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## Sustainability Practices and Financial Performance of Non-Financial Quoted Firms in Nigeria

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**Abstract:** The study examined the impact of sustainability practices on the financial performance of non-financial quoted firms in Nigeria. The research design adopted for the study is ex-post facto covering a ten-year period from 2011 to 2020 and the focused population is all the 64 companies across five sectors of the Nigerian Stock Exchange namely oil & gas, consumer goods, industrial goods, healthcare, and ICT sectors. The study adopted stratified sampling techniques to select 56 firms while secondary data sourced from annual reports, sustainability reports, codes of business conduct and ethics, and other stand-alone reports of the selected firm were used for the study, a multiple regression analysis technique was utilized for the models which were tested at 5% level of significant with the aid of Stata 14.1 software of the statistical package for the analysis of the data. The study as revealed by the Fixed Effects Model (FEM) analysis showed no statistically significant association between sustainability practices and ROA which has Environment index coefficient as 0.011 and p-value of 0.973, Social index coefficient as 7.077 and p-value of 0.358, and Ethical index coefficient as 11.867 and p-value of 0.874. Similarly, the Pooled Ordinary Least Squares (POLS) regression analysis found no significant relationships between sustainability practices and ROE whit the coefficient for the three-sustainability metrics are 0.218, 70.615 and 36.824, while their p-value are 0.863, 0.247 and 0.397

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respectively. Again, the POLS regression analysis revealed no significant associations between sustainability practices and NPM as the coefficient for the three proxy of sustainability practices stands as 0.351, 7.877 and -19.656 while their p-value are 0.893, 0.95, and 0.439. The overall results based on the models and data used in the study suggest that sustainability practices do not have a significant influence on the financial performance metrics (ROA, ROE, and NPM) of non-financial firms in Nigeria. The study concluded that there is a weak correlation between sustainability practices and financial performance of non-financial quoted firms in Nigeria and their statistical relationship is not significant. It is recommended that companies in Nigeria adopt sustainable practices as a business strategy rather than as a compliance requirement in order to match up with global trends.

**Keywords:** Financial performance; environmental index; social index; ethical index; sustainability practices

## 1. Introduction

Traditionally the main cardinal reason for business organizations is to maximize shareholders' wealth (Ironkwe & Emefe, 2019; Nnamani, Onyekwelu & Ugwu, 2017). This is a classical approach to the performance concept, given by maximizing the economic benefits for shareholders as the ultimate obligation of a company (Bebchuk, 2017; Jensen, 2001). This approach, solely opined that the economic and financial outcomes are the most crucial aim for a company's survival.

However, the neoclassical authors have a distinct perspective on the performance of a company compared to the classical concept. They believe that the classical approach, which focuses solely on maximizing profit, is not suitable in today's era of globalization and network economies. According to them, running a company solely to fulfill the shareholders' requirements is not a viable long-term strategy.

The collapse of many corporate organizations across the globe despite the existence of strong financial performance has cast aspersion on the concept of maximization of shareholders' wealth as a beam for the continued existence of a company. The effect of the collapse of business organizations such as Arthur Anderson, Enron Corporation, Marconi, HIH Insurance World, Morgan Stanley, and the bankruptcy of Lehman Brothers etc. on the economies the nations around the globe, has forced the government and the corporate world in search of other areas that could strengthen the going concern of business. In a bid to prevent the successive occurrence of these failures, several governments of countries of both advanced, emerging, and developing economies have devised laws, rules, and regulations, procedures to strengthen the operations of corporate organizations.

In the same vein, the United States (US) also enacted the Sarbanes-Oxley Act of 2002. This legislation was implemented to introduce extensive auditing and financial rules specifically for public companies. Its purpose is to safeguard investors, employees, and the broader society should be protected from accounting errors and dishonest financial practices. As a result of this law, auditors, accountants, and corporate executives are held responsible for adhering to a new set of regulations,

while listed companies are subject to strict trading guidelines imposed by the Securities and Exchange Commission of the United States (Lutkevich, 2020; Kyere & Ausloos, 2021).

