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Sustainability Accounting and Financial Performance of Quoted Agricultural Companies in Nigeria

Oluyemi Ayodele OLONITE[1*], Temitayo Emmanuel AYEJUYO[2], Oluyemi Benjamin ONI[3] & Oyebisi Abdulwaheed BAMIDELE[4]

[1]Department of Accounting, Faculty of Administration, Adekunle Ajasin University, Akungba-Akoko, Ondo State.
[2]Department of Accounting, Faculty of Management and Social Sciences, Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria.
[3]Accounting Department, College of Management Sciences, Joseph Ayo Babalola University, Ikeji-Arakeji, Osun State, Nigeria.
[4]Accounting Department, Faculty of Administration, University of Abuja, FCT, Nigeria.

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ABSTRACT

The emergence of the Sustainable Development Goals (SDGs) by the United Nations is a response to the contemporary issues in business sustainability activities and the socio-economic relationship in the world. Agricultural companies in Nigeria are also affected by lack of sustainable frameworks on staff trainings. This study investigates the effect of sustainability accounting on financial performance of quoted agricultural companies in Nigeria. The study population consists of five agricultural companies, quoted on the Nigerian Exchange Group as at December 31st, 2023 Data were retrieved between 2012 and 2023 and analyzed using descriptive statistics and Dynamic Ordinary Least Square (DOLS) regression analysis. The findings affirms that staff sustainability training play a significant role in company's financial performance and should be managed properly. The study recommends that agricultural companies should regularly conduct sustainability training for staff. This study offers more insights for management of companies, investors, academia and community on sustainable accounting engagements.

Keywords: Sustainability training, sustainable development goals (SDGs), financial performance.

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1 INTRODUCTION

Sustainable accounting in organization is crucial to the growth of companies, it is considered a factor that influences effective financial performance of companies (Beatty, 2023). Globally, evolving characteristics of business nature have led to various environmental issues such as pollution, depletion of natural resources and health risk. In developed economies like Japan, Russia, United Kingdom, United States of America (USA), Canada and China, the issue of sustainability accounting has become important because company performance are directly responding to the level of sustainable accounting involvements (Kaoje, 2020). There has been a growing recognition worldwide of the connection between businesses and staff sustainability exposure. This awareness has been heightened due to concerns about depletion in resources, environmental damage, and the actions of companies that contribute to the depletion of the ozone layer, disrupting the environmental balance (Ernst & Young, 2022). Companies have introduced additional environmental risks to various economies, including Africa and in response to the global environmental challenges arising from business operations and other sources, the 2030 global sustainable development goals (SDGs) was established (Cheska et al., 2022).

In developing economies like Nigeria, issues with poor financial performance have been attributed to poor staff sustainability training (Kolawole, et al., 2023). This was also recorded in Ghana and South Africa (Damieibi, 2023). In the past few years, stakeholders have been advocating for sustainability training in Africa to ensure sustainable development. This is due to the expansion of businesses across borders, which has brought about various business risks.

Inadequate sustainable accounting training can distort the level of awareness and understanding of the true extent of environmental impacts on host communities by the staff (Huang, 2022). This hinders company's ability to make informed decisions and take necessary actions to protect the well-being and environment. It has also resulted in conflict of interest on environmental issues, exacerbating health risks, pollution, and other negative impacts on both staff and communities (Lusiana, 2021). Lack of more empirical research on the effect of sustainable accounting training have on financial performance of quoted agricultural companies in Nigeria has been identified as an area needing further exploration. It is recognized in the existing literature that sustainable accounting training has effect on financial performance in general. However, studies that looks at this relationship in the context of Nigerian agricultural sector are scanty. It is important to conduct additional research to evaluate how sustainable accounting affect the performance of the agricultural companies in Nigeria.

Previous research has explored the effect of sustainable accounting on company's financial performance, yielding varying results. Amosun and Akintoye (2021) and Benson et al. (2021), discovered a positive and significant correlation between sustainable accounting and financial performance. However, Oti et al. (2017) and Cheska et al. (2022) presented contradictory findings, indicating a negative and insignificant relationship between sustainable accounting and financial performance. The lack of consistency in the results of various studies suggests that the matter of sustainability accounting remains inconclusive. It has been noted that majority of studies in Nigeria have focused primarily on waste management, prevention, and remediation. As a result, the engagement of sustainability accounting training, which is an important measure for sustainable growth and development have not received adequate attention.

The main objective of this study is to evaluate the effect of sustainability accounting and financial performance of quoted agricultural companies in Nigeria The study specifically intends to examine the effect of staff sustainability training on financial performance of quoted agricultural companies in Nigeria. To achieve the objective of this study, the following null hypotheses was formulated:

H_{O1}: Staff sustainability training has no significant effect on financial performance of quoted agricultural companies in Nigeria.

2 LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Financial performance

Financial performance represents the prosperity of business owners. The management of companies has the responsibility of maximizing the wealth of shareholders optimally (Oyedokun, et al., 2019). Okafor et al. (2021) affirmed that performance measures can be used to support continuous improvement by focusing attention on the areas where managers want a certain level of performance. Accounting based measurement is generally considered as an effective indicator of the company's profitability. The increasing awareness of the benefits of environmental responsibility has prompt investment institutions to consider environmental responsibility as one of the factors for investments. The return on equity (ROE) is considered as a measure of company's performance.

