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EFFECT OF SUSTAINABILITY ACCOUNTING AND REPORTING ON FINANCIAL PERFORMANCE OF FIRMS IN NIGERIA BREWERY SECTOR

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ABSTRACT: *This paper evaluates the effect of sustainability accounting on the financial performance of listed manufacturing firms in Nigeria. Firms used for the study were chosen from the Nigerian brewery sector. Data were sourced from the financial statements of three sampled firms. Data were analysed using the ordinary linear regression. The study reveals that sustainability reporting has positive and significant effect on financial performance of firms studied. Following the findings, the study recommends that firms in Nigeria should invest reasonable amount of their earnings on sustainability activities while specific accounting templates be articulated by professional accounting regulating bodies to guide firms' reportage on sustainability activities. The Financial Reporting Council of Nigeria (FRC) and others alike should make sustainability reporting compulsory while adequate sanctions are spelt out and enforced on defaulting organizations to serve as a deterrent.*

KEYWORDS: Sustainability Accounting, Financial Performance, Return on Assets, Return on Equity, Nigeria.

INTRODUCTION

Firms all over the world are increasingly being challenged to expand on and enlarge their financial reportage to include both those targeted at profiteering as well as social efforts being made to improve the environment. To this extent, sustainability accounting as a business philosophy is fast gaining momentum in this millennium especially in the face of the adoption of International Financial Reporting Standards(IFRS) which emphasizes a lot on disclosure. Sustainability accounting can be defined as the integration of reporting and accounting for social, environmental and economic issues in corporate reporting or simply the 'Tipple bottom line reporting(Elkington, 2004).

The concept of sustainability reporting views as important both the traditional concern of business organizations strategies for profit maximization, diversification, product differentiation as well as globally assessing a firms performance on its environment. However, the evolution of strategic thinking underscores the need to include activities that seek to integrate social and environmental issues into business decision making process, more so as firms that properly integrate their environment and people are viewed as socially responsible.

Businesses development has social and environmental impacts that result in social problems, global warming, actual disaster and pollution. Therefore, many business organizations take much responsibility for social and environment issues as they do for economic issues. One reason for

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this is that business entities are reflecting growing social expectations and stakeholders concern. Responsibility is reflected in disclosure made by these companies or business concerns known as corporate social and environmental responsibility reporting. Henderson and Pierson (2004) explains that social and environmental reporting is an aspect of sustainable development reflecting concerns about environmental protection, inter-generational equality, the Earth and its resources. When people come together to establish a firm, they do so to allocate their resources for the purpose of a common goal and such may be to earn profit. To achieve this goal, they also interact with the society. On the basis of their motives stakeholders and groups that keep interest in the operations of the organization. Stakeholders include the customers, workforce, lenders, suppliers, government and local communities and even the environment. Many scholars are trying to understand how sustainability accounting affects the financial performance of firms. Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate resources.

The brewery industry in Nigeria has proved lucrative and very resilient. Many of the firms such as the Nigerian Breweries (NB) Plc has the largest capacity and coverage, with about eight breweries located across the country (estimated to have total annual capacity of 13.5mnhl) while Guinness operates four breweries (from which the total annual capacity of 7.5mnhl is expected). SABM has built up its capacity (by acquisition) to approximately 1.8mnhl, which includes Pabod breweries in Port Harcourt, international breweries in Ilesha and Onitsha. The recent entrance of SABM into Nigeria market through the acquisition of two regional brewing companies, has also given rise to speculations regarding the future dominance of the two incumbent majors (NB Plc and Guinness Nigeria Plc). Thus, the critical role played by the sector in the non-financial sector motivated this study of how sustainability accounting by the firms influence their financial performance. This study will use earnings measurement variables to reflect financial performance of firms selected from Nigeria brewery sector.

Most empirical studies about sustainability accounting or reporting have focused on the developed countries while others were skewed toward the oil and gas firms in Nigeria and hence the need for this study. Subsequent sections of this paper are divided into section two: review of related literature; section three which shows the methodology adopted in the study; section four: Data presentation and analysis and finally section five which shows the findings, conclusion and analysis.

