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Strategic Management Accounting Practices and Return on Equity of Quoted Manufacturing Firms in Nigeria

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ABSTRACT
This study assessed strategic management accounting practices and return on equity of quoted manufacturing firms in Nigeria. The objective of the study was to ascertain if there was significant relationship between strategic management accounting practices and return on equity of quoted manufacturing firms. The study adopted deductive approach and employed the ex post facto research design and relied on secondary data from 25 quoted manufacturing firms while data were analyzed using panel data analysis, ordinary least square estimator, fixed effects and random effect models. The findings of the study proved that 50.6 percent variation in return on equity was explained by variation in strategic management accounting. The model results further found that target costing has negative and no significant effect on the return on equity, absorption costing has positive and significant effect on the return on equity while activity based costing have negative and significant effect on the return on equity of the quoted manufacturing firms in Nigeria. The study recommend that management and policy makers of manufacturing firms should adhere strictly to strategic management accounting policies as they have major impact on return on equity of the company. Finally, there should be continuous application of strategic management accounting practices as regards to absorption costing, target costing and activity based costing for investment decisions, pricing policy decisions and management reporting to achieve increase financial performance.
Keywords: Activity Based Costing, Target Costing, Absorption Costing, Return on Equity

INTRODUCTION

A company's financial performance is measured by its return on equity; while financial performance is a notion that refers to how well management has met its objectives. All stakeholders are concerned about it, and it is influenced by internal elements such as costing procedures and strategic management accounting practices, as well as external factors like as technological change and macroeconomic concerns. If a company performs well in terms of profitability, the shareholders' return is maximized, employees are paid, and creditors are paid on time. It is measured in terms of return on equity, return on assets, net profit margin and earnings per share. A firm can be said to be performing to expectations if there is an increase in profitability that maximizes shareholders' wealth (Oyewo, 2013).

Because shareholders give capital to the company, the ultimate purpose of a company is to maximize shareholder wealth (Jensen, 2002), according to finance theory. At both the micro and macro levels of the economy, the importance of financial performance can be assessed. Financial performance is the most cost-effective source of money and an essential prerequisite of a competitive firm at the micro level. It is not just a result, but also a must for successful business in an era of increasing market competition. As a result, the primary goal of an organization's management is to improve corporate performance, which is a prerequisite for performing any business (Bobakova, 2003). A sound and successful business environment can survive negative shocks and contribute to the business

environment's stability at the macro level. The above financial performance analysis is heavily reliant on manufacturing enterprises' strategic management accounting and costing procedures.

The goal of managerial accounting is to improve financial performance and profitability by providing useful data for planning, regulating, and making decisions. Strategic management accounting is a branch of accounting that focuses on maximizing shareholder value and assisting management in accomplishing organizational objectives. Many advanced managerial and costing techniques in strategic management accounting have resulted in significant improvements in determining and measuring costs, resulting in significant cost savings and reductions, and some of these strategic costing systems may have resulted in the changing of traditional cost structures, which has a significant impact.

Activity-based costing, target costing, attribute costing, life cycle costing, cost of quality, and value chain costing are the six components of strategic costing systems. Many essential aspects, such as customer empowerment, level of competition, and technological advancement, have influenced the current business climate. Firms developed costing systems as a result of these changes. These solutions significantly improved cost estimation and measurement, resulting in significant cost savings and reductions, improved decision-making, and improved performance (Onaolapo & Oladegi, 2013).

Accounting procedures used in strategy management, as well as other aspects that influence manufacturing firm performance, give financial and non-financial data to managers to aid in decision-making. It is used by a company's managers to improve the organization's performance by regulating its operations and activities (Scapens, 2006). One of the most important challenges for any organization, at whatever level of development, is strategic management accounting practice. It's a method for making better use of resources and increasing production quantities (Okunbor, 2013). Managers are concerned about estimating cost behavior patterns because the data allows for more precise cost forecasting in planning and decision-making (Pichetkun & Panmanee, 2012). Strategic management accounting techniques play a critical and significant role in delivering accurate information that allows management to make appropriate decisions as companies acquire a competitive advantage over their competitors (Wang & Huynh, 2013).