According to Kaoje et al. (2020) return on equity is a measure of the profitability of a business in relation to its equity; where: Return on Equity = Net Income/Average Shareholders' Equity thus, it is equal to a fiscal year's net income, divided by total equity, expressed as a percentage. Return on Equity is a primary measure of company's performance as managers of business are to increase the wealth of the shareholders which are their contributed equities.

2.1.2 Sustainable Accounting and Financial Performance

The ultimate goal of sustainable accounting is to enable companies to achieve sustainable development and engage in efficient and effective conservation activities, while maintaining a positive relationship with the company's staff and community. This procedure helps organizations determine the expenses associated with participating in conservation efforts, quantify the benefits derived from such activities, and effectively communicate the evaluation results to stakeholders (Endiana, et al., 2020). It is a component of sustainability engagements that specifically analyzes the effect of corporate operations on going concern values.

Sustainability accounting practice is all encompassing and forms an integral part of sustainable development goals set to be achieved by members of the United Nations in 2030, which Nigeria is a member. The aim of implementing sustainable accounting is to increase the efficiency of direct involvements on sustainability matters by staff and, by assessing environmental activities from the perspective of costs (environmental costs) and benefits or effects (economic benefits), as well as producing environmental protection effects (Aifuwa, 2020). In short, the implementation of sustainable accounting provides information about the extent to which an organization or company makes a positive or negative contribution to the quality of human life and the environment (Lusiana et al., 2021). For the purpose of this study, sustainable accounting training is adopted as a proxy of Sustainable Accounting.

2.1.2.1 Staff Sustainability Training

This is also known as the sustainability Education which is an initiatives aimed at educating and training staff on the functioning of natural environments and the importance of sustainable living. These efforts involve a range of disciplines, including biology, chemistry, physics, ecology, earth science, atmospheric science, mathematics, and geography, and are integrated into business activities and accounting practices. It is believed that these seminars have a lasting impact on the mindset of staff and communities, promoting a sustainable approach to living. In a study conducted by Oladutire et al. (2023), the selection of accounting practices by a company can be linked to an attempt to reduce future costs of contracting, and that the distinct accounting practices employed by a reporting entity can have a notable effect on the comprehension of financial reports when studied through ratio analysis. This links staff sustainability training to the behavioral of accounting policies and neuroaccounting by companies.

According to UNESCO, Environmental Education (EE) plays a crucial role in instilling a deep respect for nature in various industries and societies, while also promoting environmental awareness

among employees and the general public. UNESCO highlights the significance of EE in ensuring the future well-being of global society and fostering sustainable development through initiatives like sustainability accounting, which not only protect the environment but also contribute to the success of businesses (Buckler & Carolee, 2023). Imoobe & Iroro (2019) further explain that the term "staff sustainability training Seminar" typically refers to education provided in structured settings such as organizations and academic institutions.

2.2. Theoretical Review

2.2.1 Sustainability Theory

According to Oti and Mbu-Ogar (2017) sustainability is currently a critical perspective in managing companies through a holistic system by examining economic, environmental and social dimensions of companies. With the rising proposition of sustainable development, the theories of sustainability in entities have evolved during the past six decades. An examination of the changing theories connecting sustainability and companies reveals that the primary theories connecting sustainability and businesses, in order is the corporate sustainability. The comprehensive examination calls attention of sustainability accounting of agricultural companies to consider the future generations while directing and controlling companies in lawful manner (Effendi, 2021). This consideration covers social, economic and environmental issues therefore regular trainings can assist companies. The success of a company as measured by its performance can be enhanced by engaging in sustainable accounting. The ability of a company to manage its company-stakeholders' relationship will ensure its survival and performance on the long run (Beatty, 2023).

2.3 Empirical Review

In an attempt to examine the impact of sustainability accounting on the financial performance of companies in Nigeria, a study was conducted by Amosun and Akintoye (2021). Based on the data extracted from the annual reports of two natural resources companies listed on the Nigerian exchange group for five years (2015- 2019) and analyzed using ordinary least square (OLS) regression, the study found that environmental accounting (environmental conservation cost) has a significant effect on the financial performance of natural resources companies. The authors concluded that proper reporting of sustainability accounting could affect the financial performance of companies. The Dynamic Ordinary Least Square (DOLS) should have be employed because OLS will not solve the problem of data outliers internally but the DOLS. This current study will improve on Amosun and Aintoye (2023) study by employing the Dynamic Ordinary Least Square for the data analysis.

According to Benson *et al.* (2021), the study examined the effect of sustainability accounting on the financial performance of oil and gas companies from 2010-2020. A quantitative technique was adopted, and Ex post facto research design was employed for the study. Data were obtained from annual reports and accounts of the companies for the periods 2010 to 2020. The results showed that environmental cost accounting has a significant effect on the financial performance of oil and gas companies. Also, the study found that sustainability management accounting has significant effect on the financial performance of oil and gas firms. Since Benson et al. (2021) was not considering a pre-post view, the retrieved data were expected to have commenced prior to 2010 because in the western countries. This current study will improve on (2021) study by capturing data from 2012, which serve as the starting point for IFRSs adoption in Nigeria.

Sumiati *et al.* (2021) gathered empirical evidence about the effect of sustainability accounting and environmental performance on profitability, either separately or concurrently. The population in this study consisted of 107 companies listed on the Indonesia Stock Exchange in the mining sector and the consumption goods industry sector. Purposive sampling with criteria set to produce 77 observational data was used to sample as much as possible. Based on the findings of the research, it

was concluded that, while the use of sustainability accounting is voluntary, its impact on profitability is greater than that of environmental performance. From the review, it was discovered that Sumiati et al. (2021) failed to cover a specific year range for the study.

