

Management Accounting Strategies and Financial Performance of Listed Brewery and Food Product Manufacturing Companies in Nigeria

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Abstract: The study examined management accounting strategies and financial performance of listed brewery and food product companies of Nigeria. The specific objective of the study was among others; to examine the relationship between cost control and reduction and earnings per share of listed brewery and food product companies of Nigeria. Also, to examine the relationship between cash management and earnings per share of listed brewery and food product companies of Nigeria. Ex-post facto research design was employed. Population of the study is seventeen (17) listed brewery and food products manufacturing companies on the floor of the Nigerian Stock Exchange (NSE) as at 31 August 2022. A total of thirteen (13) companies were operating within period of 2012 to 2021 and have financial statements available and assessable to date, which give the accessible same size of the study. The instrument of the study is secondary data. The formulated research questions were analyzed with descriptive statistics, while simple regression analysis was adopted to test the hypotheses. The findings of the study among others were that; there is significant relationship between cost control and reduction and earnings per share of listed breweries companies of Nigeria. There is significant relationship between cash management and earnings per share of listed breweries companies of Nigeria. From the findings the following recommendations were made among others; from practice perspective, this study recommends the continuous invention and enhancement of cost reduction and control practices, as it is one of the most highly used management accounting practice by brewery and food product manufacturing companies that contributes significantly and positively to financial performance. There is need to create awareness on the impact of cash management on financial performance of brewery and food product manufacturing firms in Nigeria. Brewery and food product firms should also continue using cash management in order to identify financing and investing opportunities. For continuous contribution of inventory management on financial performance of brewery and food product companies, there should be a cut-off date in order to ensure that there is no transaction that takes place during the inventory cycle count activities, which ensures that the records of physical stock and the recording system are accurate.

Keywords: Cost Control Reduction, Cash Management, Earnings Per Share, Return on Equity.

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Introduction

The complex and competitive nature of today's business world and from the objective of shareholder's wealth maximization have been of great concerns to managers of all forms of business organizations (Maziriri & Mapuranga, 2017). According to Nwanyanwu and Ogbonnaya (2018), managers are more aggressive and dynamic in identifying strategies that will enable organizations to develop standards that reflect the desired outputs of organizations, and then help the organization to measure and assess actual results to ensure profitability. Applying the appropriate management accounting strategies in optimization of profits and minimization of costs may enable an organization to create a competitive advantage in its industry. Thompson, et al (2009), are of the view that the adoption of management accounting strategies may provide an organization with a sustainable competitive advantage over its rivals and can influence largely on financial performance of breweries and food products companies.

Managerial accounting, or management accounting, is a set of practices and techniques aimed at providing managers with financial information to help them make decisions and maintain effective control over corporate resources. These include the methods and concepts necessary for effective planning, decision making (choosing among alternative business actions and controlling through the evaluation and interpretation of performance (Abdel-Kader and Wadongo, 2011). According to Arithi (2016), management accounting practice helps an organization to survive in the competitive, ever-changing world, because it provides an important competitive advantage for an organization that guides managerial action, motivates behaviors, supports and creates the cultural values necessary to achieve an organization's strategic objectives. Management accounting is concerned primarily with the internal needs of management. It is oriented toward evaluation of performance and development of estimates of the future as opposed to traditional financial accounting which emphasizes historical data related to such legal financial matters as ownership, investment, credit granting, taxation, regulation, and the building of foundations for consistent and conservative external reporting, "in accordance with generally accepted accounting principles." Flexibility is an essential characteristic of management accounting since it presupposes that careful attention has been given to determine the important needs of management, many of which cannot be precisely identified in advance (Parker, 2002).

Financial performance of breweries and food products industries can be measured through variety of ratios of which return on asset, return on equity and net interest margin are the major ones (Alexandru, 2018). Earnings per share (EPS) is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet. ROE is what the shareholders look in return for their investment. A business that has a high earning per share is more likely to be one that is capable of generating cash internally. Thus, the higher the ROE the better the company is in terms of profit generation. It is further explained by Khrawish (2011) that, ROE is the ratio of net income after Taxes divided by total equity capital. It represents the rate of return earned on the funds invested in the pharmaceutical by its stockholders. ROE reflects how effectively brewery and food product management is using shareholders' funds. Thus, it can be deduced from the above statement that the better the ROE the more effective the management in utilizing the shareholder's capital.

The breweries and food product companies in Nigeria has experienced robustness in its operations in recent years. Still, many breweries and food products companies are finding it difficult to produce, as they have problems paying short term liabilities, accounts receivables from business partners, problems of cost control and reduction and inappropriate cash planning and budgeting and inappropriate credit management, etc. There have been occasions where the federal government through the bank of industry (BOI) injects funds to the manufacturing sector for which these companies are major

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benefactors (Nwanyanwu and Ogbonnaya (2018). The resultant effects are on the company's financial performance.

There is a vast range of accounting practices in operation ranging from simple analysis to computer-based accounting systems incorporating standards, variance analysis and the automatic production of control and operating statements. These different costing practices are meant to suit different organization. The adaptation of the wrong method, for a company constitutes a problem instead of a solution (Kumar & Shafabi, 2011). Poor or inadequate knowledge of a particular method of costing constitute problems for many firms. Most companies are still using the simple analysis system to set cost while some companies do not even have a costing system. This no doubt has led to poor planning, control and decision making.