Strategic management accounting includes both financial and non-financial information about the cost in obtaining or employing resources, which is an unavoidable part of any firm. Cost accounting data is used by managers to make decisions on strategy formulation, Research and Development (R&D), budgeting, production planning, and pricing, among other things. New cost accounting techniques such as activity based costing, target costing, life cycle costing, just in time system, back flush accounting, and throughput accounting were born in response to criticism of relevance loss of accounting information affecting corporate performance due to the use of traditional techniques (Okunbor, 2013). It is in the light of the above that this study is aimed at investigating strategic management accounting practices and return on equity of quoted manufacturing firms in Nigeria with activity based costing, target costing and absorption costing as operational proxy.

Research Objectives

The main aim of this study is to investigate empirically the relationship between strategic management accounting practices and return on equity of quoted manufacturing firms in Nigeria. However, the study specific objectives are to:

iii. Ascertain the relationship between activity based costing and return on equity of quoted manufacturing firms in Nigeria.

iv. Investigate the relationship between target costing and return on equity of quoted manufacturing firms in Nigeria.

v. Examine the relationship between absorption costing and return on equity of quoted manufacturing firms in Nigeria.

Research Hypotheses

The following null hypotheses were formulated for the study:

Ho_1 There is no significant relationship between activity based costing and return on equity of quoted manufacturing firms in Nigeria.

Ho_2 There is no significant relationship between target costing and return on equity of quoted manufacturing firms in Nigeria.

Ho_2 There is no significant relationship between absorption costing and return on equity of quoted manufacturing firms in Nigeria

Theoretical Framework

This study is anchored on efficiency theory formulated by Demsetz (1973). This is because the theory underpin the objective of the study.

Efficiency Theory

Demsetz (1973) proposed the efficiency theory as an alternative to the market power theory. Better management and scale efficiency, according to the efficiency theory, leads to more concentration and consequently greater and higher profitability. As a result, management efficiency, according to the hypothesis, not only boosts profits, but also leads to higher market share gains and improved market concentration (Athanasoglou, Brissimis & Delis, 2005). According to the efficiency theory, a positive concentration profitability relationship could indicate a positive relationship between efficiency and size. According to the hypothesis, a positive relationship between concentration and profit arises from decreased costs, which are mostly obtained through more efficient manufacturing procedures and increased managerial processes (Birhanu, 2012). According to the efficiency theory, the most cost-effective production can be achieved through economies of scale. In the short run, optimum operational efficiency is obtained at a level of output where all potential economies of scale are effectively utilized (Odunga et al., 2013). Furthermore, the efficiency theory emphasizes that better profit margins are the result of efficiency, which allows banks to achieve both good financial performance and market shares (Mirzaei, 2012).

Conceptual Review

Strategic Management Accounting Practices

Cost reducing is a frequent method that firm managers adopt to respond to declining sustainable profitability in strategic management accounting practices (Anderson, 2007). Cost management strategies are the most essential managerial tools (Zengin & Ada, 2010), and cost management strategies are regarded critical factors in increasing revenue for manufacturing organizations' performance (Kumar & Shafabi, 2011). Cost management strategy aids decision-making and increases competitive advantage, resulting in more efficient resource allocation (Ellram & Stanley, 2008). Furthermore, strategic management accounting techniques are an important component of overall business management success since they allow for accurate cost estimation prior to the commencement of a process and can aid in cost forecasting in the future.