Statement of Problem

Of great concern to financial and social critiques is that most business/economic activities of firms often results in social, ecological and humanitarian problems yet firms are to take care of these problems as well as contribute reasonably to improving their environment. Firms are also often challenged to increase their shareholders stake which is often achieved through profiteering. In view of this, accounting as well as financial scholars who advocate sustainability reporting have argued that firms that have entrenched and availed the public of their sustainability activities have positive performance indices well and above those who have not integrated sustainability reporting.

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Sustainability often regarded as the integration of three performance areas: economic, social and environmental; is viewed as a necessary practice for the survival of modern business firms. Ballon, Heitger, and Landes,(2009) submits that organizations have over the time realized that meeting stakeholders' expectations is a necessary condition for sustainability and therefore needed to achieve overall strategic business objective. The challenges presented to modern day managers on how to manage performance across the dimensions of sustainability in order to derive the synergistic benefits from its implementation strategy. Elkington(1998) argues that the key to managing organizational progress towards sustainability is in the measurement of what cannot be measured, you are likely to find hard to manage.

In view of the above submissions this study has empirically assessed the effect of sustainability accounting has on financial performance of firms in Nigeria using selected firms in the brewery industry.

Objectives of the Study

The broad objective of this study is to evaluate the effect of sustainability accounting on financial performance of firms in Nigeria using the brewery industry. The specific objectives are to:

i. Ascertain the effect of social responsibility cost on the profitability of selected firms in the Nigeria brewery sector.

ii. Determine the type of relationship that exists between employees' benefit cost and the firms' financial performance.

Research Hypotheses (Null)

The following null hypotheses guided this study:

Ho_1 Total equity to Total Asset (TETA) ratio has not effect on the return on equity (ROE) of firm in the Nigeria brewery sector.

Ho_2 total personal cost to turnover (TPCT) ratio has no positive relationship with the return on asset (ROA) of firms in the brewery sector.

REVIEW OF RELATED LITERATURE

Conceptual Framework

Defining Sustainability Accounting: Sustainability or triple bottom line was first coined in 1994 by John, the founder of a British Consultancy called Sustain-Ability (Elkington, 1998, 2004). His argument was that companies should be preparing three different (and quite separate) bottom lines. One is the traditional measure of corporate profit. The "Bottom-line" of the profit and loss account. The second is the bottom line of a company's "People account" – a measure in some shape or form of how socially responsible an organization has been throughout its operations. The third is the bottom line of the company's "Planet" account – measure of how environmentally responsible it has been. The triple bottom line or sustainability accounting consists of three 'Ps' profit, people and planet. It aims to measure the financial, social and environmental performance of the business entity over a period of time.

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The triple bottom line is made up of "social, economic and environmental" factors. "People, planet and profit", was also carried by Elkington in 1995 while at sustainability, and was later adopted as the title of the Anglo-Dutch oil company shell's first sustainability report in 1997.

Nigeria as a member of united Nation impliedly adopted the UN global compact on global reporting initiative (GRI) which provided sustainability reporting guideline in 2000 to design and build acceptance of a common framework for reporting on the linked aspects of sustainability. It is in the light of the above amidst growing demand by the society, over economic, social and environmental accounting company's performance that more research work on sustainability accounting becomes imperative.

Theoretical Framework

Despite the different theoretical approaches that can be and have been used to explain sustainability or triple bottom line reporting, the most widely advanced theoretical perspectives in the social and environmental accounting literature are legitimacy and stakeholder theories (Branco, Eugenio, & Ribeiro, 2008; M. Islam & C. Decgan, 2010; Joshi & Gao, 2009). These theories reflect the view that firms with proactive social and environmental programmes gain a competitive advantage over less socially and environmentally active companies by sharing their social and environmental activities with stakeholder groups. However this study uses only stakeholder theory to investigate sustainability accounting and the financial performance of three listed firms in the brewery sectors in Nigeria. This is premised on the notion that stakeholders expect companies to be socially and environmentally responsible so that there is a market premium in improved social and environmental performance.

Empirical Review

Previous related studies have found different results on the effect of sustainability accounting and financial performance of firms. Among the studies reviewed are Olayinka and Temitope (2011) who empirically examined the relationship between corporate social responsibility and financial performance in Nigeria. These variables studied are Return on Assets and Return on Equity, community performance, employee relation and environmental management system. The result shows that CSR has a positive and significant relationship with the financial performance measures.