Various researches carried out bring about mixed findings on the relationship between management accounting practices and the financial performance. Some argued that management accounting is an efficient way of improving financial performance of a firm while others argue that management accounting is old fashioned and based on past information hence it cannot on its own greatly impact on financial performance of a company (Ilias, Abd & Yaso, 2010); (Lucas, Prowle & Lowth, 2013). Also, there are many studies on the effect of management accounting practices, significant proportion of the studies are foreign studies as stated by: (Sunarni, 2013); (Akenbor & Okoye, 2012); (Dauda, Akingbade & Akinlabi, 2010). Similar studies in Nigeria failed to integrate modern management accounting methods like, cost control and reduction, inventory management among others, while the study of (Oluwagbemiga, Olugbenga & Zaccheaus, 2014); (Ogbadu, 2009); (Adesina, Ikhu – Omoregbe & Aboaba, 2015); (Okwo, & Ugwunta, 2012) focused on small and medium scale enterprises. From the above studies, non, mostly among the local researchers has been able to established this relationship that exist between the modern management accounting practices and the financial performance of listed breweries manufacturing firms especially in Nigeria. Secondly, the dimensions (cost control and reduction, inventory management and cash management) of this study to the best of the researcher haven't been comprehensively studied. Thirdly, the analytic gap of study breweries and food products companies with eleven years 'financial data.

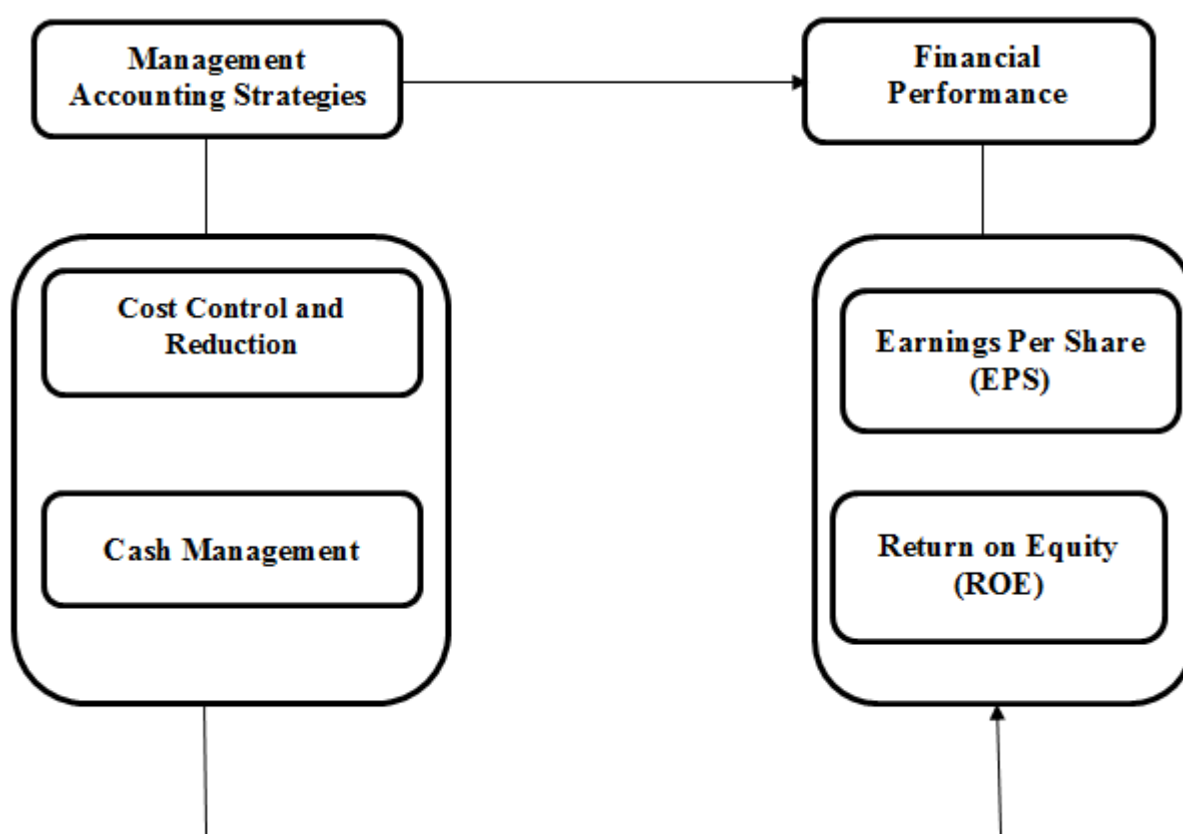
Thus, the study focusses in fill the existing gap in the relationship between management accounting strategies and financial performance of listed brewery and food product companies manufacturing firms in Nigeria.

Conceptual Framework

The independent variable on the stated topic is the "management accounting strategies" with its dimensions of *cost control and reduction, cash management and inventory management*. While the dependent variable is "Financial performance" with its measures of earnings per share and return on equity and firm size as a moderating variable, shown using the chart below.

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Figure 1.1: Conceptual Framework Model of the Study



Sources: Maziriri and Mapuranga (2017), Nwanyanwu and Ogbonnaya (2018), Okunbor, 2013), Okelle (2017), and researcher's conceptualization

Aim/Objectives of the Study

The main objective of the study is to determine the relationship between management accounting strategies and financial performance of listed brewery and food product companies of Nigeria. The specific objectives are to:

1. Examine the relationship between *cost control and reduction* and earnings per share of listed brewery and food product manufacturing companies of Nigeria.
2. Examine the relationship between *cash management* and earnings per share of listed brewery and food product manufacturing companies of Nigeria.
3. Examine the relationship between *inventory management* and earnings per share of listed brewery and food product manufacturing companies of Nigeria.
4. Examine the relationship between *cost control and reduction* and return on equity of listed brewery and food product manufacturing companies of Nigeria.

Research Questions

1. What is the relationship between *cost control and reduction* and earnings per share of listed brewery and food product companies of Nigeria?
2. What is the relationship between *cash management* and earnings per share of listed brewery and food

product companies of Nigeria?

3. What is the relationship between *inventory management* and earnings per share of listed brewery and food product companies of Nigeria?
4. What is the relationship between *cost control and reduction* and return on equity of listed brewery and food product companies of Nigeria?

