost account management practices and earnings per share. Findings from the study proved that 49 percent variation on the earnings per share of the selected manufacturing firms can be traced to variation on the management accounting practices while beta coefficient of the variables proved that cash management have negative and significant effect, budgetary control have negative and no significant effect while inventory management have negative and significant effect on earnings per share of the manufacturing firms. From the findings, the study concludes that inventory management has negative and no significant relationship with earnings per share of the food and beverage manufacturing firms in Nigeria. That budgetary control has negative and significant relationship with earnings per share of the food and beverage manufacturing firms in Nigeria. That cash management has negative and significant relationship with earnings per share of the food and beverage manufacturing firms in Nigeria. it recommend that The consumer goods manufacturing firm's management, policy makers and transaction advisors should be keen on making cost management policies to be applied since they greatly impact on financial performance of the company and accounting policies regarding to financial performance of companies should incorporate various cost management accounting practices since they greatly impact financial performance and financial policies regarding cost management strategies should be formulated and be used keenly and with a lot of controls to avoid critical financial loses.

Keywords: Cost Account, Management Practices, Earnings per Share, Manufacturing Firms

INTRODUCTION

The objective of shareholders wealth maximization is an appropriate and operationally feasible criterion to choose among the alternative financial actions. It provides an unambiguous measure of what management should seek to maximize in making investment decisions on behalf of shareholders. Accounting goals are quantitative expression of a company's mission and strategy and are set by its long-term planning system as a tradeoff among conflicting and competing interest (Anyamaobi & Lucky, 2018). These accounting goals guided maximizing the level of cash flow, operating profit before interest and tax, maximizing the ratio of earnings, market rate of return, return on investment, net profit to net worth, net profit margin, maximizing the growth in earnings per share, total assets, sales and ensuring availability of fund (Pandey, 2015).

The need to increase company level efficiency has been a dominant suggestion offered as the key to reversing this unimpressive performance. Soderbom and Teal (2002) suggested a key policy issue the Nigerian government should face is to understand and address the factors that will enable the efficiencies of companies and consequently their competitiveness to increase. (Ayodele & Falokun 2003) suggested the adoption of the combination of suitable management techniques with suitable technology and other resources in addressing the low productivity of the sector. Increase financial performance is the operational target of every profit making organization and constituted the short and long-run management planning and operating strategies. At the micro-level corporate performance was a critical functional internal factor such as management quality, pricing and cost management (Ahmad & Zabri, 2013). For companies to attain satisfactory levels of performance, management must formulate tactical and strategic policies to management cost incurred in the process of production.

Cost account management practices are seen as one of such important management techniques that can help ensure efficiency in the use of companies' resources (IFAC, 1998). Traditionally, the main objective of the cost accounting systems has been to provide information for costing products and for promoting efficiency in the use of labour and materials (Johnson & Kaplan, 1987). Such traditional method adopt practices and techniques such as inventory management, budgetary control and cash management, standard costing and flexible budgeting for cost control, cost allocation and product cost measurements; incremental analysis for decision-making; measurement of profit, contribution and return on investments for performance monitoring; and the full integration of internal cost accumulation systems with the external financial reporting systems (Shillinglaw, 1989).

Management accounting practices as one of the factors that determine performance of manufacturing firms provides financial as well as non - financial information to the managers that help them in the decision- making process. It is used by the managers of a company to improve the performance of the organization by controlling its operations and activities (Scapens, 2006). Management accounting practice is one of the most significant issues for any company and at any stage of its development. It is a process lead to better use of costs and higher production volumes and revenues and considered as one of the core activities in economic practice of industrial companies. Managers are concern in estimating cost behavior patterns as the information accelerates precise cost forecasts concerning planning and decision-making (Pichetkun & Panmanee, 2012). Management Accounting Practices play a vital and influential role of providing accurate information that can be used by management to make informed decisions that can help firms to gain a competitive edge over competitors (Wang & Huynh, 2013). Direct costs primarily comprise direct materials and labor, representing those easily and accurately identified with a particular cost object while indirect costs cannot be determined specifically and exclusively with a given cost object (Drury, 2012; Hansen & Mowen, 2015). Issues related to an increasing proportion of overhead costs and any subsequent impact on cost management was defined by Nimocs (2005). Hansen (2009) opined that further comment that cost assignment is a key process within a cost accounting system. Studies have shown that up to 80% of manufacturing firms continue to use traditional product-costing methods, despite the fact that

accountants express dissatisfaction with relying on the outputs of such cost accounting systems for decision-making purposes (Sharman, 2003).

Management accounting practices effectiveness helps to finish the task with the spending of limited allocated resources and makes valuable to firms such as working capital invested reduction, lower cost per unit, and better quality of the process and product (Groth & Kinney, 1994. Limited resource and apparent continuous competition influence firms to better managing cost of production by implementing standard costing, budget system, monitoring cost information, and focusing on value added activities by eliminating non-value added activities through supplier coordination, and emphasizing on cost structure by analyzing cost and finding the way to reduce costs in the stage of pre-production. Manufacturing Firms with cost management strategy implementation are able to know when the amount of cost will incur in the future if they have current and future cost information. Managers can make better decision which can positively improve the financial performance of manufacturing companies.

Traditionally, management accounting practices were based on controlling costs and quality and balancing them temporary and focus on internal efficiency. Management accounting practices constitute the process of quality planning and cost decreasing that manages the costs before their occurrence. A well planned cost management system provides improvements in quality, cost/price and functionality of a product. Manufacturing companies use modern cost management techniques in their daily operations which has a great impact on their financial performance (Atkinson, 2012).

There has been argument on the effect of management accounting practices and financial performance of manufacturing firms. The researcher anticipates either a positive of negative relationship of cost management strategies and financial performance. One school of thoughts argues that there is a positive relationship in that cost management strategies are considered as critical factors to increase revenue for the success of manufacturing companies (Kumar & Shafabi, 2011). Another positive relationship is that cost containment techniques such as, inventory management, material costing, standard costing, sourcing and budget system limit the highest cost that could be incurred and as a result for the same level of income, the expenses are lower which results to increase in profitability. Cost reduction which refers to an attempt to attain lower current cost with an essential activity (Groth & Kinnery, 1994). As a result of this total output of assets is low compared to the resulting income generated. These results to rising of (ROA) ration hence increase in profitability. Cost avoidance which refers to the eliminated activities that generate costs of non-added values has a positive impact on profitability in that costs which increase expenditure with no future income generation are done away with hence reducing the negative impact on income. Positive elevation of Income leads to increase in profitability and in profitability as well which is the measure of financial performance in this study. Another approach which indicates a negative relationship of cost management to financial performance measurement advocates for supplementing traditional cost accounting measures with a diverse mix of non-costing measures that are expected to capture key strategic performance dimensions that are not accurately reflected in short-term accounting measures.

Brancato and Fisher (1995) indicated that many manufacturing firms believe that cost accounting measures are too historical and ‘‘backward-looking,’ lack predictive ability to explain future performance, reward short-term or incorrect behavior, provide little information on root causes or solution problems, and give inadequate consideration to difficult to quantify ‘‘intangible’’ assets such as intellectual capital. As a result, many firms are supplementing cost accounting metrics with a diverse set of non-cost performance measures that are believed to provide better information on financial progress and success (Garrison, 2015). Therefore this study examined the relationship between cost accounting management practices and earnings per share of Nigeria manufacturing firms.

LITERATURE REVIEW

Management Accounting Practices

Management accounting practices often refer to cost cutting and it's commonly approached that firm managers use to respond to the decreasing sustainable profitability (Anderson, 2007). The most important managerial tools are cost management strategies (Zengin & Ada, 2010), and cost management strategies are considered as critical factors to increase revenue for the success of manufacturing companies (Kumar & Shafabi, 2011). Accounting management strategy supports decision making and improves competitive advantage that results in a better resource allocation (Ellram & Stanley, 2008). In addition, management accounting may be an integral feature of overall businesses' management effectiveness and facilitate to determine accurately estimated cost before process starting and can help to forecast cost occurrence in the future.