Appah(2011) carried out a study on Corporate Social Accounting Disclosure in the Annual Report of Nigeria companies. The objective of this study is to examine the practice of social accounting disclosure in Nigeria companies. The research adopted descriptive research design, secondary data only was used. A sample size of 384 from infinite population the formula is Z^2 pq/(e)$^{2.}$The research hypothesis was tested using chi-square (X^2).The findings reviewed that the inclusion of social cost and the disclosure of information by the organizations in the financial statements of will enhance disclosure of information disclosure in the financial statement of the organization.

Setyorini and Ishak(2012) examined Corporate Social and Environmental Disclosure. A Positive Accounting Theory View Point. The center objective is to provide an examination. Of Indonesian corporate social and environmental disclosure in the Positive Accounting Theory (PAT) perspective. It used descriptive research design also and secondary data only was used.

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Population of the study was listed companies since they are required to publish their annual report yearly in the Indonesian stock exchange from 2005 until 2009. The study applied sampling method on the sectors of the listed companies in the Indonesian stock exchange. There were approximately 336 to 398 companies listed on Indonesian stock exchange from 2005-2009. The findings review that if the association is driven more by political cost considerations, it can be expected that corporate social and environmental disclosure is positively associated with earnings management. Onyekwelu and Ekwe (2014) examined whether corporate social responsibility predicate good financial performance using the banking sector in Nigeria?. The study adopted the expost facto as it made use of historical research design and secondary data used. Analysis was done using the Ordinary Least Square Regression. The findings shows that the amount committed to social responsibility vary from one bank to the other. The data further revealed that the sample banks invested less than ten percent of their annual profit to social responsibility. The researchers recommended that companies .n Nigeria particularly profitable one should give greater priority to Corporate Social Responsibility because this has the tendency to assist them to survive and maintain their profitability and also diffuse the tensions and hostilities usually experienced by companies in their localities.

Yahya and Ghodratollah (2014) investigated the impact of corporate social responsibility disclosure (CSRD) on the financial performance of companies listed on the Tehran stock exchange, employing multiple-linear regression analysis. The CSRD was the independent variable as measured by economic, social and environmental while Return on Assets, Return on Equity and Price Earnings Ratio were used in measuring financial performance. The analysis produce inconsistent results.

Olanyinka & Oluwamayowa (2014) carried out a research on Corporate Environmental Disclosure and market value of Quoted Companies in Nigeria. The broad objective of this study was focused at ascertaining the aggregate and individual impact of Corporate Environmental Disclosure were regressed on market value. Descriptive research design was adopted and secondary data only was used. A sample size of fifty firms quoted in Nigeria Stock Exchange (NSE) were purposively selected for analysis based on the availability of environmental disclosures in their annual reports. The hypothesis were tested using correlation coefficient. The findings review that the inclusion of environmental disclosure will enhance market value. The study recommends that business should take caution in areas where environmental activities impacts negatively on the value of the firm and also invest in areas that enhance value for the firm.

Juhmani(2014) studied Corporate Social and Environmental Disclosure on Website. This study was centered on examining and information disclosure of companies and website. The study made use of historical research design and secondary data was used. The findings shows that 57.57% of the samples listed companies provided social and environmental information in their 2012 annual reports and their websites. Commercial banks and insurance companies made most disclosure of social and environmental accounting, while companies in the hotels and tourism sectors and industrial sector made the least disclosure.

Onyekwelu & Ugwuanyi (2014) carried out a research on Corporate Social Accounting and Enhancement of Information Disclosure among Firms in Nigeria. The broad object of this study

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was aimed at ascertaining if the inclusion of social accounting information in the financial statements will significantly enhance information disclosure. They adopted survey research design; primary and secondary data were used. A sample size of 108 was drawn from a total population of 148 using Taro Yamane formula. The research hypothesis were tested using chi square(X^2)finding reviews the inclusion and separate presentation of social costs incurred by organizations in the financial statements will enhance information disclosure in the statement.
Ajayi and Ovharhe (2016) examined how Nigeria LNG uses CSR as a key strategy in creating an enabling environment that fosters support from all her stake holders which has led to good performance and growth of the company. This paper brought out CSR initiatives taken by NLNG in Nigeria that made her stands out as role model with regards to CSR in Nigeria. An exploratory research design was chosen in order to develop a profound understanding of the research topic and to obtain in-depth data about the research objectives. All main elements of the research paper, comprising theory, findings and analysis were incorporated in a cohesive and expository manner and structured in order to address and evaluate the central research objectives and hypotheses appropriately.