The study of Effendi (2021) examined the effect of implementing environmental management accounting in increasing firm value in Tangerang Raya. This research used a population of 2,579 manufacturing industrial companies in Banten province. The samples were selected using predetermined criteria with quantitative methods. Based on the multiple linear regression testing that had been carried out, the following results were obtained: there is a significant positive effect between the material input aspect and the environmental complaint mechanism aspect on firm value. Furthermore, the results of non-output aspects of products and aspects of compliance have a significant negative effect on firm value. Simultaneously, the effect of the application of environmental management accounting proxied through material input, environmental complaint mechanism, non-product output, compliance, transportation, supplier assessment and others have a significant effect on firm value. A single regression analysis should have been considered, by doing this, the direct influence of environmental management accounting on firm value will be more appreciated.

A more detailed study on the relationship between the environmental and financial performance of corporates that have adopted the system of environmental accounting in Taiwan was carried out by Huang and Fu (2022). Annual reports of 32 companies listed on the Taiwan stock exchange provided data for the study, which were analyzed ANOVA. The study results showed a positive relationship between environmental accounting and the financial performance of the companies. The study of Huang and Fu (2022) was expected to have considered a regression analysis using the Dynamic Ordinary Least Square (DOLS), and not just the analysis of variance (ANOVA). ANOVA is to be used when comparing two different periods and not for a continuous data. By using a regression analysis, the result Huang and Fu (2022) submitted will be different. This current study will improve on Huang and Fu (2022) study by employing the use of a regression analysis.

Osemene et al. (2021) conducted a comparative analysis of corporate governance systems and environmental accounting reporting in chosen African listed companies, using an ex-post facto research design. The study was conducted on listed companies in six sectors located in four African countries (Nigeria, Egypt, South Africa and Kenya). A content analysis was conducted to obtain environmental disclosure and reporting scores and a static panel regression model was employed to assess the obtained data. This study revealed that the size of the board had a meaningful impact on environmental accounting reporting (EAR) in South Africa and Nigeria; board independence had a notable effect on EAR in Egypt; and board committees had a notable effect on EAR in African countries. These results suggest that existing regulations and codes regarding corporate governance should be adhered to and, most significantly, other economies should emulate South Africa by embracing integrated reporting and incorporating the GRI index score into their corporate reporting.

Emmanuel (2021) x-rayed sustainability accounting disclosure and its effect on financial performance of listed manufacturing firms in Nigeria. Particularly, the study examined the effect of sustainability accounting disclosure on ROA, ROE and share price of manufacturing firms in Nigeria. The ex- post facto research design was employed. Data from the annual reports of forty out of the sixty- six manufacturing companies listed in the Nigerian Stock Exchange as of 31st December 2019 for the period spanning 2010 – 2019 were used. The descriptive statistics and the panel regression methods were employed for the data analysis. The Arellano and Bond (1991) GMM estimator which controls for potential endogeneity problem was employed to ensure robustness of the parameter. The study findings revealed that sustainability accounting disclosure had a positive significant effect each on ROA and ROE. However, a negative effect subsists between sustainability accounting disclosure and share price of manufacturing firms in Nigeria. It was discovered that 2012 was not the starting

point for data collation, and this implied that the pre-effect of IFRS was considered, which faulted the study scope. The study did not conduct a research for triangulation.

Akpan and Simeon (2021) examined the effect of sustainability disclosures on cash flow return on investment of shareholders of oil and gas companies in Nigeria. Secondary source of data was used and the research design adopted was ex post facto. The study adopted time series and cross sectional analysis of selected oil and gas firms quoted on the Nigeria Stock Exchange as at 31st December 2020 for a period of seven years spanning 2014-2020. Content analysis methodologies were employed to get data for the sustainability parameters. The results from the study reveal that social sustainability disclosure have a positive significant effect on cash flow return on investment of listed oil and gas firms in Nigeria; health and safety as well as environmental disclosure have insignificant effect on cash flow return on investment of the studied companies. A longitudinal research design should have been considered and not an ex post facto as the data cut across various years.

In a study carried out by Okeke *et al.* (2021) to analyze the effect of carbon emission disclosure on economic value added of oil and gas firm in Nigeria stock exchange between the periods 0f 2018-2019, Panel Least Squared (PLS) method of data analysis was used. Secondary sources of data were employed; the interested variables were sourced from the annual report of the quoted oil and gas firms. The following variables were employed: Economic value added, effluent and waste treatment cost disclosure, Revenue growth of firm and Firm size. The study employs Causality Test, Hausman Test, fixed effect as well as random effect to analyses the included variables. From the analysis result the study found that effluent and waste treatment cost disclosure, has significant effect on economic value added, revenue growth of firm has positive significant effect on economic value added. Firm size has positive insignificant negative effect on economic value added.

Jang et al. (2020) looked into how sustainability reporting affected the financial success of South Korean businesses in 2020. The research performed the ordinary least square regression analysis on a sample size of 214 companies. The findings showed a strong as well as a substantial relationship between sustainability reporting and business performance, notably (ROA), (ROE), and (EPS). For a study that employed the panel data approach, the granger causality test should have been conducted. This study fails to capture such.