Management accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by management to plan, evaluate, and control within an organization and to assure appropriate use of and accountability for its resources (Smith, 2009). According to Ndwiga (2011) management accounting practices are connected with providing management solutions for the internal management purposes.

Epstein and Lee, (2008) as well as Nuhu, Baird & Appuhami, (2016) are of the view that management accounting practices are organizational information systems that offer an organization with pertinent information to add value to its customers and organizations. Management accounting practices enables effective decisions and assists organizations in encouraging intended behaviours (Abdel-Kader & Luther, 2006). Management accounting practices can comprises Cost, budgeting, performance evaluation, information for decisionmaking and strategic analyses, among many others (Gichaaga, 2013).

The amount of direct costs is dependent on the scope of works, unit prices of materials, wage tariffs and costs of machinery usage, and can be easily planned in a detailed way. However, a proper allocation of overhead costs to individual contracts is a challenging issue. Taking into consideration that overhead cost can be considered as a factor of the company’s competitiveness. It is obvious that overhead costs should be managed adequately in order for the company to remain eligible to participate in tenders with acceptable prices. Overhead cost is defined by

(Gichaaga, 2013) as costs that are not a component of the actual construction work but support the main work. Accordingly, administration staff wages, the depreciation of fixed assets or acquisition and operation of information technology and mobile devices are among the typical overhead cost items.

Inventory Management

The word inventory has been defined in many ways. Ballou (2004) defines inventories as stockpiles of raw materials, supplies, components, work in process, and finished goods that appear at numerous points throughout a firm's production and logistics channels. According to Chase, Jacob and Aquilino (2004) inventory is the stock of any item or resource used in an organisation. An inventory system is the set of policies and controls that monitor levels of inventory and determine what levels should be maintained, when stocks should be replenished, and how large orders should be. Pycraft (2004) defined inventory or stock as the stored accumulation of materials resources in a transformation system. International Accounting Standards (IAS2) states that Inventories shall be measured or valued at the lower of cost and net realizable value.

The costs of inventories comprise all cost of purchase, cost of conversion and cost incurred in bringing the inventories to their present location and condition. Inventory is an important and valuable asset. It constitutes substantial portion of the total current assets of a business. Inventory covers a wide variety of items which are meant to be procured, „used up" and sold in an ordinary course of business. It covers the whole range of items starting from input of material and ending with output of finished products. According to Josh (2000), the item forming inventory can be classified into three categories: (1) raw materials, (2) work-in-process (WIP) and (3) finished goods. Raw material inventory represents the item of basic inputs which are yet to be processed into final product. Work-in- process covers all items which are at various stages of production processes. These items have ceased to be raw material but have not developed into final products and are at various stages of semi-finished levels. Finished goods inventory consists of the final products which are awaiting sale. According to Hugo (2002), the aim of inventory management is to hold inventories at the lowest possible costs.

Josh (2000) enumerates the objectives of inventory management as fellows; - To reduce cost of holding stock so that investment in stock outs (running out of stock) production cycle operates smoothly. - To persuade the business to reduce the levels of inventory whereas one prompts it to increase the same. When making decisions on inventory, management has to find a compromise between the different cost components, such as the cost of supplying inventory, inventory-holding costs and cost resulting from insufficient inventories. Starr & Miller (1962) identify three motives for holding inventories which are similar to Keynes three motives for holding cash. The transaction motives which emphasizes the need to maintain inventories to facilitate smooth production and sales operation, the precautionary motive which necessitate holding of inventories to guard against the risk of unpredictable changes in demand and supply forces and other factors; and the speculative motive which influence the decision to increase or reduce inventory levels to take advantage of price fluctuations.

Budgetary Control

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Budgetary control is the process of developing a spending plan and periodically comparing actual expenditures against that plan to determine if it or the spending patterns need adjustment to stay on track. This process is necessary to control spending and meet various financial goals. Organizations rely heavily on budgetary control to manage their spending activities, and this technique is also used by the public and private sectors (Dunk, 2009). Budgetary control is system which uses budgets as a means of planning and controlling all aspects of producing and selling commodities or services. This is true as we tend to prepare revenue and expenditure variance analysis to be able to deduce area of divergences for which management needs to watch to avoid embarrassment as any adverse variance will translate in to inability to meet the corporate objective which will eventually lead to disagreement with stakeholders (Batty, 1982).Although many people complain about budget and its process, budgets are indispensible in a large modern organization as the benefit that occurs from budgets and its control is much greater than the cost involved.

The fact that resources are scare, coupled with high competition that permeate most business, budgets when rightly applied, would be an effective tool for planning and control, especially large organization as Nepal Oil Corporation (Pandey, 1985). Performance refers to the extent of which an organization's goals and objectives are achieved effectively and efficiently while financial performance is general measure of a firm's overall financial health status over a given period of time. Financial performance can be measured by using variable such as firm's cash flow, working capital, cost base, borrowing as well as firm's growth (San and Heng, 2011).

Cash Management

Managing cash is becoming ever more sophisticated in the global and electronic age of the 1990s as financial managers try to squeeze the last dollar of profit out of their cash management strategies (Block & Hirt 1992). According to Mclaney (2000) cash is much more than just one element of working capital. As the medium of exchange and store of value, cash provides the linkage between all financial aspects of the firm. More specifically it links short and long-term financing decisions with one another, with decision involving investment both in fixed assets and working capital. Clearly, cash management is one of the key roles in any organization of any size description. Meyer, et al (1992) observes that cash and marketable securities are the most liquid of the company’s assets. Cash is the sum of currency a company has on hand and the funds on deposit in bank checking accounts. Cash is the medium of exchange that permits management to carry on the various functions of the business organizations.

From economic theory, several writers have theorized in support of Keynes that the motives for holding cash are merely, transactionary, precautionary and speculative. According to Keynes (1973), companies hold cash in order to bridge the interval between the time of incurring business cost and that of the receipt of the sale-proceeds. In other words, companies hold a certain amount of cash in order to meet the regular expenses of their activity. Therefore, the higher the firm’s ability to schedule its cash flows (depending on their predictability) the weaker the transactionsmotive for holding cash will be. The transaction motive illustrates the cash holding of firms and therefore more applicable to SMEs. The precautionary motive pays regard to a company’s need to provide for

unsuspected expenses and unforeseen opportunities of advantageous purchases. Thus, if a firm operates in a highly volatile sector, its precautionary cash holding will be higher than that of firms operating in a less risky environment.

Earnings per Share

Earnings per share are a ratio that measure earnings in relation to every share on issue. This is measured by dividing the profit before interest and taxes with the outstanding number of shares of the firm. This indicates how much each one share of the firm will earn from the yearly proceed. The earnings for every share represent shareholders slice of the pie. As earnings go up over time, the value of that piece of the firm becomes more valuable and this is why the price will be bid Whilst there are not many truisms when it comes to share investment, one is that if earnings rise consistently over the long term, then the share price will follow. Apparently, issue of shares that increases the number of outstanding share dilutes the equity owners' residual value. Tze-Sam and Heng (2011) provide empirical investigation using EPS as a proxy for corporate performance to establish its relationship with financial structure. The measure is derived thus;

$$EPS = \frac{\textit{Profit before Interest and Tax}}{\textit{No of Outstanding Shares}} \quad 1$$

Theoretical Review

Contingency Theory

Contingency theory is an approach to the study of organizational behavior in which explanations are given as to how contingent factors such as technology, culture and the external environment influence the design and function of organizations (Islam and Hui Hu, 2012) the essence of contingency theory is that best practices depend on the contingencies of the situation. Contingency theory is often called the "it all depends" theory, because when you ask a contingency theorist for an answer, the typical response is that it all depends. The term contingency as used in contingency theory is similar to its use in direct practice. A contingency is a relationship between two phenomena. If one phenomenon exists, then a conclusion can be drawn about another phenomenon.

Contingency theory has been applied in accounting in several ways and by several authors. Hofstede (1983) found that, economic, technological and sociological considerations had a significant impact on the functioning of budgeting systems. Shank (1989) also applied contingency principles in investigating the use of managerial accounting systems and information in a strategic way and Banker, Datar and Kemerer (1991) looked at the impact of structural factors and found that firms which implemented just-in-time (JIT) or other team-work programs were more likely to provide information regarding performance to shop-floor workers.