Research Hypotheses

In order to provide answers to the research questions raised, the following hypotheses stated in null form are presented below:

HO₁: There is no significant relationship between *cost control and reduction* and earnings per share of listed brewery and food product companies of Nigeria.

HO₂: There is no significant relationship between *cash management* and earnings per share of listed brewery and food product companies of Nigeria.

HO₃: There is no significant relationship between *inventory management* and earnings per share of listed brewery and food product companies of Nigeria.

HO₄: There is no significant relationship between *capital allowance and cost control and reduction* and return on equity of listed brewery and food product companies of Nigeria.

Review of Literature

Conceptual Review

Management Accounting Practices

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).

Management accounting provides information from its environment to management to facilitate decision-making. Good management accounting information has three attributes: Technical-it enhances the understanding of the phenomena measured and provides relevant information for strategic decisions, Behavioral-it encourages actions that are consistent with an organization's strategic objectives, and Cultural-it supports and/or creates a set of shared cultural values, beliefs, and mindsets in an organization and society (Ashton et al., 2014). The development of management accounting is responsive to the demands of management and the environment. Management accounting adapts to organizational change and three major forces cause organizations to evolve: technological change, globalization, and customer needs (McWatters, 2001). In order to remain competitive in today's global market, business must continually improve. Good management accounting practices help the organization to improve continually. Due to these all over the world there are so many management

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accounting tools & techniques developed and practiced.

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 comprises of cost, budgeting, performance evaluation, information for decision-making and strategic analyses, among many others (Gichaaga, 2013).

Cost Control and Cost Reduction

According to Lucey (2013), cost control is a process which focuses on controlling the total cost through competitive analysis. It is a practice which works to maintain the actual cost in accordance with the established norms. It ensures that the cost incurred on an operation should not go beyond the pre-determined cost. Cost Control involves a chain of functions, which starts from preparation of the budget in relation to the operation, thereafter evaluating the actual performance, next is to compute the variances (standard cost) between the actual cost & the budgeted cost and further, to find out the reasons for the same, finally to implement the necessary actions for correcting discrepancies.

Whereas cost Reduction is a process, aims at lowering the unit cost of a product manufactured or service rendered without affecting its quality by using new and improved methods and techniques. It ascertains substitute ways to reduce the cost of a unit. It ensures savings in per unit cost and maximization of profits of the organization. Cost Reduction aims at crashing programmes to cut expenditure or cutting off the unnecessary expenses which occur during the production, storing, selling and distribution of the product such as floor space reduction, Bill of Materials (BOM)/Material Requirements Planning (MRP) are all ordering expense, etc, (Lucey, 2013).

Cash Management

No business operation can go on smoothly without cash. Cash is regarded as the most important current asset for the operation of business. Cash is the resource required to acquire of challenges are identification of right investment opportunity for idle funds, non-cash planning and budgeting, collection period and determination of the optimal level of cash to be maintained by the company. Cash management is deemed as one of the most important techniques in the overall cash analysis and has recently been broadly used by many financial analysts, corporate managers and auditors to evaluate the company's short-term liquidity (Pandey, 2009). It is believed to have implication of the performance of business firms.

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 McInaney (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.

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Financial Performance

Financial performance can be defined as a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues (Mills, 2008). This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The performance measurement concept indicates that employees can increase the value of the firm by; increasing the size of a firm's future cash flows, by accelerating the receipt of those cash flows, or by making them more certain or less risky (Cadbury, 2014).

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Financial performance is the single most important factor in assessing growth potential, earnings capacity and overall financial strength (Richardson, 2002). The business dictionary (n.d) defines financial performance as measuring results of a firm's policies and operations in monetary terms and these results are reflected in firm's return on investments, return on assets and return on equity, liquidity and solvency. Nelly (2010) observed that financial performance measures mainly serve three purposes. One they serve as a tool of financial management, two they serve as major objectives of business and three they serve as a mechanism for motivation and control in an organization. Various researchers have used different financial performance measures. Doyle (1994) says that profitability is the best most commonly used measure of performance in Western companies.

Carreta and Farina (2010) argued that use of financial performance could still be justified on the grounds that it reflects what managers actually consider to be financial performance and, even if this is a mixture of various indicators like accounting profits, productivity, and cash flow. Financial performance is determined by the following indicators; profit or value added; sales, fees, budget; costs or expenditure and stock market indicators (share price) and autonomy. Management accounting is thus fundamentally involved with the processes of organizational practice. It must be noted that the major practice system in most organization is the budget.

Return on Equity (ROE)

The return on equity ratio (ROE) is considered a key ratio in equity evaluation because it addresses a question of prime importance to investors, which is what kind of return that the company is generating in relation to its equity. A company's ROE is a valuable indicator of both how effectively the organization is utilizing its equity investors. The importance of ROE in analyzing brewery companies stems from the basic fact that brewery companies must expend massive amounts of capital to bring their products to market. Therefore, how efficiently they employ the capital that equity investors provide is indeed a key indicator of the effectiveness of the company's management and of the company's ultimate profitability. ROE is calculated by dividing a company's net income by total shareholders' equity. Although a higher ROE figure is generally a better ROE figure, investors should exercise caution when a very high ROE is a result of extremely high financial leverage. This is one reason why it's also important to consider a pharmaceutical company's debt and liquidity situation.

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Beattie, Goodacre and Thomson (2006), the rate of dividend on these shares depends upon the profits of the company. They may be paid a higher rate of dividend or they may not get anything. These shareholders take more risk as compared to preference shareholders. Equity capital is paid after meeting all other claims including that of preference shareholders. They take risk both regarding dividend and return of capital. Equity share capital cannot be redeemed during the life time of the company.