The process of identifying, measuring, accumulating, analyzing, preparing, interpreting, and communicating financial data for use by management in planning, evaluating, and controlling an organization, as well as ensuring appropriate resource use and responsibility (Smith, 2009). Management accounting practices, according to Ndwiga (2011), are dedicated to offering management solutions for internal management purposes. Management accounting practices, according to Epstein and Lee (2008) and Nuhu, Baird, and Appuhami (2016), are organizational information systems that provide an organization with relevant information to bring value to its customers and organizations. Management accounting methods help firms make better decisions and encourage desired behaviors (Abdel-Kader & Luther, 2006). Cost, budgeting, performance evaluation, information for decision-making, and strategic analysis are only a few of the strategic management accounting methods (Gichaaga, 2013).

The quantity of direct costs is determined by the scope of work, material unit prices, salary tariffs, and equipment usage expenses, and can be easily calculated. The proper allocation of overhead expenses to specific contracts, on the other hand, is a difficult task. Taking into account that overhead costs can be a role in determining a company's competitiveness. It is self-evident that overhead costs must be properly handled in order for the company to continue to be eligible to compete in tenders with reasonable rates. Gichaaga, (2013) defines overhead costs as charges that are not part of the primary building job but help to support the main work. As a result, typical overhead cost categories include administrative staff salary, depreciation of fixed assets, and the acquisition and operation of information technology and mobile devices.

A precise estimate of overhead costs should be backed up by complete cost accounting that allows for the necessary examination. Different techniques to supporting overhead cost estimating have been

described from a theoretical perspective, such as approaches based on neural networks ABC approach (Sunarni, 2013) or earned value (Talha, Raja, & Seetharaman, 2013). (2010). Overhead cost management must also account for the fact that some cost items are variable or fixed in nature, and hence are or are not dependent on output volume. (Uy, 2014) addressed this issue, claiming that overhead costs are determined by transactions arising from production complexity rather than production output.

Given the high level of uncertainty and complexity associated with the construction process, as well as the large number of parties involved, the corporation should examine whether all of the work will be completed using its own resources, or if hiring subcontractors would be more advantageous. Considering that subcontractors and general contractors have a significant impact on how a construction company operates (Gichaaga, 2013). The degree of overhead costs in a contract will be influenced by the decision to outsource. The pay paid (including all costs to the manufacturer of hiring a worker), the number of laborers required to run the process, and the paid operating time are all factors in direct labor costs. Only direct laborers are often included in this computation, with the rest falling under the overhead category. Determining the paid operating time is a critical aspect of this computation.

According to Asaolu and Nassar (2007), cost behavior is the study of how expenses vary or do not vary with the level of activity in a company. The amount of labor completed or the number of events that occurred were used to indicate their degree of activity. Drury (2005), on the other hand, defines cost as expenses incurred in the process of generating income. Lucey (1997), on the other hand, defined profitability as the difference between revenue and cost. To put it another way, profit is calculated by subtracting costs from income. Profit and expense are shown to be linear. In the management accounting literature, the terms variable and fixed cost, often known as indirect and direct expenses, have traditionally been used to explain how costs react to variations in activity level. Short-term variable costs are proportional to the amount of activity, therefore doubling the amount of activity doubles the total variable costs. Fischer and Schmitz (1998) assumed that this would result in an increase in profit.

Return on Equity

Return on equity is one of the accounting based measures of financial performance. The accounting-based performance measures most common in the ownership literature are return on equity (ROE) and return on assets (ROA). They are defined as:

$$ROE = \frac{Earnings\ after\ \text{int}erest\ \text{exp}enses\ and\ taxes}{Shareholders'\ equity} \quad 2.1$$

$$ROA = \frac{Earnings\ after\ \text{int}erest\ \text{exp}enses\ and\ taxes}{Total\ assets} \quad 2.2$$

The Return on Assets (ROA) of equity owners is measured by the return on equity, whilst the return on assets of equity and debt holders is measured by the return on assets. This fact supports three arguments in favor of using return on equity rather than return on assets in equity ownership and performance studies. First, financial performance is often focused on the concept of shareholder value, which is reflected more strongly in the pure equity focus of the return on assets than in the diluted equity returns of the return on assets. Second, the financial rewards of shareholders play a significant influence in the effect of performance on stock ownership. These are more reliant on the ROE than on the ROA, which includes the return of debt holders.