The continuous stay in operation of business organizations in the developing economies of Africa is also susceptible. Many business organizations, prominently financial institutions have collapsed, which in turn has dissuaded investors (local and foreign) from putting their funds into businesses in Africa. Companies like Cadbury Plc., Kriem, Regal Bank, and other financial institutions have their own share of the risk. These made various governments, regulatory agencies, and professional bodies come up with strict regulations, and procedures to safeguard the shareholders' assets in Africa. The measures were meant to check the excesses of corporate managers, improve financial performance, and protect the interest of all stakeholders (Baba, 2022; Ayandele & Isichei, 2013).

In Nigeria, the going concerns of corporate entities most especially the financial institutions were truncated while a host of others were on the brink of collapsing. History had it in Nigeria a few decades ago; the death of banks like; National Bank, Savanna Bank, Allied Bank, and Société Générale Bank and so many cottage companies arising from poor financial management and performance. Recently in the last decade, corporate entities like Cadbury Nigeria plc., NAMPAK, Oceanic Bank, Spring Bank, Wema Bank, Intercontinental Bank, Afri Bank, and Fin Bank all suffered set back because the entities manipulated their financial data and as such lost investors' confidence which led to the eventual death of some while others were restructured (Abakasanga, Ogbonna & Umobong, 2019; Olayiwola, 2018).

Businesses are an essential component of society and rely on it to achieve their economic objectives. However, it is important to ensure that pursuing these goals does not result in adverse consequences for the various parties involved and society at large (Crane, McWilliams, Matten, Moon, & Siegel, 2008). While shareholders may prioritize favorable financial performance, it is congruently crucial as a consideration, the concerns of other stakeholders. Hence, it is imperative for company management to consistently assess the impact of policies and decisions on both shareholders and other interested individuals within the public sphere.

According to Astrin, Mohd, Jumadil, Mohd, and Zikri (2021), the financial statement provides a summary of a business's financial situation during a specific period, demonstrating its ability to generate revenue and its profitability. Conversely, financial performance is a key aspect that determines the competitiveness, business potential, and financial safety of corporate managers, as well as the rationality of existing and imminent interests. A favorable financial result serves as a rewarding outcome for shareholders who have invested in the company (Ongore & Kusa, 2013).

Assessing the performance of a company's finances involves evaluating how the shareholder's position has improved at the end of a given period compared to the beginning, which can be achieved through the utilization of ratios derived from financial statements. Financial performance can be appraised by means of a numeral of metrics as market value ratios and other universally acknowledged methods (Yenesew, 2014).

In line with this perspective, development should focus on enhancing human well-being, promoting individuals' freedom and choices, and ensuring a sustainable environment. While economic growth is significant, it alone cannot guarantee comprehensive development. In the past three decades, sustainable development has gained significant attention from scholars and authors as a powerful concept in the discourse on new economic models, running parallel with human development (Khasanov, 2016). These two concepts, human development, and sustainable development, complement each other and reinforce the notion that any development path that is not sustainable cannot be considered human development.

Although there are differences in theoretical approaches, human beings are central to both sustainable development and human development. In the past, addressing environmental concerns was seen as a lose-lose situation for businesses. However, in today's world, both businesses and the environment can benefit. Going green is no longer seen as a hindrance to business; instead, it is viewed as a driver of transformation and innovation, opening up new market opportunities and maximizing wealth.

## **2. Objectives of the Study**

The primary goal of this research work is to examine the correlation between the firm financial performance and sustainability practices of listed non-financial firms in Nigeria. The precise purposes are to:

- a. Investigate the degree to which sustainability practices of non-financial firms affect the return on asset (ROA);
- b. Explore the degree to which sustainability practices of non-financial firms affect the return on equity (ROE);
- c. Examine the degree to which sustainability practices of non-financial firms affect net profit margin (NPM).

## **3. Methodology**

### **3.1. The Study Area**

The geographic scope of the research effort is referred to as the region of investigation (Onodugo, 2010). In relation to this study, the area covered does not go beyond the listed non-financial firms on the Nigeria Stocks Exchange which majority are located within the industrial hub of Nigeria. The research focused on quoted non-financial firms stratified and selected across sectors for the study, the selection is based on methodology and selection criterion adopted for the study.