Nze, Okoh & Ojeogwu(2016) examined the effect of corporate social responsibility on earnings of quoted firms in Nigeria. Data for the study were secondary and were sourced from firms' financial statements and the fact book of Nigerian Stock Exchange. The two firms studied were chosen from the oil and gas industry in Nigeria using the simple random sampling technique. The study covered a ten year period. Data were analysed using the ordinary regression analysis. The results show that CSR has a positive and significant effect on earnings of firms studied

METHODOLOGY

The *expost –facto* research design was adopted in this study. Secondary data in examining the relationship between sustainability accounting and the financial performance of public limited liability firms in Nigeria. The data spanning a period of five years were garnered from the Nigerian brewery industry while three listed and major brewery firms in Nigeria, Guinness Nigeria Plc, Champion Breweries Plc and Nigeria Breweries Plc constituted our sample. The choice of the three firms was because of their domination of the brewery sector over years which ensure data availability for the covered period (2010-2014). Therefore, this study emphasized on the activities of the three, among which are two largest brewing companies in Nigeria (Nigeria Breweries Plc and Guinness Nigeria Plc).
We must however, indicate that the sampling method adopted does not lead to problem of bias because the sampled firms are considered to have a better reflection of the Nigerian brewery industry and are dealing with different clienteles based in the country.

Variables

In line with performance measure of past studies this study made use of measure of financial performance (Return on Asset and Return on Equity) as dependent variables while Total Personal cost to Total Asset (TPCTA) ratio and Total Equity to Total Asset (TETA) ratios form our independent variables

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Return on Asset (ROA) ratio indicates how profitable a firm is relative to its total asset and illustrates how well management is employing the firm's total asset to make profit (Investopadia, 2013). The higher the return, the more efficient management is, in utilizing its asset base.

Return on Equity (ROE) ratio measures firm's profitability by revealing how much profit a company generates with the money shareholders have invested. Total personnel cost to turnover (TPCT) ratio means the ratio of personnel cost covered by the firm's turnover (net sales). It shows in relative terms what part of the firm's revenue spent on the employees (people) of the organization.

Total Equity to total Asset (TETA) ratio measures the firm's investors stake in relation to the asset base. It reveals the corporate risk navigation of the firm to the investors. The choice of the variable is informed by their reflection of the business rationale for corporate social responsibility.

The Model

Our model is a modification of Ogbebe (2013) and is thus specified as follows:
Firm financial performance = sustainability accounting
$ROAit = a + a, TPCTit + a_2\ TETA$

Where:

ROA = Return on Asset
TPCT = Total personnel cost to turnover
TETA = Total Equity to Total Asset
We also used ROE another financial performance measure for robustness test and the right hand side of the mathematical model remains the same while replacing the dependent variable, ROA with ROE (Return on Equity) as.
$ROEit = a + a, TPCit + a_2\ TETAit$

Data Presentation and Analysis

Data for this study is shown in Appendix 2 in page 24.
Using the regression equations, the empirical data associated with its related statistics/regression results are as stated below:

Regression Analysis of Return on Asset (ROA) on Total Personnel Cost to Turnover (TPCT) ratio and Total Equity and Total Assets (TETA)

ROA = f (TPCT, TETA) …………………1
$ROA = b_0 + b_1TPCT + b_2TETA\ U_t$ …………2 [Linear Function]

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Table 1: Regression Estimated Function

Dependent Variable: ROA
Method: Least Squares
Sample: 1-13
No of observations 13

Variable	Coefficient	St.Error	t-Statistic	Prob.
C	0.132234	0.069710	1.896922	0.0871
TPCT	-0.614249	0.290156	-2.116956	0.0603
TETA	0.164437	0.160365	1.025394	0.3293

Source: Eviews' Output

R^2 = 0.309571
F- Stat = 2.241875
AIC = -3.036581
SIC = -2.906208
Durbin Watson (2.249226)