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 shares 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;

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

Theoretical Review

Theory of Lean Management

This study is anchored on lean management theory. The lean management theory was developed by John Krafcik in (1988) posits that, companies are in business to make a profit. If they don't, they won't survive. There are two ways to increase profits; raise prices and lower costs. Competitive pressures often limit the ability to do the former, so companies tend to focus on cutting costs. One of the more popular ways for companies to reduce costs is through lean management. Lean management focuses on improving processes. Every step a product takes from raw materials to final assembly is reviewed. Waste or duplication of effort is identified and eliminated to the maximum extent possible. As mentioned above, the focus is on creating benefit (lower costs, quicker turn times, etc.) for the customer. A system of "continuous improvement" is established to monitor the results on an ongoing basis. The goal is to create the perfect process.

Empirical Review

Atali, et al, (2009) in the study 'If the inventory manager knew: Value of visibility and RFID under imperfect inventory information' state that netting inventory transactions is an extremely important since the warehouse staff uses it to continually update the accuracy of its inventory records. Inventory record accuracy is needed to ensure that replacement items are ordered in a timely manner, that inventory is properly valued, and that parts are available for sale or production when needed. Netting inventory transactions is also needed to ensure that the actual and recorded inventory amounts are the same at the end of the year, so that there will be no issues when the inventory is audited. Reconciling inventory transactions is not as simple as adjusting the book balance to match the physical count. There may be other reasons why there is a difference between the two numbers that cannot be corrected with such an adjustment (Atali, Lee & Özer, 2009). It is not clear whether net transaction was one of the

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objectives of the study by Atali, Lee and Özer, (2009), as objective of the study have not been explicitly stated.

Nebart (2010), examined the management of inventories in Kenya with a case of a case of the horticultural industry. The study objective was to determine the various inventory management practices used by in the Kenyan horticultural industry. The study used questionnaires as the preferred data collection tool. These questionnaires had both closed and open-ended questions. The study findings revealed that horticultural firms adopt various inventory management practices so as enhance performance. The study was done in horticultural sector, but the current study was done in manufacturing firms.

Thige (2010), studied netting as an inventory management practice as adopted by MFT's in Kenya. The researcher established that a majority of the studied MFT's manage inventories through various strategies for instance netting. Avutswa (2009) in a study of exporting horticultural firms concluded that the studied horticultural firms adopt netting so as to effectively manage their inventories and therefore performance. The adoption of netting was found to be effective against inventory management. This study was conducted in financial sector, which forms the larger service sector. Need a similar study in manufacturing sector.

Ndagijimana (2014), examined Working Capital Management for SMEs in Nairobi, Kenya. The study results indicated that accounts payable management, accounts receivable management and cash management were the profound WCM practices implemented by SMEs. Empirical gaps were unveiled on the need to extend the assessment to consider the association between those WCM and financial performance.

Njeru, et al (2015), studied on cash management practices and financial performance of SACCOs. The study established that cash management practices positively influence the financial performance of SACCOs. Empirical gaps were unveiled on the need to expand the framework of working capital management variables considered other than cash management. Kiprotich, Wanjare, Joab, and Oluoch (2013) assessed working capital management practices and financial performance. The study targeted sugar cane out grower firms. Findings established poor financial performance of out-grower companies and related the same to weak working capital management framework adopted by the out-grower companies. The study presented methodological gaps on the need to consider more dimensions of financial performance such as profitability indicators. Contextual gaps were also presented on the need to undertake a local study. To address stakeholders concerns and fill the unresolved gaps on the subject, the current study determined the effect of inventory management on financial performance of SMEs in Laikipia County, Kenya.

Juan, et al (2007) analyzed working capital management practices and profitability of SMEs. The study adopted a panel study approach and covered a sample of 8,872 SMEs. The span between 1996 and 2002 was considered for analysis. Study results indicated an inverse link between the inventories holding period and performance. Therefore, inventory management practices do influence performance of firms. Vahid et al. (2012) assessed WCM and performance through an empirical study of Iranian firms. The study specifically targeted 50 firms Listed in Tehran Stock Exchange (TSE). The Net Operating Profitability was used to assess firms' performance. The multiple regression analysis was used as the main inferential tool guiding the conclusions. Inventory management was found to be a significant predictor of profitability of the firms.

Deloof (2003), undertook a study on working capital management and performance of Belgian Ian firms. The study relied on a sample of 1,009 large Belgian non-financial firms. Profitability was

evaluated for the period between 1992 and 1996. The study considered the Inventory policy and management as one of the key variables considered. It was established that holding as less inventories as possible (Optimal level) serves to enhance corporate profitability.

Kwadwo (2016), investigated the impact of efficient inventory management on the profitability of manufacturing firms in Ghana. The study adopted the cross-sectioned design and employed the use of secondary data. The cross sections data gathered covered the period 2004- 2014 from the annual reports of four manufacturing companies listed in Ghana stock Exchange (GSE). The four companies were selected through the judgmental sampling procedure. Measures of profitability were examined and linked to proxies for efficient inventory management by manufacturers. The ordinary least square (OLS) that came in the form of multiple regression models was employed in data analysis. The study found out that there is a significantly strong correlation between inventory management and profitability of manufacturing firms in Ghana. The study therefore recommends that efficient management of raw materials inventory should be a major factor to be considered by Ghanaian manufacturing in enhancing or boosting their profitability.

Methodology

The methodology deals with research design, study population, sample size, sampling technique, instrumentation for data collection, validity of instruments and reliability of instruments, method of data analysis, model specification and model estimation technique that will be used to achieve comprehensive study.

Population for the Study

According to Gula (2005), a population refers to any group of institutions, people, or objects having common characteristics and meeting the criteria needed by the respondents to provide the information. According to Nzeneri (2005), the research population can be defined as the aggregate of elements, events, conceivable traits, people, subjects, or observations having the same characteristics, relating to the situation of interest in the study to be conducted.