A research population represents the elements, observations, and variables that a researcher intends to investigate. Also, a population represents a collective group of individuals with shared characteristics. Hence, in this study's sample, all the sixty-four (64) companies listed in the five (5) sectors of the Nigerian Stock Exchange (NSE) were considered for this study as of 31st December 2021. Twenty (21) companies were part of the consumer goods sector; eight (8) firms were listed under the healthcare sector; another ten (10) were listed in the ICT sector, thirteen (13) entities were standing on the industrial goods sector while eleven (12) companies were quoted on the Oil & Gas sector. The tables below clearly show the population of this study per sector.

**Table 1. Population of the Study**

S/N	SECTOR	NUMBER OF COMPANIES
1	Consumer Goods	21
2	Healthcare	8
3	ICT	10
4	Industrial Goods	13
5	Oil & Gas	12
	<b>Total</b>	<b>64</b>

*Source: Nigerian Stock Exchange (NSE) Website*

### 3.2. Sample and Sampling Techniques

Considering the interconnectedness of sustainability practices and the impact of companies' operations on the environment, the study, therefore, targeted the companies whose routine activities have a high impact on the environment which are the Consumer industries, Health, ICT, Industrial, and Oil and Gas sectors which serve as a stratified sampling technique for this study. This implies that the study adopted stratified sampling techniques to select five sectors and variable sampling fraction type of stratified sampling method to select a total of fifty-six (56) companies over a period of ten years (2011-2020). Almost all of the companies not selected within the five sectors mentioned above were listed less than the period considered for this study, this made their annual report available to be less than the ten-year annual report.

### 3.3. Research Instrument

The financial statements and other published independent reports are the primary data sources for this investigation. The financial statements which had been prepared in compliance with the Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standard (IFRS), duly audited in line with auditing standards and practice under the appropriate legislation and regulatory bodies as necessary by law. These financial statements, have undergone various levels of review and been recognized as public records, and are considered reliable for this research.

### 3.4. Model Specifications

The model establishes the connection between the variables. The empirical framework by Deloof (2003), Padachi, (2006), and Ajayi, Abogun, and Odediran (2017) was adapted. The model's details are arranged as follows:

Financial Performance (Y) = Dependent Variable. i.e  $Y = (y_1, y_2, y_3)$ ; represented as follows:

$y_1$  = Return on Assets (ROA) of companies;

$y_2$  = Return on Equity (ROE) of companies;

$y_3$  = Net Profit Margin (NPM) of companies.

Sustainability Practices (X) = Independent Variable. i.e  $X = (x_1, x_2, x_3, x_4)$ ; represented as follows:

$x_1$  = Environmental Sustainability Index (EVI);

$x_2$  = Social Sustainability Index (SOI);

$x_4$  = Ethical Sustainability Index (ETI).

The control variable for this study is the firm size (SIZE).

A linear representation of the relationship can be built as shown below:

$$ROA_{it} = \beta_0 + \beta_1EVI_{it} + \beta_2SOI_{it} + \beta_3 ETI_{it} + \beta_4SIZE_{it} + e_{it} \dots\dots\dots 3.1$$

$$ROE_{it} = \beta_0 + \beta_1EVI_{it} + \beta_2SOI_{it} + \beta_3 ETI_{it} + \beta_4SIZE_{it} + e_{it} \dots\dots\dots 3.2$$

$$NPM_{it} = \beta_0 + \beta_1EVI_{it} + \beta_2SOI_{it} + \beta_3 ETI_{it} + \beta_4SIZE_{it} + e_{it} \dots\dots\dots 3.3$$

The  $\beta_1, \beta_2, \beta_3, \beta_4$

Apriori expectation is that  $\beta_1, \beta_2, \beta_3, \beta_4$  will be greater than zero

Coefficients of the independent variables, also known as observable heterogeneity, are used to measure the characteristics of each firm.