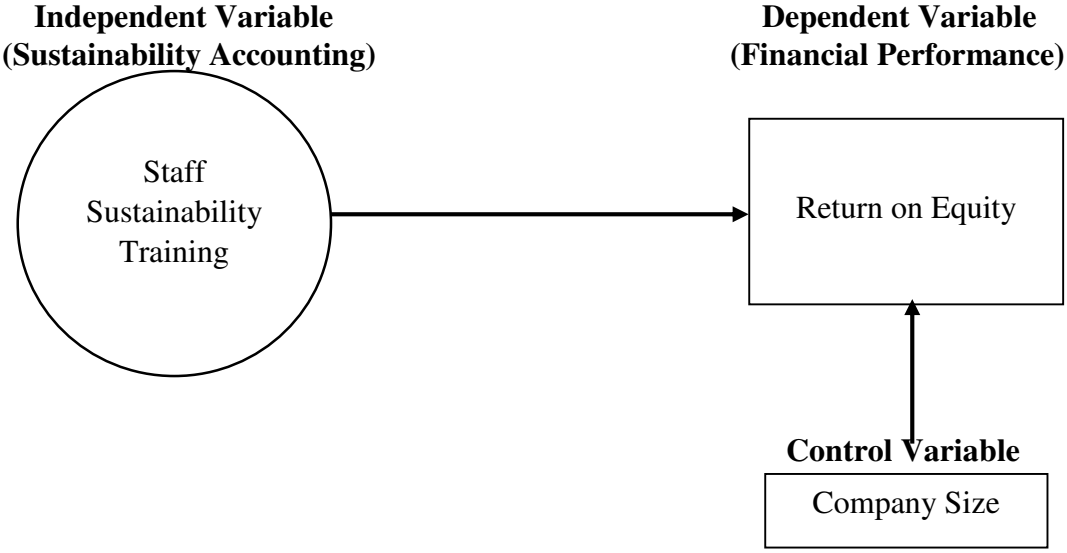
2.4 Gap in Literature

There are identified gaps in the conceptualization of sustainability accounting in previous studies. Existing studies like Akpan and Simeon (2021), Cheska, et al. (2022) and Akpan and Nkanta (2023), and have only focused on environmental accounting practices such as: biodiversity disclosure, carbon emission disclosure, waste management, water and effluents, compliance to environmental laws and regulations, environmental complain mechanism, supplier's assessment, environmental degradation and many others but have ignored staff sustainability training. This study considers staff sustainability training important and hereby include it in the study's variable. Also, past studies have only considered financial performance proxies such as return on assets, return on investment, earnings per share, and shareholder's value added. Not much studies have focused on return on equity. It was also observed that have only focused on the consumer goods, multinational corporations, manufacturing companies, oil and gas, petrochemical and natural resources industry. It seems as if concentration has not yet been on the agricultural industry. Likewise, there is an observed gap in the methodology of previous studies in the data scope. Previous studies have only considered 2010-2021 as submitted by Effendi (2021), Okeke, et al. (2021) and Benson, et al. (2021). It was expected that some of these recent studies captured 2022 data as they were readily available.

2.5. Conceptual Framework

The conceptual framework was illustrated to explore the relationship between sustainability accounting and financial performance.

Figure 2.1. A Conceptual Model Demonstrating the Relationship between Sustainability Accounting and financial Performance.



Source: Author's Design (2024)

3 METHODOLOGY

The study adopted an ex post facto research design considering the research objectives. The population of this study consists of five (5) quoted agricultural companies on the Nigerian exchange Group as at 31st December 2023. The sample size of this study comprises of all the quoted companies. Data were obtained from secondary source via the annual reports and sustainability reports of the selected companies within the time frame of 2012-2023. The data were obtained from the official websites of the targeted companies as well as the fact book of the Nigerian Exchange Group (NGX). This research was based on the models outlined in Adegbie et al. (2021) study which focused on sustainability accounting practices and firm value of quoted manufacturing companies in Nigeria. The models used in the study were adapted for this purpose of this study. The model is stated thus:

$$EPS_{i,t} = \alpha + \beta_1 STA_{i,t} + \beta_2 CSZ_{i,t} + \mu_{i,t} \quad \ldots\ldots a$$

Where: EPS = Earnings per Share
SA = Sustainability Accounting
CZ = Company Size

In the extension of the basic model, the model was modified to suit this study thus we have:

$FPE = f(STA)$ ……b

$FPE = f(SST)$ ……..…… …..……..c

$REQ_{i,t} = \alpha_o + \beta_1 SST_{i,t} + \beta_2 CSZ_{i,t} + e_{i,t}$ ……d

Where: FPE = Financial Performance
REQ = Return on Equity
SST = Staff Sustainability Training
CSZ = Company Size (Control Variable)

α = Constant; i = i^{th} company; t = Time Period; β_1, = Regression of the Independent Variable; β_2 = Regression of the Control Variable; e = Epsilon.

The apriori expectation of this study are stated as follow: $\beta_1 > 0$, (the implication means that staff sustainability training is expected to have a positive impact on financial performance).