As a result, the ROE should lead to a stronger link between ownership and performance, which will improve the results. Finally, extra benefits accrued to shareholders as a result of their control rights can only come through residual profits. Rents for corporate debt, on the other hand, are paid according to fixed contracts and hence do not form part of the residual profits. As a result, the return on investment (ROI) should be a better proxy for financial performance and its impact on ownership. The introduction of debt-holders' returns would dilute the performance metric and its relationship to ownership once more. However, the discussion of ROE or ROA appears irrelevant when taking a look at the seven studies that used both measures.

Empirical Review

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. The data generated for this study were analyzed using tables, frequencies, bar charts, and mean scores. The findings revealed that Strategic Management Accounting enhances Competitive Advantage although several factors bedevil its adoption in Nigerian manufacturing firms.

Akinyomi (2014) examined the effects of firm size on activity-based costing implementation in Nigerian manufacturing sector. The study revealed significant relationship between the extent of ABC implementation and firm size in the Nigerian manufacturing sector. It is therefore recommended that future studies should seek to investigate the influence of other contextual factors such as top management support, product diversity and level of competition.

Alan and Glynn (2016) examined the use of management accounting techniques by small and medium-sized enterprises in Australia and Canada. With the adoption of descriptive statistics they found that of the common management accounting techniques covered in the interview, a very small number are moderately or highly used by the respondent companies. More revealing, they found that the manufacturing companies in the study are more disposed to use a broader set of techniques such as costing systems, operating budgets and variance analysis while early-stage SMEs are the lightest users of management accounting tools overall. They interestingly found three main factors affecting the adoption of MA techniques which are decision-usefulness of the technique, complexity of SMEs operating environment and the age of the SMEs.

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.

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.

METHODOLOGY

This study investigates the relationship between strategic management accounting practices and return on equity of quoted manufacturing firms in Nigeria. The study adopted ex – post facto and cross sectional research design because it relies on historical or past data and a cross section of manufacturing firms in Nigeria. The population of the study comprises of 25 quoted manufacturing firms on Nigerian Stock Exchange as at 31stDecember, 2019. Secondary data was used to carry out this study. Secondary data was collected from the company Annual Reports. While data were analyzed using panel data analysis, ordinary least square estimator, fixed effects and random effect models and was facilitated by E – view 9.0.

RESULTS AND ANALYSIS

Strategic Management Accounting Practices and Return on Equity

Table 1: Panel Unit Root Test

Method: : ROE	Statistic	Prob.**	Cross-sections	Obs
Panel Unit Root At Level				
Levin, Lin & Chu t*	-4.47576	0.0000	26	223
Im, Pesaran and Shin W-stat	-2.04311	0.0205	26	223
ADF - Fisher Chi-square	79.8292	0.0078	26	223
PP - Fisher Chi-square	120.141	0.0000	26	233
Series: TC				
Levin, Lin & Chu t*	-27.4141	0.0000	26	228
Im, Pesaran and Shin W-stat	-11.7022	0.0000	26	228
ADF - Fisher Chi-square	186.222	0.0000	26	228
PP - Fisher Chi-square	247.552	0.0000	26	234
Series: ASC				
Levin, Lin & Chu t*	-1.42242	0.0775	26	228
Im, Pesaran and Shin W-stat	-1.62284	0.0523	26	228
ADF - Fisher Chi-square	69.7400	0.0508	26	228
PP - Fisher Chi-square	103.559	0.0000	26	234
Series: ABC				
Levin, Lin & Chu t*	-9.42964	0.0000	26	227
Im, Pesaran and Shin W-stat	-3.76538	0.0001	26	227
ADF - Fisher Chi-square	99.0466	0.0001	26	227
PP - Fisher Chi-square	89.9709	0.0008	26	234
Panel Unit Root At First Difference				
Series: D(ROE,2)				
Levin, Lin & Chu t*	-22.4130	0.0000	26	169
Im, Pesaran and Shin W-stat	-11.8855	0.0000	26	169
ADF - Fisher Chi-square	226.289	0.0000	26	169
PP - Fisher Chi-square	355.010	0.0000	26	181
Series: D(TC,2)				
Levin, Lin & Chu t*	-48.1876	0.0000	26	170
Im, Pesaran and Shin W-stat	-18.0262	0.0000	26	170
ADF - Fisher Chi-square	232.133	0.0000	26	170
PP - Fisher Chi-square	411.886	0.0000	26	182
Series: D(ASC,2)				
Levin, Lin & Chu t*	-17.5670	0.0000	26	165
Im, Pesaran and Shin W-stat	-7.63139	0.0000	26	165
ADF - Fisher Chi-square	159.884	0.0000	26	165
PP - Fisher Chi-square	245.425	0.0000	26	182
Series: D(ABC,2)				
Levin, Lin & Chu t*	-25.8712	0.0000	26	167
Im, Pesaran and Shin W-stat	-12.7116	0.0000	26	167
ADF - Fisher Chi-square	225.650	0.0000	26	167
PP - Fisher Chi-square	313.323	0.0000	26	182