Sheild, Chow Kato and Nakagtuvu (1991) stated that the difference in accounting practice between the US and Japan has been attributed to difference in underlying goal and educational training and career paths of the cost accountants. While US uses direct labour for allocating manufacturing overheads, Japan uses it for a motivational purpose, Japanese firms believe that allocation of inventory management distorts the product cost, but they still

use it because of the incentives it provides to increase labour efficiency and to implement technology that will replace labour. Most of the US accountants are trained in the universities and their career path is accounting while most of the accountants in Japan are trained in other disciplines apart from accounting, but are rotated in many functional areas of the organization including accounting for about 10 to 15 years. After that, some of them are sent for in house training in accounting that would prepare them to spend several more years in accounting section. After a lot of experience in the accounting department, they are usually transferred from accounting section and end up as general managers.

Kaizen Costing System

Kaizen a term with Japanese origin Sani and Allahverdizadeh (2012) was launched by Masaaki Imai (Rof, 2012) the concept is a coinage of two Japanese words: KAI (Change) and ZEN (for better) (Rof, 2012). Thereafter, Yashuhiro Monden from Japan developed Kaizen Costing as the costing counterpart to the Kaizen approach (Industrial and Financial Systems, 2001). This concept refers to the process of continuous improvement (Rof, 2012; Sani and Allahverdizadeh, 2012).The principle behind Kaizen Costing application is on achieving small, gradual but continuous improvements in the production process at minimal cost (Rof, 2012). Ellram (2000, cited in Modarress, Ansari, & Lockwod, 2004) observed that Kaizen Costing ensures that products meets or exceeds customer demands for 'quality, functionality, and prices' in order to sustain the product's competitiveness. This according to Rof (2012) can be achieved through a sequential elimination of all the processes that would increase the product's cost of production without a corresponding increase in value. The philosophy emphasizes continuous improvement in our ways of life, social life and home life. This technique has made tremendous changes in management policies not only in Japan, but all over the word (Ogundele 2004). Blocher, Chen and Lin (1999), define Kaizen costing technique as the application of continuous improvement specifically to reduce costs; it focuses on making production and service delivery processes more efficient. Kaizen costing is used for making improvement to a process through small incremental amounts, rather than through large innovations. Unlike target costing, Kaizen costing is applied during the production stage of the product life cycle (Target cost is applied during the design stage). Adeniji (2011) asserted that Kaizen costing is the process of continuous improvement, encouraging constant reductions by tightening the 'standard'. The cost reduction objective is to set for each process, and then adopt value analysis and Value engineering to achieve the set objective. With target costing, the focus is on the product, and cost reductions are achieved primarily through product design. Kaizen means improvement, continuous improvement involving everyone in the organization from top management, to managers then to supervisors, and to workers. Kaizen is a Japanese philosophy for process improvement that can be traced to the meaning of the Japanese words 'Kai' and 'Zen', which translate roughly into 'to break apart and investigate' and 'to improve upon the existing situation (Boca, 2011)

The Kaizen method and technique are valuable instruments that can be used to increase productivity, obtain competitive advantage and to raise the overall business performance in a tough competitive market like the one in the Europe (Ramezani & Mahdloo 2014; Boca ,2011). The Kaizen Method has been particularly distinguished

as the best methods of performance improvement within companies since the implementation costs were minimal. The Kaizen management is dedicated to the improvement of productivity, efficiency, quality and in general of business. The Kaizen method acknowledged as method of improvements applied to key processes will generate the majority of the company's profit, while constituting a secure way to obtain the clients loyalty and fidelity.

Inventory Control Theory

Zappone (2014) stated that managing all kinds of assets in an organization can be viewed as an inventory problem. For the large companies they use a variety of inventory control theories and mathematical formulas to help them optimize the production and storage of many thousands of units of products and to help them minimize costs. At the same time the small-business owners can use ideas from several inventory control methods to manage their production and storage based on their cost-containment and customer service needs. Any inventory manager's goal within an organization is to minimize cost and maximize profit while satisfying customer's demands. Too much inventory consumes physical space, creates a financial burden, and increases the possibility of damage, spoilage and loss (Zappone, 2014) further explains that excessive inventory frequently compensates for sloppy and inefficient management, poor forecasting, haphazard scheduling, and inadequate attention to process and procedures. Too little inventory often disrupts manufacturing operations, and increases the likelihood of poor customer service. In many cases good customers may become dissatisfied and take their business elsewhere if the desired product is not immediately available. Companies with very high inventory ratios have more possibilities to be bad financial performers. Shah and Shin (2007), reported a strong negative relationship between the cash conversion cycle and corporate profitability for a large sample of public American firms. Firms with abnormally high inventories have abnormally poor stock returns, firms with abnormally low inventories have ordinary stock returns while firms with slightly lower than average inventories perform best over time. Shah and Shin (2007) also stated that reducing inventories has a significant and direct relationship with a firm's financial and operational performance.

Empirical Review

Uyar (2010) explored the management accounting practices utilized by small and medium manufacturing companies operating in Istanbul, Turkey. The data was obtained from 13 small and 39 medium manufacturing companies in Istanbul using multiple choice and open-ended Like scale questions namely: textile industries (26), paper products and publication companies (9), chemical and plastics manufacturing firms (11), food industries (5), and miscellaneous industries (5) information technology, leather and shoes, constructions, metal, wood products and automotive. Sunarni (2013) study was participated by management accountants who work in 30 medium-scale (20-99 employees) manufacturing companies throughout Yogyakarta Indonesia. Budgetary planning and control system and cost-volume profit analysis were considered as the most vital in managing their task which is slightly consistent with the findings of Lucas et al. (2013) However, total quality management and standard costing and variance analysis were included at the top-three most important tools but never used for Lucas et al. (2013) sample companies.

Shehu (2014) examined the effect of environmental expenditure on the performance of quoted Nigerian oil companies, within a period of twelve years (1999-2010) using selected firm financial statement of all quoted oil companies listed in the Nigerian Stock Exchange. The data was analysed using multiple regression, employing ROA and three independent variables; Cost of Environmental Remediation and Pollution Control (ERPC), Cost of Environmental Laws Compliance and Penalty (ELCP), Donations and Charitable Contributions (DCC).

Malarvizhi and Ranjanni (2016) conducted a research to examine whether there is any significant relationship between Corporate Environmental Disclosure (CED) and firm performance of selected companies listed in Bombay Stock Exchange (BSE), India. They use content analysis methodology by developing an environmental disclosure index (EDI) and formulating hypotheses to test the association between firm performance and level of environmental disclosure. Primary data was collected using questionnaire instrument. A regression model with EDI as dependent variable and return on capital employed (ROCE), return on assets (ROA), net profit margin (NPM) and earnings per share (EPS) as independent variable is used to analyze data for this research. Results show there is no significant relationship between the level of environmental disclosure and firm performance. They recommended that corporate organizations should be educated on the benefits of better environmental performance and encouraged to comply with the requirements for long-term survival. As part of environmental governance government should include education on ethical environmental disclosure at societal level, school level.

Oluwagbemiga, Olugbenga and Zaccheaus (2014) investigated the relationship that exists between cost management practices and firm's performance in the manufacturing organizations using data from 40 manufacturing companies listed on the Nigeria stock exchange during the period of 2003 to 2012. The study relied on secondary data extracted from the audited financial statement of the selected companies. Inventory management, budgetary control and cash management, production overhead cost and administrative overhead cost were taken as independent cost management variables while profitability (Operating profit) was taken as dependent variable representing the firm's performance. The result indicates that a positive significant relationship exists between cost management practices and firm's performance in the manufacturing organization.

Oyewo (2014) determined whether Strategic Cost Management (SCM) techniques are practically used by Nigerian companies and the extent of their utilization- particularly in the Nigerian manufacturing and financial services industries, identify the factors influencing the adoption of strategic cost management and investigate whether strategic cost management can be used as competitive strategy for survival in recessionary times. Questionnaire was used as a major instrument for data collection. Data collected were subjected to statistical procedures using the Mann-Whitney test. The research found out that although Nigerian companies are receptive to the philosophies of SCM, there are challenges inhibiting their adoption and implementation in the Nigerian environment.