$\epsilon_{it}$  = error term corresponding to variables not included in the model, while

$i$  = 1-64 firms

$t$  = 2011-2020

### 3.5. Methods of Data Analysis

Data analysis involves numerical representation and manipulation of observations to explain the phenomena. The data for this research were tested and analyzed using descriptive and inferential statistical tools. The data collected were also run on the Stata 14.1 software of the statistical package to give answers to research questions and accomplish stated goals. Measures of central tendency, skewness, and kurtosis are among the descriptive statistics employed. Ordinary least squares methods, Pearson's product correlation analysis, and regression analysis were inferential statistics tools used for modifications.

### 3.6. Pooled OLS Estimation

The constant-coefficient model or pooled OLS model estimates a grand regression while ignoring the fact that the data are cross-sectional and time-series. Consequently, the model has the following form:

$$Y_{it} = \delta_0 + \sum_{m=1}^M \delta_m X_{it} + \mu_{it} \dots \dots \dots 3.4$$

For  $t = 1, \dots, T$ ;  $i = 1, \dots, N$ ;  $m = 1, \dots, M$ ,

T stands for the quantity of time-varying observations, N for the number of cross-sectional units in the panel, and M for the number of regressions. Over time and across the subject, the intercept and coefficient are both constant.

### 3.7. Least Square Dummy Variable Fixed Effect Estimation

The unobserved impact is expressly taken into account by the third technique, often known as the least squares dummy variable (LSDV) regression model. If a set of dummy variables  $D_i$  is defined, the model can be written as follows, with  $D_i$  equal to 1 when an observation corresponds to company  $i$  and 0 otherwise.





#### 4.2. Descriptive Statistical Interpretation of the Financial Performance

From Table 4.1 below, the outcome shows that the sampled firm's ROA (Return on Assets) for the covered period has an average value of 3.6, with a range of -179.917 (negative), to 176.267 (positive) with a standard deviation of 18.499, indicating that the data is spread out. The conclusion is that the industry has made at least a loss of N179.92 or a gain of N176.27 for every Naira invested. In addition, the average ROA was reported to be 3.6, meaning that the examined company could achieve a normal return of 360% on an average outlay with a greater notch of risk considering that the returns varied significantly by a substantial margin of 18.5% at both ends of the spectrum.

The skewness is negative (-0.339), signifying that the data is slightly skewed to the left while the kurtosis is positive (42.601), signifying that the data is heavily tailed which affected the result of the Jarque-Bera as 9598.578 indicating that the data distribution deviates significantly from a normal distribution. By implication, the wide range in ROA values, from a significant loss of -179.92 to a substantial gain of 176.27, showcases the volatility within the industry. This variation suggests that while some firms experienced remarkable profits, others faced considerable financial challenges, potentially indicating disparities in operational efficiency or market adaptability.

The positive skewness hints at the presence of underperforming firms dragging the average down, making it crucial for investors and stakeholders to assess the risk tolerance and management strategies of individual companies within the sector. On the other hand, as revealed in the same table, the ROE across the sampled firms has a normal value of 164.748 ranging from an adverse return of -1964.346 to a highest of 69701.136. The standard deviation is 3364.000, signifying that the data is highly spread out. This suggests that for every equity value, the sector suffered a loss of N1964.35 kobo and gained the most attainable profit of N69701.14 kobo.

The skewness is positive (20.683), indicating that the data is heavily skewed to the right. The kurtosis is positive (428.540), indicating that the data is heavily tailed which also affected the result of the Jarque-Bera as indicated that the data distribution deviates significantly from a normal distribution.

From the above interpretation, the extreme values in ROE, ranging from a considerable loss of -1964.35 to an astounding gain of 69701.14, underline the vast differences in profitability among the sampled firms. Firms with exceptionally high ROE might have leveraged their resources effectively or benefited from niche markets, whereas those with negative ROE faced significant challenges, potentially requiring restructuring or strategic realignment. Investors should carefully analyze these disparities to make informed decisions, considering both the potential rewards and risks associated with different firms.

Meanwhile, the Net Profit Margin (NPM) across the sampled firms has a normal value of 8.379 ranging from an adverse profit margin of -704.236 to a possible highest gain of 5640.101. The standard deviation is 280.363, indicating that the data is moderately spread out. The corollary of this is that the industry on each revenue made a loss of N -704.25 kobo or a maximum gain of N5640.10 kobo. The skewness is positive (18.905), indicating that the data is heavily skewed to the right. The kurtosis is positive (383.044), indicating that the data is heavily tailed.