Source: Computed from E-view 9.0

* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality, Im, Pesaran and Shin; ADF - Fisher and PP - Fisher - Null Hypothesis: Unit Root (Individual Unit Root process). Levin, Lin & Chu Test.

- Null Hypothesis: Unit Root (common Unit Root process), Automatic lag length selection based on Modified Schwarz Criteria and Bartlett kernel.

It can be seen from the Table (1) above that the data are stationary at first difference for 1%, 5% and 10% levels of significance. It is therefore deduced that the series are characterized as I (1) process; consequently, suitable for a use in a test for panel co-integration between strategic management accounting and return on equity of the quoted manufacturing firms.

Table 2: Pedroni Residual Cointegration Test

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-2.424969	0.0023	-2.655448	0.0060
Panel rho-Statistic	2.974521	0.0085	2.253319	0.0079
Panel PP-Statistic	-0.843070	0.1996	-4.626861	0.0000
Panel ADF-Statistic	2.816435	0.0076	0.868726	0.8075
Alternative hypothesis: individual AR coefs. (between-dimension)				
	Statistic	Prob.		
Group rho-Statistic	4.710163	0.0000		
Group PP-Statistic	-7.239790	0.0000		
Group ADF-Statistic	0.446162	0.6723		

Source: Computed from E-view 9.0

The co-integration test is consistent with Pedroni (2004), which is an Engle-Granger based test. The test allows for heterogeneous intercepts and trend coefficients across cross-sections, with different methods of constructing statistics for testing the null hypothesis of no co-integration. From the results in table 2 above, it is clear that most of the p-values are all less than 0.05. We can therefore safely conclude that the panel co-integration results provide us with evidence of co-integration since most of Pedroni test statistics reject the null hypothesis of no co-integration for the estimated models.

Table 3: Presentation of Regression Results

Variable	Pooled Effect			Fixed effect			Random effect		
	β coefficient	T. stat	p. value	β coefficient	T. stat	p. value	β coefficient	T. stat	p. value
TC	-0.000301	-0.128885	0.8976	3.299705	0.017350	0.9862	-0.000679	-0.339839	0.7343
ASC	0.241677	2.260051	0.0247	0.135160	1.555008	0.0368	0.189449	1.859306	0.0441
ABC	-0.577095	-3.014548	0.0028	-0.288360	-1.502576	0.0344	-0.347685	-1.825083	0.0492
C	26.50708	11.15899	0.0000	24.62421	10.12127	0.0000	2.530143	6.876548	0.0000
R-squared	0.335940			0.511763			0.618495		
AdjR^2	0.224598			0.430022			0.506948		
F-statistic	3.168792			6.260775			6.601727		
F- Prob	0.024963			0.000000			0.000053		
D W	0.928110			1.333870			1.197572		
Correlated Random Effects - Hausman Test									
Test Summary	Chi-Sq. Statistic			Chi-Sq. d.f.	Prob				
Cross-section random	1.731071			3	0.6300				