Critical examination of the model selection criteria shows that the linear function of the regression equation has a low R-squared and a better relatively lower AIC and SIC values. Hence, the regression result is stated below as:

Modelling ROA by OLS

ROA = 0.132 – 0.0614 TPCT + 0.164 TETA
T* = (1.897) (-2117) (1.025)
$t_{\text{P-values}}$ = [0.0871] [0.0603] [0.3293]
S.E = (0.069) (0.290) (0.160)
F- stat = 2.24
$F_{\text{P-value}}$ = [0.1569]
R^2 = 0.309571
DW = 2.249

Presentation and Analysis of Results

Unit Root Test

The Augmented Dickey-Fuller (ADF) test-statistic was employed to test for the existence of unit roots in the data using trend and intercept. The test results are presented below:

Table 2: Augmented Dickey Fuller Unit Root Test

Trend and Intercept (Series at level)

Series	ADF Test Statistic	5% Critical values	Remarks
ROA	-3.240024	-3.875302	Not Stationary
TPCT	-2.310950	-3.875302	Not Stationary
TETA	-2.176158	-3.875302	Not Stationary

Sources: Researcher's compilation from E-views 7

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Table 3: Augmented Dickey Fuller Unit Root Test

Trend and Intercept (Series at 1st Difference)

Series	ADF Test Statistic	5% Critical values	Order	Remarks
ROA	-4.445036	-3.933364	*I*(1)	Stationary
TPCT	-5.354364	-3.933364	*I*(1)	Stationary
TETA	-2.176158	-3.933364	-	Not Stationary

Sources: Researcher's compilation from E-views 7

Table 4: Phillips Perron Fuller Unit Root Test

Trend and Intercept (Series at 2nd Difference)

Series	PP Test Statistic	5% Critical values	Order	Remarks
ROA	-4.445036 [ADF]	-3.933364	*I*(1)	Stationary
TPCT	-5.354364 [ADF]	-3.933364	*I*(1)	Stationary
STETA	-5.609030 [PP]	-4.008157	*I*(2)	Stationary

Sources: Researcher's compilation from E-views 7

The results from table 2 and 3 on ADF unit root test showed that ROA, TPCT and TETA series were not stationary at levels but considering their series in 1st difference, ROA and TPCT series became stationary. However, the application of Philips Perron (PP) Unit root test in table 4 indicated that the series of TETA became stationary in 2nd difference. Therefore, the results showed that the time series on ROA and TPCT are integrated of the same order; *I* (1) while the data on TETA series was stationary at 2nd difference i.e. *I* (2) using PP Statistic. Thus, the series on ROA, TPCT and TETA do not suffer from the unit root problem. Therefore, they are deemed fit for use in data analysis.

Analysis of Results

T-test: The calculated t-value for the regression coefficients of TPCT and TETA are -2.117 and 1.025 respectively. Their P-values are 0.0603 and 0.3293 respectively. Considering the P-values, the chosen level of significance α =0.05 [5%] is less than the calculated t-value of the estimated parameters; [TPCT] and [TETA]. It is concluded that their regression coefficients are not statistically significant. This is confirmed by the P-value which is not statistically zero.

Standard Error test: It is used to test for statistical reliability of the coefficient estimates.

$S(b_1) = 0.290 \quad S(b_2) = 0.160$

$b_1{}^1/_2 = -0.307 \quad b_2{}^1/_2 = 0.082$

Since $S(b_1) > b_1{}^1/_2$ and $S(b_2) > b_2{}^1/_2$, it is concluded that the coefficient estimate of $S(b_1)$ and $S(b_2)$ are not statistically significant.

F-Test: The F-calculated value is 2.242 while the P-value of F-statistic is 0.157 at 5% level of significance. Considering the P-value, the chosen level of significance α =0.05 [5%] is less than the P-value of F-statistic [0.157]. It is concluded that the regression plane is not statistically

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significant. This means that the joint influence of the explanatory variables (TPCT and TETA) on the dependent variable (ROA) is not statistically significant.

Coefficient of Multiple Determination (R^2): The computed coefficient of multiple determination (R^2 = **0.309571**) shows that 30.96% of the total variations in the dependent variable (ROA) is accounted for, by the explanatory variables namely Total Personnel Cost to turnover (TPCT) ratio and Total Equity and Total Assets (TETA) while 69.04% of the total variation in the dependent variable is attributable to the influence of other factors not included in the regression model.