The data generated from the parameters of the study was analyzed using both descriptive and inferential statistics. Descriptive statistics such as mean, median, mode, and standard deviation were employed. Inferential statistics was based on regression analysis which factored in the random or fixed effect features of the variables. The reliability of the variables was assessed using the pairwise correlation, panel unit root and variance inflation factors. Also, post estimation diagnostic test was conducted using the serial correlation, residual normality test and the heteroskedasticity test. In additional Hausman and individual effect test were conducted in order to evaluate the suitability of the model. The analysis of data in this research was carried out with the regression technique.

3.1 Measurement of Variables

Table 3.1 Measurement of Variables

S/N	VARIABLES	DESCRIPTION	MEASUREMENT	SOURCES
1.	**Dependent Variable** (Financial Performance)			
	Return on Equity	This is a measure of the profitability of a business in relation to its equity.	Income/Average Shareholders' Equity.	Kaoje et al. (2020).
2.	**Independent Variable**			
	Sustainability Accounting Training	This is the teaching, training and retraining of staff on how natural environments function, and particularly, how human beings can manage behavior and ecosystems to live sustainably.	The total amount spent on staff sustainability training The total assets in the financial statement for each year under study.	Beatty (2023); Buckler & Carolee (2023) and Imoobe & Iroro (2019).
3.	**Control Variable**			
	Company Size	The total assets of the individual company under study.	The total assets in the financial statement for each year under study.	Nkanta (2023).

Source: Author's Compilation, 2024

4 DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Descriptive Statistics

Table 4.1 provides the summary statistics for the variables under study. It is clear that the statistics show the characteristics common with most time series.

Return on equity (REQ) average is 1.226 million with standard deviation of 1.034. The standard deviation value shows that there is low variability in the return on equity across the sampled quoted

agricultural companies. The quoted agricultural companies with the least return on equity is 0.206 while the maximum return on equity recorded in the industry is 3.241. The total sum of return on equity for the sampled agricultural companies is 13.49. Data for the study positively skewed and normally peaked having skewedness value of 0.515 and kurtosis of 1.896. Further test for data normality through Jarque-Bera test shows statistics of 5.221, and probability value of 0.000. This imply that data for return on equity is not normally distributed.

In addition, staff sustainability training (SST) average is 3.181 million with standard deviation of 1.336. The standard deviation value shows that there is low variability in the staff sustainability training across the sampled quoted agricultural companies, with the least value of 0.000 while the maximum recorded in the industry is 5.000. The total sum of the sampled agricultural companies is 35.00. Data for the study is negatively skewed and normally peaked having skewedness value of -0.71 and kurtosis of 3.268. Further test for data normality through Jarque-Bera test shows statistics of 4.903 and probability value of 0.014. This imply that data for staff sustainability training is not normally distributed.

Lastly on table 4.1, company size (CSZ) average is 5.000 million with standard deviation of 0.000. The standard deviation value shows that there is extremely low variability in the company's size across the sampled quoted agricultural companies. The quoted agricultural companies with the least company size is 5.000 while the maximum recorded in the industry is 5.000. The total sum of company size for the sampled agricultural companies is 55.00. Data for the study is positively skewed and normally peaked having skewedness value of 0.000 and kurtosis of 0.000 Further test for data normality through Jarque-Bera test shows statistics of 20.62 and probability value of 0.000. This imply that data for company size is not normally distributed.

Table 4.1: Descriptive Statistics

Variables	REQ	SST	CSZ
Observations	55	55	55
Mean	1.226	3.181	5.000
Std. Deviation	1.034	1.336	.0004
Minimum	.2061	.0002	5.000
Maximum	3.241	5.000	5.000
Sum	13.49	35.00	55.00
Skewness	.5152	- .713	.0009
Kurtosis	1.896	3.628	.0003
Jarque-Berra	5.221	4.903	20.62
Probability	0.000	0.014	0.000

Source: Eviews 13 Result, 2024.

4.2 Test of Variables

4.2.1 Pairwise Correlation Matrix

The pairwise correlation coefficient was used to test the linear relationship between staff sustainability training and company size. It is demonstrated that there is a positive correlation between staff sustainability training and financial performance. The coefficient value is 0.1302 while its probability value is 0.000 making the correlation significant. From the same table, it is revealed that company size has coefficient value of -0.3493 and probability value of 0.0000 and this imply that there is inverse and significant correlation between company size and financial performance. The explanatory variable is positive except the relationship with company size as the control variable which is observed to be negative. The overall implication of this relationship is that the function of staff sustainability

training on financial performance of quoted agricultural companies in Nigeria is direct as it seems the financial performance reacts based on the activities of the staff sustainability training.

Table 4.2: Correlation Analysis of the Variables

Variables	Pairwise Correlation	REQ	SST	CSZ
REQ	Coefficient	1.0000		
	Sig.	-		
SST	Coefficient	0.1302*	1.0000	
	Sig.	0.0021	-	
CSZ	Coefficient	-0.3493*	-0.0745*	1.0000
	Sig.	0.0000	0.0311	-

Source: Eviews 13 Result, 2024

4.2.2 Panel Unit Root Test of the Variables

Augmented Dickey-Fuller (ADF) and Phillips- Perron (PP) test for unit root were used to determine the order of integration. Schwarz Information Criterion (SIC) and Akaike Information Criterion (AIC) are used for determination of appropriate lag order selection for each test. The results of unit root tests indicate all the variables are integrated of order I(I). The stationarity tests were performed first in levels and then in first difference to establish the presence of unit roots and the order of integration in all the variables. The results of the ADF and PP stationarity tests for each variable show that both tests fail to reject the presence of unit root for the variables under study.