Source: Computed from E-view 9.0

ANALYSIS OF RESULTS

First a choice between fixed and random effects regression has to be made. This is determined by the probability of the Chi-sq. statistics from the Hausman test. The Hausman test shows a probability of the Chi-Sq. as 0.6300 which is greater than 0.05; therefore, the study adopts the random effect model. From the above, the study adopted the random effect model for the analysis of the effect of strategic management accounting on return on equity of the quoted firms in Nigeria.

F-Test: The F-statistics is 6.601727, with a probability of 0.000053, which is lesser than the error margin of 0.05. It is therefore evident that there is a statistically significant relationship between strategic management accounting and return on equity of the quoted manufacturing firms.

Coefficient of Multiple Determinations (Adj.R^2): The R^2 is 0.506948 implying that the endogenous variables are responsible for approximately 50.6 percent variation in the exogenous variable return on equity of the quoted manufacturing firms within the periods covered in this study. This is above the acceptable threshold of 50.6, therefore the model is adjudged to have appreciable goodness of fit.

Durbin Watson statistics (DW): The computed DW is 1.197572 from the random effect results shows that at 5% level of significance with three explanatory variables and 220 observations. This value is below 1.5, and though less than 2, is permissible. This implies the absence of serial autocorrelation among the variables within the time series.

Regression Coefficient and Probability Value: From the random effect model, the regression intercept is positive which implies that at constant, return on equity of the quoted manufacturing firms is valued at 2.55 percent. However, target costing have negative and no significant effect on the return on equity of the quoted manufacturing firms such that a unit increase on the variables can negatively affect return on equity by 0.006 percent. Absorption costing has positive and significant effect on the return on equity of the quoted manufacturing firms such that a unit increase on the variables can positively affect return on equity by 0.189 percent while activity base costing have negative and significant effect on the return on equity of the quoted manufacturing firms such that a unit increase on the variables can negatively affect return on equity by 1.82 percent

Table 4: Descriptive Statistics

	ROE	TC	ASC	ABC
Mean	23.15629	-57.38475	15.06266	12.14421
Median	15.04000	6.460000	9.770000	8.490000
Maximum	137.2400	366.9100	172.3500	42.82000
Minimum	0.230000	-9022.200	1.530000	1.580000
Std. Dev.	22.68086	597.3833	15.98948	8.928685
Skewness	2.001825	-13.44053	4.675787	1.107938
Kurtosis	8.062901	198.4302	40.17967	3.360932
Jarque-Bera	449.6043	419963.9	15861.37	54.39412
Probability	0.000000	0.000000	0.000000	0.000000
Sum	5997.480	-14862.65	3901.230	3145.350
Sum Sq. Dev.	132720.8	92071650	65961.13	20568.13
Observations	259	259	259	259

Source: Computed from E-view 9.0

Descriptive statistics was used to vividly describe the distribution and behavior of all the variables; Tables 4 present the descriptive summary of the observed variables and return on equity of the quoted manufacturing firms. The descriptive statistics was presented on the overall data (combined) to observe for general patterns among the sampled firms. As indicated, the first line of descriptive analysis was conducted on all the firms combined. Results as shown on Table 4.4 return on equity are higher than other variables. Mean statistics indicate that on the average the sampled firms acquired about 23.15. The minimum and the maximum coefficient return on equity respond to variation positively at maximum and at minimum. The Jarque-Bera and the probability value show that the variables are normally not distributed while the standard deviation shows that the variables have high dispersion.