Durbin Watson statistics (DW): The computed DW is 2.25. At 5% level of significance with two explanatory variables and 13 observations, the tabulated DW for dL and du are 0.861 and 1.562 respectively. The value of computed DW is greater than the lower limit. Therefore, there is no evidence of positive first order serial correlation.

Table 5: Correlation Matrix

	ROA	**TPCT**	**TETA**
ROA	**1**	**-0.4868**	**0.012456**
TPCT	**-0.4868**	**1**	**0.464542**
TETA	**0.012456**	**0.464542**	**1**

Sources: Researcher's compilation from E-views 7

Table 6: Significance Test of the Correlation Coefficients

	ROA	**TPCT**	**TETA**
ROA	**1.0000**	**-0.4868**	**0.012456**
TPCT	**-0.4868 [0.0916]**	**1.0000**	**0.464542**
TETA	**0.012456 [0.9678]**	**0.464542 [0.1098]**	**1.0000**

Sources: Researcher's compilation from E-views 7

The correlation matrix shows that there is no strong relationship between ROA and TPCT. This is confirmed by the P-value of the correlation coefficient which is -0.0916. More so, the correlation matrix revealed that there is no strong relationship between ROA and TETA. This is confirmed by the P-value of the correlation coefficient which is -0.9678. This implies that there is no strong relationship between the variables though, the nature of their relationship remains positive.

Test of Hypothesis

With respect to the study, the null hypotheses are stated as follows;

H_o: Total equity to total asset (TETA) ratio has no effect on the return on asset (ROA) of firm in the Nigeria brewery sector.

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H_0: Total personnel cost to turnover (TPCT) ratio has no positive relationship with the return on asset (ROA) of firms in the brewery sector.

P-value of t-statistic is employed in testing the first hypothesis. This test will help to capture the relationship between the estimate variables.

Decision Rule

If the chosen level of significance ($\alpha = 0.05$) i.e. 5% level significance is greater than the P-value, the null hypothesis is rejected. Otherwise, we accept null hypothesis. It is found in the estimated function in table 1, that $\alpha = 0.05$ is less than the P-value of t-calculated value (0.3293) of TETA. Thus, H_0 is accepted and we conclude that total equity to total asset (TETA) ratio has no effect on the return on asset (ROA) of firm in the Nigeria brewery sector within the period under study.

Correlation Coefficient is employed in testing hypothesis two. This test will help to capture the relationship between the estimate variables.

Decision Rule

If the coefficient of correlation coefficient between ROA and TPCT bears positive sign, reject the null hypothesis. Otherwise accept the null hypothesis. The R value for TPCT & ROA is -0.4868. Since the correlation coefficient (R) bears no positive sign, the null hypothesis is rejected and it is concluded that total personnel cost to turnover (TPCT) ratio has no positive relationship with the return on asset (ROA) of firms in the brewery sector within the period under study.

IMPLICATIONS OF THE RESULT

The regression result above shows that total equity to total asset (TETA) ratio has no significant effect on the return on asset (ROA) of firm in the Nigeria brewery sector within the period under study. This was evident in the t-test value as also confirmed from the p-value [0.3293]. It was found that a unit increase in TETA will cause an increase in ROA by 0.2unit.

The result indicated that total personnel cost to turnover (TPCT) ratio has no positive relationship with the return on asset (ROA) of firms in the brewery sector within the period under study. It is estimated from the result that a unit increase in TPCT, on the average will cause a decrease in ROA by 0.6unit.

CONCLUSION

There is no doubt that there are numerous studies conducted in the relationship between sustainability reporting and firms' financial performance in developed countries but few in developing countries. The significance of this study is of great importance, as it assists firms in Nigeria to know whether sustainability accounting has impact on the financial performance of firms. More specifically, it helps firms' management to know that sustainability reporting is an integral part of the wealth creation process, which if managed properly will enhance the competitiveness of business.

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The result of the study will be of immense advantage to the government in seeing ways of improving its regulations on sustainability reporting of corporations. Based on the analysis of data and, the findings, the study concludes that sustainability accounting has impact on the financial performance of firms in the Nigeria brewery industry.