The substantial range in NPM, from a significant loss of -704.25 to a substantial gain of 5640.10, demonstrates the diverse financial health of the sampled firms. Firms with high NPM might have efficient cost structures or innovative product offerings, while those with negative margins may struggle with high operational costs or market competition. Investors should scrutinize companies with negative NPM to understand the reasons behind their losses, which could range from market saturation to mismanagement.

#### **4.3. Descriptive Statistical Interpretation of the Sustainability Practices**

Table 2 below shows that the sampled firms practiced social (SOC) corporate responsibilities with an average value of 0.743 which is equivalent to 74.3%. The lowest is 0.000, and the highest value of 1.000, with a standard deviation of 0.189. This demonstrates that the SOC is widely practiced and reported in the annual statement of the sampled firm considered for this research though the data is sparingly spread out. The skewness is negative (-0.663), signifying that the data is slightly skewed to the left, and the kurtosis of positive (1.094), indicating that the data is moderately tailed and the Jarque-Bera result indicates that the data distribution deviates significantly from a normal distribution.

The average SOC value of 0.743 signifies that, on average, firms embraced social responsibility practices, reflecting a positive trend toward ethical business conduct. However, the negative skewness suggests that there are firms with lower SOC values, indicating a need for industry-wide initiatives to promote social responsibility. Investors and consumers, increasingly focused on ethical practices, might favor companies with higher SOC values, potentially impacting market perception and brand value.

For the environmental Sustainability index (EVI), the majorities of the sampled firms do not consider environmental factors (EVI) or do not report them in their yearly statement. A paltry average of 0.092 which is approximately 9.2%, with a minimum of 0.000 and a maximum of 1.000 and a standard deviation is 0.209, signifying that the data is moderately spread out but the large chunk of the sampled firms did not consider or disclose environmental factors (EVI) as revealed by their annual reports. The skewness is positive (2.244), indicating that the data is moderately skewed to

the right. The kurtosis is positive (3.837), indicating that the data is moderately tailed. Environmental sustainability happened to have the lowest mean value of sustainability practice in the sampled firm.

The low average EVI of 0.092 highlights a concerning trend: many firms have yet to prioritize environmental sustainability in their operations. As environmental concerns become more prominent globally, firms neglecting EVI might face reputational damage and regulatory challenges. Investors should monitor companies' efforts to enhance their environmental practices, as these initiatives could signal a forward-thinking approach and resilience against future environmental regulations.

However, the ethical sustainability index (ETI) has an average value of 0.776 which connotes 77.6%, with a minimum of 0.000 and a maximum of 1.000. The standard deviation is 0.251, indicating that the data is moderately spread out. The skewness is negative (-1.447), indicating that the data is heavily skewed to the left. The kurtosis is positive (1.916), indicating that the data is moderately tailed. The ethical index is the highest in the metrics used as a proxy for sustainability practices which shows that the majority of the firms considered for this study included ethical considerations in their financial reports, which signifies that they duly consider work ethics in their daily operations. The higher average ETI value of 0.776 suggests that firms predominantly consider ethical factors in their business operations.

This positive trend aligns with the growing importance of ethical conduct in corporate environments. Companies with higher ETI values are likely to build stronger trust with consumers and investors, enhancing their long-term sustainability. Investors might favor such firms for their ethical practices, considering them more resilient and trustworthy in the face of market fluctuations.

For the control variables, the average value of the log of total assets is 7.227, with a minimum of 0.000 and a maximum of 9.306. The standard deviation is 1.073, indicating that the data is moderately spread out. The skewness is negative (-2.104), indicating that the data is heavily skewed to the left. The kurtosis is positive (12.764), indicating that the data is heavily tailed. In conclusion, the wide-ranging financial performance and sustainability practices among the sampled firms underscore the need for a nuanced approach in investment decisions. Investors should not only consider financial indicators but also evaluate firms' sustainability practices, as ethical and socially responsible conduct increasingly influences market dynamics and consumer behaviour.