Thus, the target population for the study is the seventeen (17) listed brewery and food products manufacturing companies on the floor of the Nigerian Stock Exchange (NSE) as at 31 August 2021.

Sample Size and Sampling Techniques

Dike (2014), posits that the sampling procedure involves either probability or non-probability techniques. The probability technique was adopted in this study because it concerns a selection among a population. Sampling techniques also provide a range of methods that will enable the researcher to reduce the quantity of data he needs to collect by considering only data from a subgroup rather than all possible cases. The sample size was therefore determined by using the Taro-Yame formula as was adopted by Baridam (2001) and shown below:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample size
N = Population
1 = Constant

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$$e = \text{Level of errors } (0.05)^2$$

Thus: sample size sought (n) is

$$n = \frac{N}{1 + N(e)^2}$$

$$N = 17$$

$$e = \text{level of significance of } 0.05$$

$$n = \frac{17}{1 + 17(0.05)^2}$$

$$= \frac{17}{1 + 0.042}$$

$$= \frac{17}{1.042} = 16$$

The sample size for this study is (16).

Thus, sample size of this study consisted of is sixteen (16) listed brewery and food products manufacturing companies on the floor of the Nigerian Stock Exchange (NSE) as at 31 August 2021. However, since the time period of this study is 2012 - 2020, only companies operating within this period and have financial statements available and assessable were selected to form the same size for the study. Thus, a total of thirteen (13) companies were operating within period of 2012 to 2020 and have financial statements available and assessable to date, which give the accessible same size of the study.

Instrumentation

The instrument of the study is secondary data obtained from the aforementioned company's financial statements from Nigeria Stock Exchange (NSE) duration period of nine (9) years, ranging from 2012-2020.

Method of Data Analysis

The formulated research questions were analysed with descriptive statistics (mean, median, standard deviation, Kurtosis, Skewness and Jarque-Bera probability tests etc), and simple regression analysis was adopted to test the hypotheses models to determine the relationship between a dependent variable and a combination of independent variables all with the aid of E-views statistical software version 12. The value of the independent variable is defined as a function (Ex) or linear combination of the independent variables plus an error term.

$$Y = B_0 + B_1X_1 + Et \text{ (Pohlman \& Leitner, 2003).}$$

From the stated formula, the [Bs represents the regression co-efficient Xs are the independent variables, Et represents the error term. The regression coefficients are interpreted as the change in the anticipated value of Y associated with a unit increase in independent variable with other variables being constant. However, the errors are regarded to be normally distributed within expected zero value and constance. (Pohlmann & Leitner, 2003).

Model Specifications

According to Nmesirionye et al. (2019), regression analysis is concerned with the study of how one or more variables affect changes in another variable. Thus, on the basis of the theoretical framework, the study adopted the regression formula adopted in the work of with some modifications. The model is specified as:

$$Y = f(a_0 + bX_1) + E_t$$

Where:

y	=	Criterion variable
f	=	Function
x	=	Independent (explanatory) variables
a	=	Intercept
b	=	Slopes

In functional form, our hypotheses model are:

$$H0_1: EPS = f(CCR) \dots \dots \dots (i)$$

Where:

EPS	=	Earnings Per Share
CCR	=	Cost Control and Reduction

$$H0_2: EPS = f(CAM) \dots \dots \dots (ii)$$

Where:

EPS	=	Earnings Per Share
CAM	=	Cash Management

$$H0_3: ROE = f(CCR) \dots \dots \dots (iv)$$

Where:

ROE	=	Return on Equity
CCR	=	Cost Control and Reduction

$$H0_4: ROE = F(CAM) \dots \dots \dots (v)$$

WHERE:

ROE	=	Return on Equity
CAM	=	Cash Management

Partial Correlational Model

Where:

MAS = Management Accounting Strategies

FINP = Financial Performance

Decision Rule

If the probability value (PV) in the coefficient table is less than 0.05 alpha level, we Reject the null hypotheses and accept that a significant relationship exists.

If the probability value (PV) is greater than 0.05 alpha level, we accept the null hypothesis and accept that there is no significant relationship.

Data Presentation, Analysis, Results and Discussion of Findings

Data Presentation

The purpose of this study was to examine the relationship between management accounting strategies and financial performance of listed brewery and food product companies of Nigeria. The study emphatically obtained secondary data. The data were sourced from the annual reports of listed construction and real estate companies from the Nigerian Stock Exchange (NSE), covering the period 2012-2020. The NSE is believed to have in possession of such sensitive documents. The study therefore used data from the financial statements (annual report) which is termed as pure secondary in nature. Thus, data was extracted and compiled from the fourteen companies on the dimensions and measures of the independent and dependent variable (*cost control and reduction, cash management, earnings per share earnings and return on equity*

Data Analysis and Results

Descriptive Statistics

The descriptive statistics of data series gives relevant information about sample statistics such as mean, median, minimum, maximum value, skewness, kurtosis and Jarque-Beta statistics.

Table 4.1: Descriptive Statistics of the Variables

	CCR	CAM	EPS	ROE
Mean	148023.9	686209.8	13.00545	64.51727
Median	160689.0	949110.5	11.05000	65.88000
Maximum	287707.3	125794.9	40.15000	112.2100
Minimum	658005.0	22804.95	2.130000	9.560000
Std. Dev.	729258.5	536011.3	10.95281	24.42975
Skewness	2.461028	1.419963	1.549352	2.436582
Kurtosis	2.158674	1.343585	4.524850	4.465284
Jarque-Bera	0.714091	1.580877	5.466605	1.333509
Probability	0.699741	0.453646	0.065004	0.513372
Sum	16282626	7548308.	143.0600	709.6900
Sum Sq. Dev.	5.32E+12	2.87E+12	1199.640	5968.128
Observations	9	9	9	9