RECOMMENDATIONS

Relying on the analysis of data, and the findings, the paper recommends as follows:

1. Firms should adopt sustainability accounting initiatives to enable them identify allocate and measure environmental and social cost affecting the business and provide manages with strategies and techniques for managing corporate environmental social and economic performance.
2. Sustainability reporting system should be developed within the national industry and firm level context to enable Managers account for specific costs of operations affecting them.
3. The implementation of sustainability accounting in organizations would enable managers identify products with greater environmental and social costs to the Organization; these could become useful measures of departmental performance evaluation and product profitability assessment.
4. A necessary step for reasonable disclosure of sustainability related concerns in the reports of organizations could serve as useful instruments in Stakeholders conflict management.
5. Professional and regulatory bodies should do more to develop standards to regulate and guide sustainability accounting.

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APPENDIX 1

Dependent Variable: ROA
Method: Least Squares
Date: 11/11/16 Time: 03:36
Sample: 1 13
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.132234	0.069710	1.896922	0.0871
TPCT	-0.614249	0.290156	-2.116956	0.0603
TETA	0.164437	0.160365	1.025394	0.3293

R-squared	0.309571	Mean dependent var	0.149615
Adjusted R-squared	0.171485	S.D. dependent var	0.052720
S.E. of regression	0.047987	Akaike info criterion	-3.036581
Sum squared resid	0.023028	Schwarz criterion	-2.906208
Log likelihood	22.73778	Hannan-Quinn criter.	-3.063379
F-statistic	2.241875	Durbin-Watson stat	2.249226
Prob(F-statistic)	0.156890		

APPENDIX 2

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	(a) PAT	(b) TOTAL ASSET	€ TOTAL EQUITY	(d) TURNOVER	€ S&W	(f) TPC	NPM	ROA	ROE	SWT	TPCT	TPCTA	TETA	
	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦ ‘000	₦‘000	
2010	13,736,359	82,558,876	34,199,119	109,366,975	6,037,317	7,921,507	0.126	0.166	0.402	0.055	0.072	0.096	0.414	GUINNESS NIG PLC
2011	17,927,934	92,227,824	40,283,,492	123,663,125	6,423,755	7,117,637	0.145	0.194	0.445	0.052	0.058	0.077	0.437	
2012	14,671,195	102,534,172	40,352,504	126,288,184	7,600,884	8,340,142	0.116	0.143	0.364	0.060	0.066	0.081	0.394	
2013	11,779,956	121,060,621	46,039,111	122,463,538	7,730,644	9,219,080	0.096	0.097	0.256	0.063	0.075	0.076	0.380	
2014	9,573,480	132,328,273	45,061,717	109,202,120	8,348,242	9,527,408	0.088	0.072	0.212	0.076	0.087	0.072	0.341	
2010	30,332,118	114,389,432	50,172,162	185,862,785	762,600	762,600	0.163	0.265	0.605	0.004	0.004	0.007	0.439	NIGERIAN BREWERIES PLC
2011	38,050,756	235,701,193	144,828,650	211,071,805	12,795,125	18,324,786	0.180	0.161	0.263	0.061	0.087	0.078	0.614	
2012	38,042,714	253,633,629	166,799,161	252,674,213	18,204,079	23,919,971	0.151	0.150	0.228	0.072	0.095	0.094	0.658	
2013	43,080,349	252,759,633	112,359,185	268,613,518	19,155,285	27,645,906	0.160	0.170	0.383	0.071	0.103	0.109	0.445	
2014	42,529,253	349,229,163	171,964,263	266,372,475	20,700,513	28,817,068	0.159	0.122	0.247	0.078	0.108	0.083	0.492	
2012	1,337,505	6,799,200	3,430,000	1,785,345	265,435	306,091	0.749	0.197	0.390	0.149	0.171	0.045	0.504	CHAMPION BREWERIES PLC
2013	1,178,025	9,137,716	4,608,386	2,223,259	267,542	379,098	0.530	0.129	0.256	0.120	0.171	0.041	0.504	
2014	754,523	9,592,381	5,870,431	3,302,383	490,250	672,253	0.228	0.079	0.129	0.148	0.204	0.070	0.612	

Source: Annual Reports of the Brewery Firms.

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