**Table 2. Descriptive Statistics of the Variables**

	ROA	ROE	NPM	Social	Environment	Ethical	Assets
Mean	3.600	164.748	8.379	0.743	0.092	0.776	7.227
Maximum.	176.267	69701.136	5640.101	1.000	1.000	1.000	9.306
Minimum.	-179.917	-1964.346	-704.236	0.000	0.000	0.000	0.000
Std. Deviation	18.499	3364.000	280.363	0.189	0.209	0.251	1.073
Variance	342.199	11316494.230	78603.261	0.036	0.044	0.063	1.151
Skewness	-0.339	20.683	18.905	-0.663	2.244	-1.447	-2.104
Kurtosis	42.601	428.540	383.044	1.094	3.837	1.916	12.764
Jarque-Bera	9598.578	108157	326439.9	149.0783	48.57693	110.068	1471.067
Probability	0.060	0.080	0.100	0.120	0.110	0.560	0.600
Sum	407.16	1196.502	2990.425	26.5	172.2	170.54	1566.053
Sum Sq. Dev.	115642.7	5498732	33508877	11.92122	8.599814	11.1729	294.1711
Observations	430	430	430	430	430	430	430

Source: Researcher's Computation, 2022

#### 4.4. Test of Hypotheses Using Regression Analysis

The research hypotheses that were articulated for this study was evaluated with the Multiple Linear regression and Pearson Product Monument Correlation Coefficient (PPMCC) statistical analysis with the aid of Stata version 14.1.

#### 4.5. Panel Unit Root Stationarity Test

The Harris-Tzavalis unit-root test results shed light on the stationarity characteristics of the variables under scrutiny. Stationarity, a pivotal concept in time-series analysis, indicates that the statistical properties of a dataset remain constant over time. Table 4.5 shows all the variables except SOI exhibit a stable behavior at their original levels (I(0)), denoting they are stationary without the need for differencing. Their consistent patterns signify a reliable foundation for time-series analysis. Analysts can confidently utilize these variables in their raw form, ensuring the integrity of their conclusions.

In contrast, the Social (SOI) variable demonstrates a more intricate pattern with a need for a first-order differencing (I(1)) to achieve stationarity implying underlying volatility or irregularities. Differencing, in this case, acts as a stabilizing transformation, allowing for a more accurate analysis of its trends over time. Researchers should be mindful of this characteristic, recognizing that the SOI variable's dynamics are best understood in its differenced form.

Similarly, Ethical and Assets variables, akin to ROA, ROE, NPM, and Environment, maintain stationarity at their original levels (I(0)). This stability underscores the consistent nature of these metrics, indicating a reliable foundation for in-depth time-

series exploration. Analysts can leverage these variables directly in their analyses, appreciating their steady behaviors without the necessity of differencing.

In essence, while most variables stand robust at their raw levels, the SOI variable's propensity for change necessitates a transformational approach, making it imperative to differentiate the data for a comprehensive understanding. This unique characteristic underscores the intricate dynamics of the social aspect under consideration, highlighting the importance of tailored analytical methods for a comprehensive study.

**Table 3. Harris-Tzavalis unit-root test**

Variables	Levels		1 <sup>st</sup> Difference		Stationarity
	Statistic	P-value	Statistic	P-value	
ROA	0.2978	0.3829	-	-	Stationary at levels – $I(0)$
ROE	9.4328	1.0000	-	-	Stationary at levels – $I(0)$
NPM	-0.4849	0.3139	-	-	Stationary at levels – $I(0)$
Environment	26.4229	1.0000	-	-	Stationary at levels – $I(0)$
Social	14.7917	0.0000	-0.8813	0.8109	Stationary at 1st difference – $I(1)$
Ethical	0.8614	0.8055	-	-	Stationary at levels – $I(0)$
Assets	3.2481	0.9994	-	-	Stationary at levels – $I(0)$