Table 4.3: Unit Root Test

Variables	In-Level I(0)		First Difference I(I)		Order of Integration	
	Augmented Dickey Fuller	Phillips-Perron	Augmented Dickey Fuller	Phillips-Perron	Augmented Dickey Fuller	Phillips-Perron
REQ	-2.4544	-2.0154	-1.6543*	-1.6299*	I(I)	I(I)
SST	-2.1955	-2.1569	-1.0907*	-1.9782*	I(I)	I(I)
CSZ	-1.5351	-1.2954	-3.0143*	-7.7430*	I(I)	I(I)

Source: Eviews 13, 2024

4.2.4 Multicollinearity Test

Post estimation tests are conducted to verify the validity of the assumptions of the regression model, such as the presence of multicollinearity. This occurs when two or more explanatory variables are highly correlated, making it possible to predict one variable from the other with some degree of accuracy. The Variance Inflation Factor (VIF) is used to assess the independence of the explanatory variables. According to the evidence in Table 4.4, it appears that there is no multicollinearity issue. The VIF values for all the variables are less than 10 and the tolerance values for all the variables are greater than 0.10. These values meet the criteria to use the regression coefficient to confidently predict the impact of independent variables on dependent variables, so the results of the study can be considered valid.

Table 4.4. Tolerance and VIF Value

Variable	VIF	1/VIF
Sustainability Accounting		
SST	1.00	0.919264
Mean VIF	1.01	

Source: Authors' Computation (2024)

4.2.5 Post-Estimation Test

Error test for model specification is conducted using Ramsey RESET test. It evaluates the suitability of the functional model specified for the regression. The study assess if a non-linear version of the connection between the dependent variable and the independent factors would be more suitable. The results shows probability of 0.2615 and this indicate that the model has no omitted variable bias and misspecification. The heteroscedasticity test was conducted to check the validity of homoscedasticity assumption that variance in the residuals are constant as the absence of homoscedasticity violate the assumption and may lead to wrong inference. Heteroscedasticity test was conducted using Breusch-Pagan/Cook-Weisberg test and the result revealed an absence of heteroscedasticity given the probability value of 0.5614 which is higher than 0.05. Likewise, variables for the study is also tested for auto-correlation using Wooldridge test for autocorrelation in panel data. Autocorrelation depicts how closely variable value is correlated across time. The result as presented in table 4 shows the probability of 0.0000 which is significant indicating that there is problem of auto-correlation hence the null hypothesis that there is no first-order correlation is rejected.

Furthermore, the cross-sectional dependence test is carried out and the result is presented in Table 4.5 The result indicate that null hypothesis which implied there is no cross-sectional dependence is strongly rejected as the statistics shows 10.341 with probability value indicated 0.0000. Hence, there is sufficient evidence to conclude that staff sustainability training disclosure under random effect condition exhibits cross-sectional dependence. However, all the observed estimation problems are to be corrected using the Dynamic Ordinary Least Square (DOLS) with the option that the standard error is independent- corrected. The Hausman test was also conducted to specify the appropriate model between fixed-effect model and random effect model and the result favour the fixed effect model as the probability shows 0.0000 implying that difference in coefficient is not systematic.

Table 4.5: Summary of Post Estimation Test Results

Ramsey Reset Test		
Null Hypothesis	F-Statistics	Probability
H_0: Model has no omitted variables (P>0.05)	1.25	0.2615
Tolerance and VIF Value		
Null Hypothesis	VIF	Mean VIF
There is no multicollinearity among the variables (1/VIF>0.10)	-	1.22
Breusch-Pagan / Cook-Weisberg Test for Heteroscedasticity		
Null Hypothesis	Chi^2 Statistics	Probability
Constant variance across the variables residuals (P>0.05)	0.19	0.5614
Wooldridge Test for Autocorrelation		
Null Hypothesis	F-Statistics	Probability
No first-order autocorrelation (P>0.0)	275.253	0.0000
Pesaran's Test of Cross Sectional Independence		
Null Hypothesis	F-Statistics	0.0000
There is no cross-sectional dependence (P>0.05)	10.341	0.0000
Hausman Test		
Null Hypothesis	F-Statistics	Probability
Difference in coefficients not systematic (P>0.05)	28.34	0.0000

Source: Eviews 13 Result, 2024.

4.3 Data Analysis

4.3.1 Sustainability Accounting and Financial Performance

As revealed in Table 4.6, the Coefficient of staff sustainability training (SST) confirmed the study apriori expectation, as it signed a positive coefficient of 0.0631. This implies a 6.3% increase in return on equity for 1 unit change in staff sustainability training. The p-value is 0.0033 making staff sustainability training statistically significant in explaining the variation change in return on equity of the quoted agricultural companies in Nigeria.

The coefficient of determination as revealed by R-square (R^2) indicates that 71.4% of the volatility observed in the model were explained by the influence and variations in the explanatory variable (staff sustainability training) while the remaining 28.6% is attributed to other factors not included in the model. The Prob (F-statistic) which test the goodness of fit suggest that the model employed in the study is statistically significant given the value of 0.0023 which denotes at 5 percent level of significance, the equation in use is statistically valid. This implies the equation is useful in explaining a unit change in company's performance of quoted agricultural companies in Nigeria. The Durbin-Watson (DW) statistics is equal to 1.9, thus implying the absence of serial auto-correlation. This is because when the DW value is above 2.5, it is an evidence of serial auto correlation.