Table 5: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
TC does not Granger Cause ROE	207	0.10116	0.9038
ROE does not Granger Cause TC		7.99707	0.0005
ASC does not Granger Cause ROE	207	0.32002	0.7265
ROE does not Granger Cause ASC		0.99103	0.3730
ABC does not Granger Cause ROE	207	0.26388	0.7683
ROE does not Granger Cause ABC		0.43616	0.6471

Source: Computed from E-view 9.0

Note: ** and *** indicate 5% and 1% significance levels respectively. Lag length is chosen according to the Akaike Information Criterion. For strategic management accounting and return on equity of quoted manufacturing firms' variable groups Akaike Information Criterion indicates the lag length of zero.

The results show that there is a uni-directional causal relationship between from return on equity to target costing while other variables have no causal relationship. The nonexistence of causal relationship among the variables contradicts our a-priori expectations and could be blamed on internal and external factors within the operating environment of the manufacturing firms.

Test of Hypotheses

H_{O1}: Activity based costing has no significant relationship with return on equity of quoted manufacturing firms in Nigeria.

The probability coefficient of 0.0492 is less than the critical value of 0.05 at 5 percent level of significance, therefore the study conclude that activity based costing has significant relationship with return on equity of quoted manufacturing firms in Nigeria

H_{O2}: There is no significant relationship between target costing and return on equity of quoted manufacturing firms in Nigeria.

The probability coefficient of 0.7343 is greater than the critical value of 0.05 at 5 percent level of significance, therefore the study conclude that there is no significant relationship between target costing and return on equity of quoted manufacturing firms in Nigeria.

H_{O3}: Absorption costing has no significant relationship with return on equity of quoted manufacturing firms in Nigeria

The probability coefficient of 0.0492 is less than the critical value of 0.05 at 5 percent level of significance, therefore the study conclude that absorption costing has significant relationship with return on equity of quoted manufacturing firms in Nigeria

DISCUSSION OF FINDINGS

The estimated regression model found that 50.6 percent variation in return on equity of the quoted manufacturing firms can be traced to variation in strategic management accounting variables as formulated in the regression model. This implies that 49.4 percent variation could be traced to exogenous variables not captured in the regression model. The beta coefficient of the independent variables proved that target costing and activity based costing have negative and no significant effect on return on equity.

The regression coefficient from the random effect model found that a unit increase on the variables can negatively affect return on equity of the manufacturing firms by 0.006 and 0.35 percent within the periods covered in this study. The negative effect of the variables contradicts our a-priori expectation and the objective of strategic management accounting practices. The negative effect of the variables could be traced to management inability to manage the operating cost to maximize return on equity. Empirically the findings of the study contradict the findings of Yeshmin and Fowzia (2010) 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. the findings of Van der Poll and Ndwiga (2013) 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 and profitability and the findings of Sulaiman, Ahmad and Alwi (2005) 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 and profitability.

Furthermore, the study found that absorption costing have positive and significant effect on the return on equity of the quoted manufacturing firms such that a unit increase on the variable positively increases return on equity by 0.18 percent over the periods covered in this study. The positive effect of the variable confirm our a-priori expectations and in line with strategic management accounting practices. The finding confirms management objectives in maximizing shareholders wealth. Empirically the findings of the study confirmed the findings of Yeshmin and Fowzia (2010) 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. The findings of Van der Poll and Ndwiga (2013) 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 and profitability and the findings of Sulaiman, Ahmad and Alwi (2005) 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 and profitability.

CONCLUSION AND RECOMMENDATIONS

From the findings, the study conclude that activity based costing has significant relationship with return on equity and that there is no significant relationship between target costing and return on equity of quoted manufacturing firms in Nigeria. Also absorption costing has significant relationship with return on equity of quoted manufacturing firms in Nigeria. The study therefore recommend that management and policy makers of manufacturing firms should adhere strictly to strategic management accounting policies as they have major impact on return on equity of the company Finally, there should be continuous application of strategic management accounting practices as regards to absorption costing, target costing and activity based costing for investment decisions, pricing policy decisions and management reporting to achieve increase financial performance.

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