Source: Researcher's Statistical Computation from E-view (v.10), 2022

In table the above, the mean value of *cost control and reduction*, *cash management* and *inventory management* are 148023.9, 686209.8, and 519.1550 respectively. The earnings per share mean value is 13.00545 while the mean value of return on equity are 64.51727 respectively. The maximum values of the data series, *cost control and reduction*, *cash management* are 658005.0, and 22804.95 respectively. The skewness coefficient which is a measure of the departure of a distribution from symmetry presented in table 4.1 above shows that the entire data variables have positive skewness value that exceeds 1 (one). This indicates that the entire data variables adopted for the study are normally distributed. Kurtosis result which measures the degree of peakedness or flatness of a distribution in relative terms to a normal distribution confirms that the entire data series are normally distributed and are not platykurtic (not having negative values / flatted curved) as their kurtosis coefficient are greater than three (3). The p-value for all the variables is significant for the Jarque-Bera statistics [(JB (PValue > 0.05) = Accept Ho (Normal Distribution) and also JB (P Value < 0.05) = Reject Ho (Non-Normal Distribution)].

Result Summary of Unit Root (Stationary) Test

To ensure that the collected data are fit for the study, the stationarity or unit root test was conducted on the data. Using the Augmented Dickey Fuller (ADF) unit root test due to the fact that the data involves time series. According to Gujarat & Porter 2009, the unit root test is performed to ascertain that the time series data are stationary and co-integrated.

Table 4.2: Summary Stationary Test Result

Variables	ADF T- Statistic	1% Critical Values	5% Critical Values	10% Critical Values	Prob. Value	Order of Diff. & Intercept	Station ary?
CCR	-5.938512	-3.600987	-2.936942	-2.606857	0.0000	1(1)	Yes
CAM	-7.449509	-3.600987	-2.935001	-2.605836	0.0000	1(1)	Yes
EPS	-7.449509	-3.600987	-2.938987	-2.607932	0.0000	1(1)	Yes
ROE	-5.938512	-3.600987	-2.935001	-2.605836	0.0000	1(1)	Yes

Source: Researcher's Result Computation from E-view (v.10), 2022

In table 4.2, the summary of unit root (stationary) test statistic of the variables is presented. The results of the unit root test adopting ADF at 1%, 5% and 10% critical levels indicate that all of the time series variables are stationary at first difference 1(1). The critical values at the selected levels showed signs/p-values that are significant and consistent. The test statistic values (ADF' T-statistic) are also greater than the corresponding critical value levels. This confirms to a large extent the stationarity and the co-integration of the data set/variables. The result implies that the adopted variables are consistent, reliable and very appropriate in explaining and measuring the relationship between management accounting strategies and financial performance of listed brewery and food product companies of Nigeria.

Analysis and Results Interpretations

Lease Square Data Regression Analysis

First Model

The first hypothesis test model; shows the relationship between *cost control and reduction* and earnings per share:

$$EPS_{it} = \beta_0 + \beta_1(CCR)_t + U(.05) \dots\dots\dots(1)$$

Table 4.3

Dependent Variable: EPS				
Method: Least Squares				
Date: 10/20/21 Time: 12:36				
Sample: 2012 2020				
Included observations: 9				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CCR	4.72E-07	5.12E-07	3.921077	0.0047
C	13.36383	3.950241	3.383040	0.0081
R-squared	0.744020	Mean dependent var		13.00545
Adjusted R-squared	0.736645	S.D. dependent var		10.95281
S.E. of regression	11.52204	Akaike info criterion		7.889367
Sum squared resid	1194.817	Schwarz criterion		7.961711
Log likelihood	-41.39152	Hannan-Quinn criter.		7.843764
F-statistic	0.936325	Durbin-Watson stat		1.916097
Prob(F-statistic)	0.000021			

Source: Researcher's Statistical Result from E-view (v.10), 2022

From the table output above, the coefficient of CCR and EPS is 4.72E-07. This value implies that for every unit increase in EPS is predicted to be accompanied by a 4.72E-07-unit increase in CCR. The T-statistics is above 1, which is sufficient statistical evidence of significant @ 1% T-stat confidence level. The Prob value of CCR is 0.0047, which means the relationship between CCR and EPS is statistically significant at the 5 percent significant level.

The result also showed that the R², which measures the goodness of fit, is 0.744020, meaning that 74 percent of the variation in the earnings per share product can be explained by the dimension of the independent variables. The result indicates that the model is proper and adequate for the study. The model's goodness of fit and appropriateness is also supported by the outcomes of F-statistics and probability of F-statistics of 0.936325 and 0.000021 respectively. The Durbin-Watson statistics of 1.916097 also indicate the absence of serial autocorrelation.

The second Model: The second hypothesis test model; shows the relationship between *cash management* and earnings per share:

$$EPS_{it} = \beta_0 + \beta_1(CAM)_t + U(.05) \dots\dots\dots 3.10$$

Table 4.4

Dependent Variable: EPS				
Method: Least Squares				
Date: 10/20/21 Time: 12:39				
Sample: 20122020				
Included observations: 9				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAM	4.42E-07	7.91E-07	2.559503	0.0133
C	64.91375	8.824235	7.356303	0.0000
R-squared	0.590989	Mean dependent var		64.51727
Adjusted R-squared	0.579012	S.D. dependent var		24.42975
S.E. of regression	25.73848	Akaike info criterion		9.496817

Sum squared resid	5962.226	Schwarz criterion	9.569162
Log likelihood	-50.23250	Hannan-Quinn criter.	9.451214
F-statistic	0.908910	Durbin-Watson stat	1.972305
Prob(F-statistic)	0.000006		

Source: Researcher's Statistical Result from E-view (v.10), 2022

From the table output above, the coefficient of CAM and EPS is 4.42E-07. This value implies that for every unit increase in EPS is predicted to be accompanied by 4.42E-07-unit increase in CAM.