The findings of the study corroborate the results of similar study in Effendi (2021) which examined the effect of implementing sustainability accounting on company's performance and the findings suggest that sustainability management positively affects firm performance in India. However, this study disagrees with the study of Cheska et al. (2022) who found that sustainability accounting has a negative relationship and insignificant effect on financial performance.

Table 4.6. Regression Analysis

Method: Dynamic Ordinary Least Square
Dependent Variable: REQ
Control Variable: CSZ
Date: 17/07/24 Time: 01:27
Sample: 1 60 (2012 2023)
Included Observations: 60

	Coefficient	Indep-corrected Std. Error	t-Statistic	Prob.
Const.	2.6466	1.3023	1.0517	0.0003
SST	0.0631	1.9603	1.4633	0.0033

R-Squared	0.7143	Mean dependent var.	1.4350
Adjusted R-squared	0.6255	S.D. dependent var.	1.0494
S.E. of regression	0.4301	Akaike info criterion	5.4031
Sum squared resid.	5.0459	Schwarz criterion	5.3024
Log likelihood	10.433	Hannan-Quinn criter.	5.7829
F-statistic	0.0001	Durbin-Watson stat.	1.9540
Prob(F-statistic)	0.0023		

Source: Eviews 13, 2024

4.4 Policy Implication of Findings

The implication of this findings is expected to motivate not only the agricultural companies in Nigeria but all other companies that are involved in business that can negatively affect the community if not controlled. The management of the Nigerian companies should also make staff sustainability training mandatory by prescribing high level of staff sustainability training both in the public and private

limited company. Also a lack of detailed disclosure of staff sustainability training might cause the company's performance to decrease. This move will attract more investors and will in turn, help companies seeking high company performance. According to Ernst & Young (2022) investors are increasingly considering companies that are environmental compliant as part of their transparency level and how they direct sustain environmental practices which is demonstrated and report on their disclosure strategy.

5 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study explored the effect of sustainability accounting on financial performance of quoted agricultural companies in Nigeria. Specifically, the study evaluated the impact of staff sustainability training on financial performance of quoted agricultural companies in Nigeria. The study reviewed existing literature from both developed and developing countries, as well as studies from Nigeria. Additionally, the theoretical literature reviewed is the sustainability theory. The methodology employed was the Dynamic ordinary least squares regression was used to analyze the effect of sustainability accounting on financial performance of quoted agricultural companies in Nigeria. The regression analysis showed that staff sustainability training has a positive and significant effect on financial performance of quoted agricultural companies in Nigeria.

The coefficient of determination as revealed by R-square (R^2) indicates that 71.4% of the volatility observed in the model were explained by influence and variations in the explanatory variable (staff sustainability training) while the remaining 28.6% is attributed to other factors not included in the model. The Prob.(F-statistic) which test the goodness of fit suggest that the model employed in the study is statistically significant given the value of 0.0023 which denotes at 5 percent level of significance, the equation in use is statistically valid. This implies the equation is useful in explaining a unit change in company performance of quoted agricultural companies in Nigeria. The Durbin-Watson (DW) statistics is equal to 1.9, thus implying the absence of serial auto-correlation. This is because when the DW value is above 2.5, it is an evidence of serial auto correlation.

5.2 Conclusion

The study is motivated from the fact that there are mixed results on the effect of sustainability accounting on financial position of quoted agricultural companies in Nigeria. The study concludes that staff sustainability training has a positive and significant effect on financial performance of quoted agricultural companies in Nigeria. From the findings, this study rejects hypothesis 1. This study contributes to knowledge by providing evidence of the effect of sustainability accounting on financial performance of quoted agricultural companies in Nigeria.

5.3 Recommendations

Based on the above conclusion, the following recommendation was made:

i. It is recommended that just as companies are striving to create sustained wealth, they should also increase their focus on staff sustainability training staff. This will help the companies to plan for the business going concern value in ever changing business world.

5.4. Contribution to knowledge

The knowledge contributions made by this study can be summarized as follows:

The study focuses on the specific context of Nigerian agricultural companies, contributing to knowledge by examining how sustainability accounting influence financial performance within an emerging market environment. This context-specific analysis provides insights that may not be readily applicable to other regions.

The study's findings are specific to Nigerian agricultural companies, providing stakeholders in the region with contextually relevant information for decision-making and policy development.

5.5 Suggestions for Further Studies

From the findings, the following are suggestions submitted for further studies:

i. The outcome of this study suggests that there is an urgent need for research by managements on the necessary training for the integration on how to manage environmental risks and the appropriate staff sustainability training method to be considered.

ii. More studies should be considered to capture other factors of sustainability accounting components influencing financial performance.

6 REFERENCES

[1] Adegbie, F. F. & Nwobodo, H. (2020). Environmental accounting and reporting practices: significance and issues in Nigeria listed deposit money banks in Nigeria. *European Journal of Accounting, Auditing and Finance Research, 8*(10), 1-12.

[2] Aifuwa, H. O. (2020). Sustainability reporting and firm performance in developing climes: A review of literature. *Copernican Journal of Finance & Accounting, 9*(1), 9-29.

[3] Akpan, D. C. & Nkanta, U. O. (2023). Green Accounting Practices and Shareholders' Value of Listed Consumer Goods Companies in Nigeria. *European Centre for Research Training and Development, 11(*6), 1-23.