Akinbor and Okoye (2012) investigated strategic management accounting (SMA) with a view to determining the extent to which it influences Competitive Advantage in the manufacturing industry in Nigeria. To achieve this

purpose, some research questions were raised, and a review of related literature was made. The population of this study consists of Chief Executives, Chief Accountants and Marketing Directors of those manufacturing companies quoted in the Nigerian Stock Exchange Factbook of 2009. The data generated for this study were analyzed using tables, frequencies, bar charts, and mean scores. Our findings revealed that Strategic Management Accounting enhances Competitive Advantage although several factors bedevil its adoption in Nigerian manufacturing firms.

Dauda, Akingbade and Akinlabi (2010) examined the influence of strategic management on corporate performance in selected small scale enterprises in Lagos, Nigeria. Cross sectional survey research method was adopted for the study and 140 participants were randomly selected among small-scale enterprises in Lagos metropolis. Findings of the study showed that strategic management enhances both organizational profitability and company market share.

Askarany and Yazdifar (2012) investigated the diffusion of six proposed strategic management tools of the past few decades through the lens of organizational change theory, examined the relationship between the adoption of these techniques and organizational performance in both manufacturing and nonmanufacturing organizations in New Zealand. The findings suggested a significant association between the diffusion of these relatively new strategic management tools and organizational performance.

Muogbo (2013) examined the impact of strategic management on organizational growth and development in selected manufacturing firms in Anambra State, Nigeria. The study used a descriptive survey design to collect detailed and factual information. Cluster sampling was used to select equal number of manufacturing firm s from each sample cluster in the study. The data collection instrument was a structured questionnaire. The study found out that Strategic management was not yet a common business practice among manufacturing firms in Anambra State.

Adesina, Ikhu – Omoregbe and Aboaba (2015) investigated the effect of cost information, sales information and marketing information on profitability. Descriptive and inferential statistics were carried out on the opinion of 222 top management staff purposively selected from the listed manufacturing companies in Nigeria with the aid of statistical package for social sciences (SPSS version 20). The results of the data analysis carried out in the study revealed that a positive significant relationship exists between accounting information and profitability of manufacturing organizations.

Ogwo and Ugwunta (2012) evaluated the effect of input costs on the profitability of brewing firms in Nigeria. A cross sectional data was gathered for the analysis from the annual reports of the sampled brewery firms for a period of 1999 to 2010. Measures of profitability are examined and related to proxies for the inputs cost assumed by brewers. The Ordinary Least Squares (OLS) stated in the form of a multiple regression model was applied in the analysis. The study revealed that the focal variable RSGAE (Ratio of Selling and General Administrative Expenses) designed to capture the effect of a company's operating expenses on profitability is statistically positive

and impacts on profitability of the brewery firms in Nigeria. Most of the studies were carried out using primary data.

Raymond, Nwakoby and Okoye (2015) assessed the cost management on corporate operating performance in Nigerian manufacturing companies. Specifically, the study ascertained the significant effect between cost management, operating profit and earnings per share of Nigerian corporate firms. Time series data was used. Data for the study were extracted from five years Annual accounts and reports of five (5) food production companies. Simple Regression Analysis was used with the aid of SPSS version 20.0 in testing the hypotheses. The study discovered that there is a significant effect between cost management, operating profit and earnings per share in Nigerian corporate firms. Based on this, the study recommends that Nigerian corporate firms should adopt modern strategic cost management method for effective operation to enable them to be at advantage in competing with their contemporaries in foreign country.

Oyerogba Ezekiel Oluwagbemiga1, Olaleye Michael Olugbenga1 & Solomon Adeoluwa Zaccheaus1 (2014) investigates the relationship that exists between cost management practices and firm's performance in the manufacturing organizations using data from 40 manufacturing companies listed on the Nigeria stock exchange during the period of 2003 to 2012. Four hypotheses were formulated for the study and tested using t-statistic. The study relied on secondary data extracted from the audited financial statement of the selected companies. Inventory management, budgetary control and cash management, production overhead cost and administrative overhead cost were taken as independent cost management variables while profitability (Operating profit) was taken as dependent variable representing the firm's performance. The result indicates that a positive significant relationship exists between cost management practices and firm's performance in the manufacturing organization.

Sulaiman, Ahmad and Alwi (2005) conducted a study on strategic cost management accounting instruments and their usage in Albanian companies. According to the findings of the study the most used Strategic Cost Management (SCM) instruments were: benchmarking strategic pricing, customer accounting, and target costing in their order of intensity. These instruments were the most used instrument by the Albanian manufacturing companies and the reason behind this selection of instruments were primarily related to implementation costs and the usage of the nonfinancial information, rather than the cost drivers, that can be a very important factor in determining the product price. This study shows that in recent years the Albanian business have successfully adapted to the new economic and technological changes by adopting strategic cost managements instruments to hold or improve their competitive advantage in the market.

Saaydah and Khatatneh (2014) on the adoption of some recent cost management tools and their perceived effects on the performance of Jordan manufacturing companies shows that few modern techniques have been adopted so far. The authors used 30 companies which represent 25% of the targeted population and confirm a reasonable level of awareness and adoption of Just-in-Time Manufacturing, Balanced Score Card, and JIT inventory, Activity Based Costing, Target Costing and Kaizen Costing in their order of intensity. Their findings also reveal

that the tool that faces the greatest difficulty in terms of adoption is Target Costing followed by Activity Based Costing.

Badem, Ergin and Dury (2013) investigated the relevance of standard costing in a study titled: Is Standard Costing Still Used? The objective of their study is to find out the use of standard costing in the automotive industry, the leading manufacturing sector of Turkey. Three survey methods were used in order to obtain the data - electronic questionnaires, telephone and face-to face interviews .The questionnaire was sent to all of the thirteen primary and 300 supplier companies in the automotive industry in Turkey. The findings show an average usage rate of 77 percent for standard costing. It is concluded that the standard costing is still used in the automotive industry in Turkey, despite a general belief by some academicians who argue that the standard costing is out of date. The majority of non-users are local small supplier firms.

Karanja, Mwangi and Nyaanga (2012) also conducted a study on Adoption of Modern Management Accounting Techniques in Small and Medium (SMEs) in Developing Countries: A Case Study of SMEs in Kenya. Their study shows that modern costing techniques such as target costing, Activity based costing (ABC), Just in Time method (JIT) as well as other nonconventional methods were adopted as an attempt to enhance enterprise efficiency and innovation for better planning and improved product/service pricing. The findings showed that SMEs in Kenya have intuitively adopted varying management accounting techniques. From the sample, the majority of the SMEs are faced with constraints of capital management.

Ashfaq, Younas, Usman and Hanif (2014) investigated the traditional and contemporary management accounting practices and their Role and Usage across Business Life Cycle Stages in Pakistani Financial Sector. The data for the study were gotten via structured questionnaire from

90 targeted service listed companies comprising; Banks, Insurance companies, Telecommunication companies and Computer Service companies. Descriptive statistics were used for the analysis and the findings shows that 69% of respondent companies belong from growth stage and 24.4% are located in maturity stage. The results also indicate that management accounting practices for instance costing practices; budgeting practices & decision making practices are widely used especially traditional management accounting practices in the service sector of Pakistan. However, in terms of performance evaluation practices, all the non-financial measures related to employees, customers and operation or innovation have a lower level of usage in Pakistani service sector irrespective of the business life cycle stage. Their findings reveal further that financial companies which are sub sector of the service sector are more sophisticated by utilizing management accounting practices than other services companies. They concluded that management accounting practices are more complicated as the companies move from growth to maturity stage and that traditional management accounting practices still have the highest level in financial sector of Pakistan based on its importance and usage.