The T-statistics is above 1, which is sufficient statistical evidence of significant @ 1% T-stat confidence level. The Prob value of CAM is 0.0133, which means the relationship between CAM and EPS is statistically significant at the 5 percent significant level.

The result also showed that the R2, which measures the goodness of fit, is 0.590989, meaning that 59 percent of the variation in the earnings per share product can be explained by the dimension of the independent variables. The result indicates that the model is proper and adequate for the study. The model's goodness of fit and appropriateness is also supported by the outcomes of F-statistics and probability of F-statistics of 0.908910 and 0.000006 respectively. The Durbin-Watson statistics of 1.972305 also indicate the absence of serial autocorrelation.

The Third Model: The fourth hypothesis test model; shows the relationship between return on equity and *cost control and reduction*:

H0₃: ROE = f(CCR)..... (iv)

Table 4.5: MODEL 4

Dependent Variable: ROE				
Method: Least Squares				
Date: 10/20/21 Time: 06:17				
Sample: 2012 2020				
Included observations: 9				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CCR	2.031696	0.001772	1.956711	0.0367
C	14.74421	72.17292	1.204290	0.8432
R-squared	0.602666	Mean dependent var		74.69300
Adjusted R-squared	0.609501	S.D. dependent var		112.7129
S.E. of regression	113.2471	Akaike info criterion		12.47388
Sum squared resid	102599.3	Schwarz criterion		12.53440
Log likelihood	-60.36939	Hannan-Quinn criter.		12.40749
F-statistic	0.915297	Durbin-Watson stat		1.835926
Prob(F-statistic)	0.000007			

Source: Statistical Computation result from Researcher's E-view (v.12), 2022

In the table, the coefficient of CCR and ROE is 2.031696. This value explains that there is an increase in unit of 2.031696 between the activities (or in the associations) of ROE and CCR. The T-statistics is above 1, which is sufficient statistical evidence of significant @ 1% T-stat confidence level. The Prob value of CCR is 0.0367, therefore indicates the statistically significant relationship between CCR and ROE at the 0.05% statistical alpha level.

The R^2 reveals indicates the good fit of the model, which stands at is 0.602666, meaning that 60% of the variation in the return on equity can be explained by the dimension of the independent variables. The result indicates that the model is proper and adequate for the study. The model's good fit and appropriateness is also supported by the outcomes of F-statistics and probability of F-statistics of 0.915297 and 0.000007 respectively. The Durbin-Watson statistics of 1.835926 also indicate the absence of serial autocorrelation as it is not below 1.5 and not also above 2.5.

The Fourth Model: The fifth hypothesis test model; shows the relationship between return on equity and *cash management*:

$$H0_3: ROE = f(CAM) \dots \dots \dots (v)$$

Table 4.6

Dependent Variable: ROE				
Method: Least Squares				
Date: 10/20/21 Time: 19:43				
Sample: 2012 2020				
Included observations: 9				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAM	-0.531642	1.568926	-0.338857	0.1372
C	0.999579	2.922195	-0.342065	0.0349
R-squared	0.820981	Mean dependent var		1.629739
Adjusted R-squared	0.792675	S.D. dependent var		1.366526
S.E. of regression	1.431904	Akaike info criterion		3.672356
Sum squared resid	57.40980	Schwarz criterion		3.855573
Log likelihood	-54.75770	Hannan-Quinn criter.		3.733087
F-statistic	0.077935	Durbin-Watson stat		1.812331
Prob(F-statistic)	0.000018			

Source: Statistical Computation result from Researcher's E-view (v.12), 2022

In the table, the coefficient of CAM and ROE is -0.531642 this value explains that there is an increase in unit of -0.531642 between the activities (or in the associations) of ROE and CAM. The T-statistics is above 1, which is sufficient statistical evidence of significant @ 1% T-stat confidence level. The Prob value of CAM is 0.1372, therefore indicates the statistically not significant relationship between CAM and ROE at the 0.05% statistical alpha level.

The R^2 reveals indicates the good fit of the model, which stands at is 0.820981, meaning that 82% of the variation in the return on equity can be explained by the dimension of the independent variables. The result indicates that the model is proper and adequate for the study. The model's good fit and appropriateness is also supported by the outcomes of F-statistics and probability of F-statistics of 0.077935 and 0.000018 respectively. The Durbin-Watson statistics of 1.812331 also indicate the absence of serial autocorrelation as it is not below 1.5 and not also above 2.5.

Summary Results

Table 4.7: Summary Computation of Hypotheses Results

Hypotheses	Coefficient	Std. Error	T-Stat	P-Value 0.05	Statistical Decision	Remark
H ₀₁	4.72E-07	5.12E-07	3.921077	0.0047	Significant	Rejected H ₀₁
H ₀₂	4.42E-07	7.91E-07	2.559503	0.0133	Significant	Rejected H ₀₃
H ₀₃	2.031696	0.001772	1.956711	0.0367	Significant	Rejected H ₀₄
H ₀₄	-0.531642	1.568926	-0.338857	0.1372	Not significant	Accepted H ₀₅

Source: Researcher's Computation, 2022

From the summary of hypotheses table above the result of the hypotheses of the study were presented in line with the statistical decision rule: 'if the probability value (PV) in is less than 0.05 alpha level, we Reject the null hypotheses and accept significant relationship. Meanwhile, if the probability value (PV) is greater than 0.05 alpha level, we accept the null hypothesis and accept insignificant relationship'. Hence:

- There is significant relationship between *cost control and reduction* and earnings per share of listed breweries companies of Nigeria.
- There is significant relationship between *cash management* and earnings per share of listed breweries companies of Nigeria.
- There is significant relationship between *cost control and reduction* and return on equity of listed breweries companies of Nigeria.
- There is negative and not significant relationship between *cash management* and return on equity of listed breweries companies of Nigeria.