[4] Amosun, O. O., & Akintoye, O. A. (2021). Social and Environmental Accounting and Performance of Banking Companies Quoted in Nigeria. *International Journal of Educational Research & Social Sciences*, *2*(6), 1526-1534.

[5] Beatty, A. (2023). Climate Change Education in Formal Settings, K-14. Climate Change Education in Formal Settings, K-14. *National Academies Press*, *6*(1), 1-11.

[6] Benson A. G, Asuquo T., Inyang M., and Adesola W., (2021) Effect Of Green Accounting On Financial Performance Of Oil And Gas Companies In Nigeria. *Journal of University of Shanghai for Science and Technology, 44(*1), 23-39.

[7] Buckler, A., Carolee, O. & Creech, H. (2023). Shaping the future we want: UN Decade of Education for Sustainable Development; final report. Shaping the future we want. *UN Decade of Education for Sustainable Development; final report. UNESCO*, *6*(1), 23-37.

[8] Budiono, S., & Dura, J. (2021). The Effect of Green Accounting Implementation on Profitability in Companies Compass Index 100. *International Journal of Educational Research & Social Sciences*, *2*(6), 1526-1534.

[9] Cheska, D. P., Ronniell, M., & James, S. E. (2022). Impact of Environment Accounting Disclosures on Profitability and Firm Value of Petrochemical Industry in the Philippines. In *Proceedings of International Interdisciplinary Conference on Sustainable Development Goals (IICSDGs)*, *5*(1), 126-135.

[10] Damieibi, E. (2012). Effect of environmental accounting on company financial performance in Kisii County. *British Journal of Economics, Management & Trade, 10*(1), *1-11,*

[11] Effendi, B. (2021). The effect of environmental management accounting on firm value. *International Journal of Social Science*, *1*(4), 309-314.

[12] Emmanuel, U. (2021). Environmental accounting disclosure and financial performance of manufacturing firms in Nigeria. *Journal of Economics and International Business Management*, *9*(2), 71-81.

[13] Endiana, I., NiLuh, G. D., Mahayu, D., Santana Putra, M. D. &. Putra, J. S. (2020). The effect of green accounting on corporate sustainability and financial performance. *The Journal of Asian Finance, Economics and Busines,* 7(12), 731-738.

[14] Ernst & Young (2022). Businesses should act now to measure and mitigate their impact on biodiversity. *Journal of Environmental Studies. 9*(2), 56-63.
[15] Huang, W, Fu Y. (2019). The study on the relationship between the environmental and financial performances of corporates which have adopting the system of environmental accounting in Taiwan. *E3S Web of Conferences,* 81-101.
[16] Imoobe, O. T, & Iroro, T. (2019). Ecological Restoration of oil spill sites in the Niger Delta Nigeria. *Journal of Sustainable Development in Africa, 11*(2), 1-13.
[17] Jang, J. (2020). Sustainability reporting and financial success of South Korean companies. *Journal of Business, 6*(1), 23-27.
[18] Kaoje, A. N., Idris, S., & Danrimi, M. L., et al. (2020). Ç evre Koruma Maliyetinin Nijerya'daki Petrol Pazarlama Şirketlerinin Özkaynak Getirisine Etkisi? *Asya Ekonomi, İşletme ve Muhasebe Dergisi*, *19*, 48-57.
[19] Kolawole, J, S., Igbekoyi, O. E., Ogungbade, O. 1. & Dagunduro, M. E. (2023). Environmental Accounting Practice and Financial Performance of Listed Aviation Firms in Nigeria, *23*(13), 70-80.
[20] Lusiana, M., Haat, M. H. C., Saputra, J., Yusliza, M. Y., Muhammad, Z., & Bon, A. T. (2021). A review of green accounting, corporate social responsibility disclosure, financial performance and firm value literature. In *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 7(2), 5622-5640.
[21] Okafor, T.G. (2018). Environmental costs accounting and reporting on firm financial performance: A survey of quoted Nigerian oil companies, *International Journal of Finance and Accounting*, *7*(1), 1-6.
[22] Okeke, A., Akinlo, O. O. & Iredele, O. O. (2021). Corporate environmental disclosures and market value of quoted companies in Nigeria. *The Business & Management Review*, *5*(3), 14-24.
[23] Oladutire, O. E., Shittu, M. S. O. & Olonite, O. A. (2023). Behavioural of Accounting Policies: The International, Neuroaccounting and Generally Accepted Accounting Principles (GAAPs) Perspectives. *International Journal of Advance Research in Multidisciplinary, 1*(2), 114-120.
[24] Osemene, A. (2021). Comparative analysis of corporate governance systems and environmental accounting reporting in chosen African listed companies. *International Journal of Research, 4*(3), 56-61.
[25] Oti, P. A., & Mbu-Ogar, G. B. (2017). Analysis of environmental performance of selected quoted oil and gas companies in Nigeria. *Journal of Accounting and Financial Management 4*(2), 1-12.
[26] Oyedokun, G. E., Egberioyinemi, E. & Tonademukaila, A. (2019). Environmental accounting disclosure and firm value of industrial goods companies in Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF), 10*(1), 7-27.
[27] Sumiati, A., Susanti, S., Maulana, A., Indiawati, L., Puspitasari, D. & Indriani, R. (2021). Influence of green accounting and environmental performance on profitability. *Advances in Economics, Business and Management Research, 20*(5), 145-151.

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