Yeshmin and Fowzia (2010) examined the use of the management accounting techniques in discharging managerial functions. The authors survey 151 organizations from manufacturing and service industries with a structured questionnaire by using 5 point Likert scale. They identified 14 management accounting techniques

which include; Cash flow Statement Analysis, Budgetary Analysis, Financial Statement Analysis, Variance Analysis, Total Quality Management (TQM), Cost Volume Profit Analysis (CVP), Fund Flow Statement, Target Costing, Responsibility Accounting, Variable Costing, Activities Based Costing (ABC) Management by Exemption (MBE), Balance Score card, Theory of Constraints. Their findings reveal that five management accounting techniques comprising financial statement analysis, budgetary control, CVP analysis, variance analysis and fund flow analysis are common to both industries and are used frequently in managerial functions. Three factors were identified and used to determine the variability's of the usage level in managerial functions. The study reveals that the usage level of management accounting techniques is very frequent in manufacturing industry (73.343%) in comparison with the service industry (54.396%). They concluded that most of the organizations are favoring quantitative techniques.

Van der Poll and Ndwiga (2013) examined the role of Management Accounting in Creating and Sustaining a Competitive Advantage in the Banking Industry used a sample of 40 respondents from Equity Bank - A leading commercial bank in Kenya. The study shows that modern management accounting provides skills and techniques that play a vital role in the planning, developing, implementing and evaluation of strategic competitive policies that result in a competitive advantage. This study further reveals that the rapid growth and competitiveness of Equity Bank, Kenya can be attributed to the application of innovative management accounting practices. The study found that management accounting practices provide both internal and external competitive strategies that enable business organizations to create and sustain a competitive advantage.

Charafa and Rahmounib (2014) carried out a study on using important performance analysis to evaluate the satisfaction of Activity-Based Costing adopters in Morocco. They examined the satisfaction of the users of Activity-Based Costing (ABC) in Moroccan companies. They employed survey method to study two types of companies: Activity Based costing (ABC) adopters and non -ABC adopters. The results suggest that the ABC adopters were more efficient and more satisfied with their cost system but they did not fully benefit from the contributions of the ABC system. Their study contributed to explaining how companies can use IPA to analyze their ABC systems to improve resource allocation and for better decision-making.

Audretch ,Klomp and Thurik (2002) examined the basic tenet underlying Gibrat's law - that growth rate are independent of firm size -for the Dutch service firms. They use longitudinal data based on a large sample of statistics of Netherlands to track the growth rates over 1000 Dutch service firms between 1987 and 1991. The study measures firm size in term of sales, and the mean growth rates as the percentage change in firm sales between 1987 and 1991; the evidence suggests that growth rates are, in fact independent of firm size. Validation of Gibrat's law is confirmed in Dutch service firms.

Hardwick and Adams (2002) analyzed the relationship between growth and size of 176 firms in the life assurance from U.K. The period analyzed is between 1987 and1996. Size is measured as annual total net assets while growth is measured as "organic" growth in firm size. They use a multivariate model in which the dependent variable is

the logarithm of size regressed on the factors that is expected to affect firm growth and WLS procedure is applied in their research methods.

Their results show that Gibrat's law is accepted for the entire period of 1987-1996. Biesebrock (2005) carried out research into the growth and productivity of growth in 9 African manufacturing firms between 1992 and 1996. Growth is measured by change in size, while firm size is measured in terms of employment. The results of his probit regression show that large firms grow more rapidly and improve productivity faster, conditional on other covariates or on previous performance. Moreover, transitions between size classes or movements in the productivity distribution are very slow, especially at the top of the size or productivity distribution. Large firms remain large, and more productive firms remain at the top of the distribution. Smaller and less productive firms have a very hard time advancing in the size or productivity distribution. Dogan (2013) used multiple regression and correlation methods to investigate the size effect of the firm profitability in Turkey with data of 200 companies between 2008 and 2011. Return on asset is used as indicator of firm profitability and total sales and number of employees are used as indicator of size. The results indicate a positive relationship between size indicator and profitability. In other words, the firms listed in Istanbul Stock Exchange have higher profitability as their sizes expand.

Maja and Josipa (2012) used regression analysis to examine the relationship between firm size and business success. All the data necessary for the research are obtained from the web site of Croatian Financial Agency and from Amadens database for the period of 2002 to 2010 financial year. They use different measures of firm size and profitability: firm size is measured by natural logarithms of firm assets and natural logarithms of number of employees; profitability in terms of return on assets and return equity; and the results of the study show that firm size has a weak positive impact on firm profitability.

Abiodun (2013) studied the effect of firm size on firm profitability in Nigeria, by using a panel data set over the period of 2000-2009. He measures Profitability by using Return on Assets, while both total Assets and total sales are used as proxies of firm size. According to the results of the study, firm size both in terms of total assets and in terms of total sales, has a positive impact on the profitability of manufacturing companies in Nigeria.

Akinlo (2012) investigated the long-run relationship and causality issues between firm size and profitability in 66 firms in Nigeria by using panel cointegration method for the period 1999- 2007. Profitability is measured as return on assets while size is measured as log of sales and his empirical results show that there is a long run steady-state relationship between firms' size and profitability. The short run causal relationship shows that there is bidirectional relationship between firms' size and profitability. This implies that firm size Granger causes profitability and profitability Granger causes firm size. The results clearly refute the general assumption that causation runs from only firms' size to profitability on which most exciting studies have been based.

Literature Gap

The empirical review on the relationship between management accounting practices and financial performance has yet to provide a convincing causal link among measures of economic variables used by various authors. A

reasonable conclusion based on previous research is that management accounting play significant role in determining corporate performance but most of these findings are foreign studies .This is in line with management efficiency theory and agency theory as advocated by the finance and accounting and further accounting principles. A number of conceptual, empirical and methodological study gaps arise from existing studies of the issues examined in this study. The conceptual gaps arise from the fact that management accounting indicators such as inventory management, budgetary control and cash management cost that determine corporate performance have largely been studied but with little focus on firms manufacturing consumer goods products in Nigeria. Existing studies are subject to lots of criticism as the measures of variables are very limited and one sided; addressing traditional costing methods. The conceptual gaps include lack of consensus and inconsistencies on the effect of management accounting practices on manufacturing firms.

METHODOLOGY

Ex-post facto research design was employed in obtaining, analyzing and interpreting the relevant data for hypotheses testing. The rationale for the variety is that ex-facto research design allows the researcher the opportunity of observing one or more variables over a period of time (Uzoagulu, 1998). It also provides a systematic and empirical solution to research problem by using data that already exist. Specifically, panel data were adopted in data analysis. The population of the study was the entire 20 quoted consumer goods manufacturing firms in Nigeria. The study population was considered finite. The sample size was the 20 quoted manufacturing firms in Nigeria Stock Exchange which are: Champion breweries, Seven Up Bottling Co, international breweries, Cadbury, UAC, DN tyre and rubber, Pabod Breweries, Floor Mills, Guinness, N. Nigeria flour mills, Nasco Allied Industry, Union Decon salt, Nestle, UTC Nig, Nigeria Enamel wares, Nigeria Breweries, PZ Cushion, Unilever, Golden Guine and Vita Foam. This study ignored the determination of sample size because it employed the census techniques as its sampling method. The secondary data that were used, secondary data were obtained by scanning the financial reports and accounts of the quoted manufacturing firms and from websites of the firms and fact book of the Nigeria Exchange Group 2023 edition.

Method of Data Analysis

To obtain the observed values on the expectation of the impact of management accounting practices on firm performance, panel data analysis for a ten year period was employed. Panel data structure allowed us to take into account the unobservable and constant heterogeneity that was, the specific features of each quoted firm. In addition the researcher employed pooled Ordinary Least Square (OLS), Fixed Effects and Random Effects regression models to test the various hypotheses. Pooled OLS regression technique is popular in financial studies owing to its ease of application and precision in prediction (Alma, 2011). These analytical techniques enabled the researcher attain justifiable and robust results.

$Y=\square_0+\square_{1Xit}+\square$ 2

Where,

Y = Dependent Variable

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$\square 1Xit$ = Independent variable

$\square_0$ = Regression Intercept

$\square$ = Error Term

Disaggregating Equation 3.1 to form the multiple regression models, we have

EPS = $\square+\square 1IVM+\square 2\ BC+\square 3CM+\square i$ 3

Transforming equation 2 to econometrics form, we have

Where

EPS = Earnings per Share of the manufacturing firms

IVM = Inventory management measured as value of raw material and work in progress to total operating cost

BC = Budgetary Control measured as percentage of fixed assets to total operating cost CM = Cash management measured as percentage of net cash flow to total operating cost.