Source: Researcher's Computation, 2022

#### 4.6. Bivariate Analysis

According to Bonett and Wright (2000), bivariate analysis are three types; Pearson Product Moment correlation coefficient, Spearman's rho correlation coefficient, and Kendall Tau b correlation coefficient. Other authors have also identified and used these bivariate analysis techniques in their research, including (but not limited to) Field (2013), Hair et al. (2017), and Pallant (2021). In order to make an inference on the variables about quoted non-financial firms in Nigeria, the Pearson Product Moment Correlation Coefficient (PPMCC) was used. The outcome variable, Financial Performance was proxied by three (3) variables; ROA, ROE, and NPM, while the explanatory variables, Sustainability Practices was proxied by Social Responsibilities Index (SOCI), Environmental Consideration Index (EVI) and Ethical Index (ETI).

Table 4 reveals the relationship between the outcome variables and the predictors. The output shows pairwise correlation coefficients (R-values) between the variables in the study. From Table 4, It was revealed that ROA has a weak negative correlation with ROE ( $r=-0.051$ ) and a moderate favorable correlation with NPM (Net Profit Margin) ( $r=0.584$ ). This suggests that the return on assets follows the same trend as the other outcome indicators with a subtle inverse connection between profitability concerning assets and equity. However, the notable moderate positive correlation with NPM ( $r=0.584$ ), indicates that firms with robust return on assets tend to exhibit healthier net profit margins. This suggests a critical synergy between operational efficiency and profitability, emphasizing the need for firms to optimize their assets effectively to bolster overall financial performance.

In like manner, the correlations of ROE unveil intriguing insights, ROE has a weak favorable and negligible correlation with NPM ( $r=0.006$ ) but has an unfavorable and in-negligible relationship with EVI, SOCI, and ETI of the sampled firm with correlation coefficients of  $-0.019$ ,  $-0.084$  and  $-0.044$  respectively. This intricate pattern suggests that they are moving in a similar direction and the relationship between a firm's equity and its profitability is subtly influenced by environmental, social, and ethical considerations. It underlines the complexity of integrating sustainable practices into financial performance metrics, indicating a delicate balance that organizations must strike to ensure both financial robustness and ethical responsibility.

On the other hand, NPM displays subtle correlations. Its weak positive link with SOCI ( $r=0.139$ ) suggests that firms with better net profit margins tend to prioritize social responsibilities. However, the negligible association with EVI ( $r=0.001$ ) indicates that environmental considerations have a minimal impact on profitability. The weak negative correlation with ETI ( $r=-0.070$ ) implies that an emphasis on ethical practices might marginally reduce net profit margins. These findings emphasize the multifaceted nature of net profit margins, where social responsibility plays a slightly more prominent role compared to environmental and ethical factors.

Furthermore, EVI exhibits minimal positive correlations with NPM ( $r=0.001$ ) and SOCI ( $r=0.317$ ). The slight connection with net profit margins suggests that firms with environmental considerations might experience slightly improved profitability. Meanwhile, the stronger link with social responsibilities highlights the importance of social initiatives in enhancing a firm's environmental consciousness. SOCI, with its weak positive correlation with ROA ( $r=0.139$ ), underscores that companies emphasizing social responsibilities often achieve slightly higher return on assets, indicating a potential financial advantage linked to social conscientiousness.

Meanwhile, ETI's correlations depict nuanced relationships. The weak negative correlation with NPM ( $r=-0.070$ ) implies that a focus on ethical practices might marginally impact net profit margins negatively. However, the weak positive

association with SOCI ( $r=0.292$ ) indicates that ethical considerations tend to align with stronger social responsibility practices. These findings highlight the intricate dynamics between ethical values, social initiatives, and financial performance, illustrating the need for businesses to navigate these complexities strategically.

ASSET demonstrates weak positive correlations with all variables, emphasizing that larger firms tend to exhibit slightly better financial performance metrics. The highest correlation with ROA ( $r=0.182$ ) indicates that firms with larger total assets often achieve superior return on assets. This suggests that economies of scale might play a role in enhancing financial efficiency among larger corporations. These findings underline the delicate balance that companies must maintain between profitability and sustainable initiatives. While some connections are subtle, they emphasize the interwoven nature of financial success and ethical responsibility, urging businesses to adopt comprehensive strategies that encompass both domains for long-term viability and societal impact.