Discussion of Findings

There is Significant Relationship between *Cost Control and Reduction* and Earnings Per Share of Listed Breweries Companies of Nigeria

The result of the descriptive statistics analysis of table 4.1 for *cost control and reduction* and earnings per share revealed mean of 148023.9 and 13.00545 respectively. On the other hand, null hypothesis one was rejected with a (P-Value of 0.0047 < 0.05 and coefficient value of (4.72E-07). Hence, there is significant relationship between *cost control and reduction* and earnings per share of listed breweries companies of Nigeria. This finding was corroborating was in line with Sulaiman, Ahmad and Alwi (2005) conducted a study on strategic cost control and reduction accounting instruments and their usage in Albanian companies. According to the findings of the study the most used Strategic Cost control and reduction (SCM) instruments were: benchmarking strategic pricing, customer accounting, and target costing in their order of intensity. This study shows that in recent years the Albanian business have successfully adapted to the new economic and technological changes by adopting strategic cost control and reductions instruments to hold or improve their competitive.

There is Significant Relationship between *Cash Management* and Earnings Per Share of listed Breweries Companies of Nigeria.

The finding of research question two descriptive statistics analysis of *cash management* and earnings per share 686209.8 and 13.00545 respectively. On the other hand, null hypothesis two was accepted with a (P-Value of 0. 0.0133 < 0.05 and coefficient value of (4.42E-07). Hence, there is significant relationship between *cash management* and earnings per share of listed breweries companies of Nigeria. The finding was in support with Juan, et al (2007) analyzed working capital management practices and profitability of SMEs. The study adopted a panel study approach and covered a sample of 8,872 SMEs. The span between 1996 and 2002 was considered for analysis. Study results indicated an inverse link between the inventories holding period and performance. Therefore, inventory management practices do influence performance of firms.

There is Significant Relationship between *Cost Control and Reduction* and Return on Equity of Listed Breweries Companies of Nigeria.

The fourth research question descriptive analysis revealed an average value *cost control and reduction* and return on equity as 148023.9 and 64.51727 respectively. On the other hand, null hypothesis four was accepted with a (P-Value of 0. 0367 < 0.05 and coefficient value of 2.031696). Hence, there is significant relationship between *cost control and reduction* and return on equity of listed breweries companies of Nigeria. The findings was in line with Oluwagbemiga, et al (2014), investigated the relationship that exists between cost control and reduction 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. Inventory management, budgetary control and cash management, production overhead cost and administrative overhead cost were taken as independent cost control and reduction 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 control and reduction practices and firm's performance in the manufacturing organization. In supporting the finding Raymond, et al (2015), assessed the cost control and reduction on corporate operating performance in Nigerian manufacturing companies.

There is Negative and Insignificant Relationship between *Cash Management* and Return on Equity of Listed Breweries Companies of Nigeria.

The fifth research question descriptive analysis revealed an average value for *cash management* and return on equity as 686209.8 and 64.51727 respectively. On the other hand, null hypothesis five was accepted with a (P-Value of 0. 1372 > 0.05 and coefficient value of (-0.531642). Hence, there is negative and insignificant relationship between *cash management* and return on equity of listed breweries companies of Nigeria. This finding was in corroboration with Amahalu N. et al (2021), this study is set to ascertain the relationship between inventory management and financial performance of brewery firms on Nigeria stock exchange for a seven (7) year period from 2010-2016.

Conclusion

Brewery and food product companies use management accounting techniques to assess their operations. These include budgeting, cost reduction and control that results to variance analysis and breakeven analysis, *cash management* and *inventory management*. These methods help organizations to plan, direct and control operating costs and to achieve profitability. It is recognized that management accounting practices are important to the success of the organization (Horngren et al., 2011). Management accounting is the application of appropriate techniques and concepts in processing the historical and projected economic data of an entity to assist management in establishing a plan for

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reasonable economic objectives and in the making of rational decisions with a view towards achieving these objectives.

Thus, the study concludes that there is significant relationship between *cost control and reduction* and earnings per share and return on equity of listed breweries companies of Nigeria. Brewery and food manufacturing sector have adopted the use of *cost control and reduction*. This is attributed to increased quality and cut cost of product, competition and decrease overhead necessary for performance of this Firm. Variance analysis in *cost control and reduction* is combined with innovative techniques which affects the financial performance of this Firm. The findings also show that *cost control and reduction* help to identify inefficient products (value destroying), departments and activities and helps to merge departments and cost centers to increase financial performance.

On the other hand, the relationship between *cash management* and earnings per share show positive impact, while that of *cash management* and return on equity, result a negative impact in listed breweries companies of Nigeria. Cash generates serious problems for any organization if no proper planning and *management* practiced on cash receivable, cash payable and other cash equivalent and this affect financial performance. Cash management make sure their cash flow performance is effective for financial health in the sense of knowing when and how and why to investing cash, finance cash and operating with cash.

There is significant relationship between *inventory management* and earnings per share and return on equity of listed breweries companies of Nigeria.

Recommendations

1. From practice perspective, this study recommends the continuous invention and enhancement of cost reduction and control practices, as it is one of the most highly used management accounting practice by brewery and food product manufacturing companies that contributes significantly and positively to financial performance.
2. There is need to create awareness on the impact of cash management on financial performance of brewery and food product manufacturing firms in Nigeria. Brewery and food product firms should also continue using cash management in order to identify financing and investing opportunities.
3. For continuous contribution of inventory management on financial performance of brewery and food product companies, there should be a cut-off date in order to ensure that there is no transaction that takes place during the inventory cycle count activities, which ensures that the records of physical stock and the recording system are accurate.
4. Cost reduction and cost control should be retained and cost reduction strategy with emphasis on programme crashing should be embarked upon if profit maximization and wealth creation objective must be achieved.

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