$\square$ = Error Term

$\square_1-\square_4$ = Coefficient of Independent Variables to the Dependent Variables

$\square_0$ = Regression Intercept

Statistical Approach

(i) Coefficient of Determination (R^2): This is used to measure the extent to which the independent variables in the model can explain changes on the dependent variable.

(ii) T-Test: This is used to measure the significance of the independent variables to the dependent variable and the hypothesis was tested at 5% level of significance and at 95% confidence interval. The hypothesis for this test is stated as follows:

Null I hypotheses: H_0:β = 0, (Statistically not significant)

Alternate hypotheses; H_1:β ≠ 0. (Statistically Significant)

And the decision rule states that "H_0" should be rejected when i-statistics is greater than the critical value, but when the T-statistics is lower than the critical value, the "H0" is accepted with its conclusion.

(iv) F-Test: This is used to find out the overall significance of the regression model at 5% level of' significance. The hypothesis for this test is stated as:

Null Hypotheses; H_0: β_1-β_6 =0 (all slope coefficients are equal to zero)

Alternative Hypotheses: H_0: β_1-β_6 ≠0 (all slope coefficients arc not equal to zero) The decision rule for this test is that "H0" should be rejected when F-statistics is greater than the critical value of F. hut when the F-statistics is lower, then the 'H0" is accepted while the Hi is rejected.

(v) Test of Autocorre1ation: The Durbin Watson statistics is used in this research to test for the presence of autocorrelation. When there is presence of autocorrelation, the First order autoregressive scheme will be employed to correct ii. The hypotheses states that: H_0: P = 0 (There is serial independence in the errors) H_1: P> 0 (There is first order (AR) positive autocorrelation.

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When the Durbin Watson Statistics (DW-Stat) is lesser than lower Durbin Watson (D_L), the null hypothesis (H_0) is being rejected hut if the Durbin Watson statistics is greater than the upper Durbin Watson (D_u), the null (H_0) is then accepted.

Operational Measure of Variables

Dependent Variables

Earnings per Share

Earnings per share are a ratio that measure earnings in relation to every share on issue. This is measured by dividing the profit before interest and taxes with the outstanding number of shares of the firm. This indicates how much each one share of the firm will earn from the yearly proceed. The earnings for every share represent shareholders slice of the pie. As earnings go up over time, the value of that piece of the firm becomes more valuable and this is why the price will be bid Whilst there are not many truisms when it comes to share investment, one is that if earnings rise consistently over the long term, then the share price will follow. Apparently, issue of shares that increases the number of outstanding share dilutes the equity owners' residual value. Tze-Sam and Heng (2011) provide empirical investigation using EPS as a proxy for corporate performance to establish its relationship with financial structure. The measure is derived thus;

$$EPS = \frac{Profit\ before\ Interest\ and\ Tax}{No\ of\ Outstanding\ Shares} \quad 4$$

Estimation Techniques

Non-stationarity Unit Roots and Co-integration

The recent literature exhibits an increasing integration of techniques and ideas from time-series analysis, such as unit roots and co-integration, into the area of panel data modeling. The underlying reason for this development is that researchers have increasingly realized that cross-sectional information is a useful additional source of information that should be exploited. Pooling data from different countries may also help to overcome the problem that sample sizes of time series are fairly small, so that tests regarding long-run properties are not powerful.

Panel Data Unit Root Tests

To introduce panel data unit root tests, consider the autoregressive model

$$yit = \square i + \square i\ yit - 1 + \square it \quad 5$$

Which we can rewrite as

$$\square yit = \square i + \square i\ yit - 1 + \square it \quad 6$$

Where $\square_i = \square_i - 1$. The null hypothesis that all series have a unit root then becomes $H_0 : \square_i = 0$ for all i. a first choice for the alternative hypothesis is that all series are stationary with the same meanreversion parameter, that is, $H_1 : \square_i = \square < 0$ for each country i, and is used in the approaches of Levin and Lin (1992) Quah (1994) and Harris and Tzavalis (1999). A more general alternative allows the mean-reversion parameters to be potentially different across countries and states that $H_1 : \square_i = \square < 0$ for at least one country i. This alternative is used by Maddala and

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Wu (1999). Choi (2001) ; Im et al (2003) and others. For all tests, the null hypothesis is that the time series of all individual countries have a unit root. This implies that the null hypothesis can be rejected (in sufficiently large samples) if any one of the N coefficients $\square_i$ is less than zero. Rejection of the null hypothesis therefore does not indicate that all series are stationary. As Smith and Fuertes (2003) notes, if the hypothesis of interest is that all series are stationary (for example, real exchange rates under purchasing power parity. Because of these issues, Maddala et al (2002) argue that for purchasing power parity panel data unit root tests are the wrong answer to the low power of unit root tests, in single time series. The combined test statistics is given by:

N

$P = -2\square \log p_i \quad {}^{i=1}$ 7

For fixed N, this test statistics will have a Chi-squared distribution with $2N$ degrees of freedom as $^{T\to\square}$, so that large values of P lead us t reject the null hypothesis, while this test (sometimes referred to as the Fisher test) is attractive because it allows the use of different ADF test and different time-series length per unit. A disadvantage is that it requires individual p-value that has to be derived by Monte Carlo simulations. While the latter test may seem attractive and easy to us, a word of caution is appropriate. Before one can apply the individual ADF test underlying the Maddala and Wu (1999) ; Im et al (2003) approaches, one has to determine the number of lags and determine whether an trend should be included.

Panel Data Co-integration Tests

A wide range of alternative test is available to test for co-integration in a dynamic panel data setting, and research in this area is evolving rapidly. With different small and large sample properties (depending upon the type of asymptotic that is chosen).

$yit = \square i + \square i\, xit + \square it$ 8

$y\ it$ Where both and each i. Homogeneous co$x\ it$ are integrated or order one. Co-integration. In addition Requires that -integration implies that $\square I = \square$If the co$\square$it is stationary for -integrating

parameter is heterogeneous. And homogeneity is imposed. One estimate

$yit = \square i + \square i\, xit + \square(\square i - \square)xit + \square it\ \square$ 9

And in general the composite error term is integrated of order one even if $\square_{it}$ is stationary. However, the problem estimator will also average over i, so that the noise in the equation will be attenuated. In many circumstance, when $N \to \square$ the fixed effect estimator for $\square$ is actually consistent for the long-run average relation parameter, as well as asymptotically normal, despite the absence of co-integration (Phillips and Moon, 1999). To test for co-integration, the panel data unit root test from the previous section can be applied to the residuals from these regressions provided that the critical values are appropriately adjusted (pedroni, 1999, or Koa, 1999).

Granger Causality Test

Thus, Granger causality test helps in adequate specification of model. In Granger causality, test, the null hypothesis is that no causality between two variables. The null hypotheses is rejected if the probability of F*

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statistics given in the Granger causality result is less than 0.05. The pair-wise granger causality test is mathematically expressed as:

$$Y_t \square_o + \square x_1^y Y_{t-1} \square \square_1^x x_{t-1} + u_1 \quad 10$$

and xtdpo + □ n ^{y} Yt −1 □n ^{dp1x}xy−1+ V1 11

Where x_t and y_t are the variables to be tested white u_t and v_t are the white noise disturbance terms.

The null hypothesis $\square_1^y = dp_1^y = 0$, for all I's is tested against the alternative hypothesis $\square_1^x \square 0$ and $dp_1^y \square 0$.if the co-efficient of $\square_1^x$ are statistically significant but that of $dp1y$ are not, then x causes y. If the reverse is true then y causes x. however, where both co-efficient of $\square_1^x$ and dp_1^y are significant then causality is bi –directional.

ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Presentation of Panel Unit Root Test

Method: Series:	Statistic	Prob.**	Cross-sections	Obs
Series: D(EPS,2)				
Levin, Lin & Chu t*	-42.3132	0.0000	19	113
Im, Pesaran and Shin W-stat	-11.4462	0.0000	19	113
ADF - Fisher Chi-square	107.450	0.0000	19	113
PP - Fisher Chi-square	259.360	0.0000	19	132
Series: D(CM,2)				
Levin, Lin & Chu t*	-9.51132	0.0000	20	120
Im, Pesaran and Shin W-stat	-3.14143	0.0008	20	120
ADF - Fisher Chi-square	79.6955	0.0002	20	120
PP - Fisher Chi-square	214.216	0.0000	20	140
Series: D(BC,2)				
Levin, Lin & Chu t*	12.3996	0.0000	20	120
Im, Pesaran and Shin W-stat	-2.72754	0.0032	20	120
ADF - Fisher Chi-square	73.4952	0.0010	20	120
PP - Fisher Chi-square	368.052	0.0000	20	140
Series: D(IVM,2)				
Levin, Lin & Chu t*	-7.34541	0.0000	19	114
Im, Pesaran and Shin W-stat	-4.41450	0.0000	19	114
ADF - Fisher Chi-square	93.1233	0.0000	19	114

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PP - Fisher Chi-square	340.906	0.0000	19	133

Source : Computed from E-view 9.0, 2025

Of the four panel unit root tests mentioned in the literature, LLC, PP and IPS seem to be the most popular and accepted. The tests are based on the ADF principle. However, LLC assumes homogeneity in the dynamics of the autoregressive coefficients for all panel participants. In contrast, IPS allows for heterogeneity in these dynamics (namely, it allows for a heterogeneous coefficient of *yit-1*); hence, it is described as a heterogeneous panel unit root test. After taking the first difference at 5% level of significance we reject null hypothesis, so first difference of the series is stationary. In case of investment policy series in every test except PP-Fisher chi-square at 5% level of significance it reject null hypothesis but PP-Fisher chi-square accept null hypothesis it seems that the series has a unit root. But first difference of the series at 5% level of significance in all case reject null hypothesis. So after taking first difference the series is stationary.

Table 2 Panel Regressions Results: The Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CM	-1.057403	1.178687	-4.897102	0.0000
BC	-0.005934	1.461558	-0.004060	0.9968
IVM	-0.940758	0.995327	-3.945175	0.0009
C	87.48719	64.80446	1.350018	0.1788
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.796216	Mean dependent var	17.71269	Adjusted R-squared 0.518055
	S.D. dependent var	87.27775		
S.E. of regression	88.06215	Akaike info criterion	11.90332	
Sum squared resid	1349360.	Schwarz criterion	12.28663	
Log likelihood	-1149.477	Hannan-Quinn criter.	12.05849	
F-statistic	8.841995	Durbin-Watson stat	2.265743	
Prob(F-statistic)	0.000097			

Source: Computed from E-view 9.0, 2025

Interpretation of the Result

Table 2 presents the effect of the management accounting practices on earnings per share of quoted manufacturing firms over the 10 years periods covered in this study. Based on the random effect regression model, the adjusted coefficient of determination (Adjusted R^2) indicates that 51.8 percent variation on the earnings per share of the selected manufacturing firms can be traced to variation on the management accounting practices of the firms; this implies that 48.2 percent variation can be traced to factors not captured in the model. The results of the estimated

model proved that the model is statistically significant based on the F-statistics and probability. The Durbin Watson statistics proved the presence of serial autocorrelation among the variables. The regression intercept is positive and significant which implies that holding other variables constant, return on equity of the manufacturing firm will increase by 87.4 units. Furthermore, the results indicates that cash management l have negative and significant effect, budgetary control have negative and no significant effect while inventory management have negative and significant effect on earnings per share of the manufacturing firms.

Table 4.3 Panel Regressions Results: The Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CM	-0.944411	1.162017	-3.812734	0.0004
BC	-0.712753	1.448329	-3.708805	0.0001
IVM	-0.400450	0.910709	-0.439713	0.6606
C	61.35561	62.23412	0.985884	0.3254
	Effects Specification			
		S.D.	Rho	
Cross-section random		0.000000	0.0000	
Idiosyncratic random		88.06215	1.0000	
	Weighted Statistics			
R-squared	0.504618	Mean dependent var	17.71269	Adjusted R-squared 0.490854 S.D.
dependent var	87.27775	S.E. of regression	87.75012	Sum squared resid 1486116.
F-statistic	8.298496	Durbin-Watson stat	2.048691	
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.504618	Mean dependent var	17.71269	
Sum squared resid	1486116.	Durbin-Watson stat	2.048691	

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.181000	3	0.5357

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CM	-1.057403	-0.944411	0.039020	0.5673
BC	-0.005934	-0.012753	0.038495	0.9723
IVM	-0.940758	-0.400450	0.161286	0.1785

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Interpretation of the Result

Table 3 presents results of effect of management accounting practices on Earnings per share. Based on the random effect regression model, the adjusted coefficient of determination (Adjusted R^2) indicates that 49 percent variation on the earnings per share of the selected manufacturing firms can be traced to variation on the management accounting practices of the firms; this implies that 51 percent variation can be traced to factors not captured in the model. The results of the estimated model proved that the model is statistically significant based on the F-statistics and probability. The Durbin Watson statistics proved the presence of serial autocorrelation among the variables. The regression intercept is positive and significant which implies that holding other variables constant, return on equity of the manufacturing firm will increase by 61.35 units. Furthermore, the results indicates that cash management l have negative and significant effect, budgetary control have negative and no significant effect while inventory management have negative and significant effect on earnings per share of the manufacturing firms.

Results on the cross sectional differences between random and fixed effect models proved that there significant difference between the random effect and the fixed effect models. The question as to whether FEM or REM model is more appropriate is very difficult to answer. Judge et al, (1980) made a few suggestions which are related to the context of the data, and its environment beside the correlation between error component and regressions. If it is assumed to be uncorrelated, random effects may be appropriate, whereas if correlated, fixed effects are unbiased and then are more appropriate. The Haussmann (1978) specification test could also be used to determine the appropriateness of the models, fixed or random effects models. However, econometricians seemed to generally agree that the random effects model was more appropriate to be used if individual intercepts are drawn randomly from a large population. By contrast, the FEM was more appropriate in the case of focusing on specific sets of the firms.

Table 4.3: Pedroni Residual Cointegration Test

Statistic		Prob.	Weighted Statistic	Prob.
Series: EPS IVM BC CM				
	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-2.217528	0.0067	-2.356219	0.0008
Panel rho-Statistic	0.673219	0.7496	1.339112	0.9097
Panel PP-Statistic	-5.003633	0.0000	-4.476066	0.0000
Panel ADF-Statistic	-4.458922	0.0000	-0.991514	0.1607
	Statistic	Prob.		
Group rho-Statistic	3.098084	0.9990		
Group PP-Statistic	-6.770647	0.0000		

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Group ADF-Statistic	-3.645161	0.0001

The results of the co-integration test proved that the variables are co-integrated as the probability coefficient of the variables are less than 0.05, we accept the alternate hypotheses that there is the presence of long run relationship between the dependent and the independent variables. The presence of long run relationship enables us to test for unit root; the table below has the details.

Table 4.4: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
CM does not Granger Cause EPS	156	4.04598	0.0001
EPS does not Granger Cause CM		0.42881	0.6521
BC does not Granger Cause EPS	156	4.38929	0.0002
EPS does not Granger Cause BC		0.90318	0.4075
IVM does not Granger Cause EPS	154	0.55044	0.5779
EPS does not Granger Cause IVM		7.31777	0.0000

A variable is said to granger because the other if it helps to make a more accurate prediction of the other variable than if only the past data of the latter was used as predictor (Zou, Guo, & Feng, 2010). Granger causality between two variables cannot be interpreted as a real causal relationship but merely shows that one variable can help to predict the other one better (Zou *et al*., 2010). From the table 4.4, the study found a bi-directional causality from budgetary control to return on equity and a unidirectional causality from inventory management to return on equity. From model 2, the study found that there is unidirectional causality from cash management to earnings per share and from budgetary control to earnings per share.