**Table 4. Pairwise Correlation Relationship**

Variables	ROA	ROE	NPM	EVI	SOCI	ETI	ASSET
ROA	1						
ROE	-0.051	1					
NPM	0.584	0.006	1				
EVI	0.072	-0.019	0.001	1			
SOCI	0.139	-0.084	0.001	0.317	1		
ETI	0.156	-0.044	-0.07	0.283	0.292	1	
ASSET	0.182	-0.072	0.029	0.337	0.447	0.378	1

*Source: Researcher's Computation, 2022*

#### 4.7. Discussion of Findings

The broad objective of this study is to delve into the intricate relationship between sustainability practices and the financial performance of non-financial firms in Nigeria. The empirical findings presented in Table 4 not only offer some insight on the complex interplay between sustainability practices and financial performance within the Nigerian corporate landscape, but also prompt further exploration, aiming to enrich our understanding of corporate sustainability in the Nigerian context, offering nuanced insights that challenge conventional wisdom

The results, as depicted in Table 4.6, reveal a subtle positive correlation between sustainability indices (EVI, SOCI, and ETI) and Return on Assets (ROA). While the correlations appear weak, their existence signifies a subtle yet tangible connection between sustainability efforts and financial outcomes. This delicate balance echoes global research trends, where researchers have grappled with the intricacies of quantifying the impact of sustainability on financial metrics.

This positive correlation aligns with existing research in corporate sustainability (Orlitzky, Schmidt & Rynes, 2003). Orlitzky and colleagues' meta-analytic study spanning Australia and the USA established a robust positive relationship between corporate social responsibility and financial performance. This also aligned with the work of Fischer and Sawczyn (2013) who focused on Japanese manufacturing companies by examining the effect of environmental performance on financial performance and found out that they were positively correlated with one another. Again, these findings also corroborate Rahim (2017), who conducted a case study in Malaysia, examining a dataset involving 226 corporate entities from various sectors (excluding the financial sector) listed on Bursa Malaysia and found substantial connection between the sustainable growth rate and profitability variables

## 5. Conclusion

This research set out to look at how the sustainability practices of publicly traded companies in Nigeria affect their financial performance. The study selected 56 companies listed on the Nigeria Stock Exchange across five sectors and used three sustainability indices (environmental, social, and ethical) as explanatory variables and three financial ratios (return on assets, return on equity, and net profit margin) as dependent variables. Firm size was used as control variables. The research made use of a stratified sampling technique with a variable sampling fraction, and secondary data were used.

The study found a weak correlation between sustainability practices and financial performance. Additionally, none of the sustainability indicators had a significant impact on ROA, ROE, and NPM for non-financial firms in Nigeria. Therefore, the three null hypotheses, which emphasizes that sustainability practices have no significant impact on financial performance could not be rejected.

## 6. Recommendations

The subsequent recommendations are based on the results of the study as follows:

- a. To the regulating organizations like the government, the Security and Exchange Commission (SEC) etc., it is recommended that the carrot and stick policy should be introduced to non-financial firms in Nigeria. This will enable non-financial firms that have embraced sustainability practices to be rewarded inform of rebates and motivation for their compliance while those that reneged should be made to face the consequences.
- b. As revealed by this study, non-financial companies that preferred higher income should prioritize and embrace programmes that enhance their financial performance, it is therefore recommended to the management and chief executive of the non-



financial firms to go beyond sustainability practices and focus on other factors and programmes that affect financial performance positively.

c. Again, to the shareholders and potential investors, the study revealed that profitability drive alone cannot guarantee the going concern of non-financial enterprises; therefore, it is recommended that investors should take their time to study other non-financial policies of a business organization before investing in it.

d. Lastly, the managers and chief executive officers of non-financial companies are enjoined as a recommendation to adopt sustainable practices as a business strategy rather than as a compliance requirement. In fact, it is imperative for non-financial firms to urgently develop sustainability campaigns that are focused on the market, which can enhance their companies' reputation and visibility while showing their dedication to sustainable development. By doing so, they can improve their chances of success in the fast-paced and competitive business environment.

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