Table 4.8: Phillips-Peron results (non-parametric)

Cross ID	AR(1)	Variance	HAC	Bandwidth	Obs
Champion breweries	-0.221	2.047161	2.078245	1.00	9
seven up bottling company	-0.126	2.189683	1.281445	3.00	9
Ashaka cement	-0.229	3.971187	3.753721	1.00	9
Cadbury	-0.434	3.088394	2.212565	3.00	9
UAC	-0.504	4.523689	0.794165	8.00	9
EVANS MEDICAL	0.015	1.746418	1.287366	3.00	9
PABOD BREWERIES	-0.275	1.989312	1.340628	1.00	9
FLOOR MILLS	-0.221	5.409896	2.077924	5.00	9
GUINNESS	-0.149	6.116952	1.517826	4.00	9
GLAXO	-0.190	1.587537	1.227668	4.00	7
LAFARAGE	0.016	5.614717	5.614717	0.00	9
MAY and BAKER	-0.116	3.364592	0.778149	6.00	9

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NESTLE	-0.184	5.304396	5.556487	1.00	9
NIGERIA BAG	-0.271	1.503331	0.651132	8.00	9
NIGERIA ROPES	0.054	5.022640	5.902880	1.00	9
NIGERIA BREWERIES	-0.361	2.478305	2.537484	1.00	9
PZ CUSHION	-0.119	2.269348	1.381872	8.00	9
UNILEVER	-0.501	2.345261	1.616852	1.00	9
UNIVERSITY PRESS	-0.334	4.033766	0.568241	8.00	9
VITA FOAM	-0.384	0.753101	0.762921	1.00	9

Augmented Dickey-Fuller results (parametric)

Cross ID	AR(1)	Variance	Lag	Max lag	Obs
Champion breweries	0.030	0.867541	1	--	8
seven up bottling company	-0.452	1.873068	1	--	8
Ashaka cement	-0.618	3.877057	1	--	8
Cadbury	-0.928	3.173177	1	--	8
UAC	-1.187	3.402719	1	--	8
EVANS MEDICAL	-0.237	1.719183	1	--	8
PABOD BREWERIES	-1.054	1.574013	1	--	8
FLOOR MILLS	-0.295	5.891070	1	--	8
GUINNESS	-0.702	4.424843	1	--	8
GLAXO	-0.205	1.810696	1	--	6
LAFARAGE	0.021	6.004272	1	--	8
MAY and BAKER	-0.699	3.004619	1	--	8
NESTLE	-0.246	5.435640	1	--	8
NIGERIA BAG	-0.864	0.264062	1	--	8
NIGERIA ROPES	0.060	4.419404	1	--	8
NIGERIA BREWERIES	-0.427	2.636921	1	--	8
PZ CUSHION	-0.162	2.081578	1	--	8
UNILEVER	-1.141	2.098439	1	--	8
UNIVERSITY PRESS	-0.929	3.560832	1	--	8
VITA FOAM	-0.560	0.691693	1	--	8

The result of the power for all the test procedure when the underlying time series model is stationary AR, all the procedures produced a reasonably high power over all the sample sizes and order considered except at order 2 where ADF (Augmented Dickey Fuller) and KPSS produced extremely low power compared to PP. Under this condition, Philip-Peron (PP) has the highest power over all the sample sizes and AR orders considered. The table

presents similar analysis on stationary MA, the power of the tests are extremely high over all the sample sizes and orders considered. Similar conclusion as in AR was also observed here. Table 3 presents the power of the mixed model (Stationary ARMA), all the test procedures produced high power over all the sample sizes at order 1 but ADF and KPSS produced low power over all the sample size at order 2 & 3.

Discussion of Findings

From the estimated regression results based on the validity of the random effect proved that inventory management have negative but no significant effect on the earnings per share of the quoted consumer goods manufacturing firms. Beta coefficient of the variable indicates that a unit increase on the variable justifies 0.4 percent reduction on earnings per share of the manufacturing firms. The negative finding of the study contradicts our a-priori expectations and does justify policies formulated by the manufacturing firms to manage cost such as reduction in overhead cost. The negative relationship between inventory management and earnings per share contradict the management efficiency theory and failed to validate the agency theory. The ideas in the theories emphasizes on the role of management policies in maximizing shareholders wealth. The negative effect of the variable contradict the findings of Nwanyanwu, Ogbonnaya and Nkiru (2018) that budgetary control can be used to drive growth and sustainability of Small and Medium sized Enterprises, the findings of Malarvizhi and Ranjanni (2016) no significant relationship between the level of environmental disclosure and firm performance, Oluwagbemiga, Olugbenga and Zaccheaus (2014) that a positive significant relationship exists between cost management practices and firm's performance in the manufacturing organization.

From the estimated regression results based on the validity of the random effect proved that budgetary control have negative and significant effect on the earnings per share of the quoted consumer goods manufacturing firms. Beta coefficient of the variable indicates that a unit increase on the variable justifies 0.71 percent decrease on earnings per share of the manufacturing firms. The negative findings of the study contradict our a-priori expectations and contradict policies formulated by the manufacturing firms to manage cost such as reduction in overhead cost. The negative relationship between budgetary control and earnings per share contradict the management efficiency theory and invalidates the agency theory. The theories emphasizes on the role of management policies in maximizing shareholders wealth. The negative effect of the variable can be traced to inability of management to trace the increase on the budgetary control . It could also be traced to undue expansion of the manufacturing firms or firm size. The negative effect of the variable contradict the findings of Nwanyanwu, Ogbonnaya and Nkiru (2018) that budgetary control can be used to drive growth and sustainability of Small and Medium sized Enterprises, the findings of Malarvizhi and Ranjanni (2016) no significant relationship between the level of environmental disclosure and firm performance, Oluwagbemiga, Olugbenga and Zaccheaus (2014) that a positive significant relationship exists between cost management practices and firm's performance in the manufacturing organization.

From the estimated regression results based on the validity of the random effect proved that cash management have negative and significant effect on the earnings per share of the quoted consumer goods manufacturing firms.

Beta coefficient of the variable indicates that a unit increase on the variable justifies 0.94 percent decrease on earnings per share of the manufacturing firms. The negative findings of the study contradict our a-priori expectations and also contradict policies formulated by the manufacturing firms to manage cost such as reduction in overhead cost. The negative relationship between cash management and earnings per share contradict the management efficiency theory and invalidates the agency theory. The theories emphasizes on the role of management policies in maximizing shareholders wealth. The negative effect of the variable can also be traced to inability of management to trace the increase on the cash management. It could also be traced to undue expansion of the manufacturing firms or firm size. Furthermore, it could also be traced to increase in cost production and other internal and external variables. The negative effect of the variable also contradict the findings of Akinbor and Okoye (2012) that strategic management accounting enhances competitive advantage although several factors bedevil its adoption in Nigerian manufacturing firms, Ogbadu (2009) that there is need to recognize the materials management function, Dauda, Akingbade & Akinlabi (2010) that strategic management enhances both organizational profitability and company market share.

Conclusion

There were evidence that 49 percent variation on the earnings per share of the selected manufacturing firms can be traced to variation on the management accounting practices while beta coefficient of the variables proved that cash management have negative and significant effect, budgetary control have negative and no significant effect while inventory management have negative and significant effect on earnings per share of the manufacturing firms. From the findings, the study concludes that inventory management has negative and no significant relationship with earnings per share of the food and beverage manufacturing firms in Nigeria. That budgetary control has negative and significant relationship with earnings per share of the food and beverage manufacturing firms in Nigeria. That cash management has negative and significant relationship with earnings per share of the food and beverage manufacturing firms in Nigeria.

Recommendations

i. The consumer goods manufacturing firm's management, policy makers and transaction advisors should be keen on making cost management policies to be applied since they greatly impact on financial performance of the company.

ii. Accounting policies regarding to financial performance of companies should incorporate various cost management accounting practices since they greatly impact financial performance and financial policies regarding cost management strategies should be formulated and be used keenly and with a lot of controls to avoid critical financial looses

iii. There should be continue high adoption of management accounting practices with relation to direct labor cost, material cost, overhead cost, investment decision making purposes, pricing policy decisions and management reporting to achieve increase profitability. High adoption of these management accounting practices

techniques would impact tremendously on the performance and sustainability of manufacturing firms in the short and long run.

iv. Cost reduction strategy with emphasis on cash management and budgetary control should be embarked upon if their profit maximization and wealth creation objective must be achieved.

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