Impact of Environmental Sustainability Practices on Financial Performance of Listed Firms in Nigeria

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ABSTRACT *Environmental Sustainability Practices is a contentious issue in Nigeria. Stakeholders have mounted pressure on listed firms to conduct their operations in an environmentally sustainable manner. However, firms are in business to maximize the value of shareholders therefore is not disposed to undertake initiatives that weigh on the bottom line. The study therefore examined the effect of environmental sustainability practices on financial performance of listed companies in Nigeria. The study adopted ex-post facto research design on population of 34 firm over 10 years' observations (2008- 2017). The study employed multiple regression analysis to investigate the relationship. The study found that that environmental sustainability practices, controlled by firm size, liquidity and leverage exerted significant effect on the overall financial performance (Wald = 103.54, Adj R^2 = 0.091, p < 0.05). Specifically, Environmental sustainability practice and Liquidity made significant individual contribution to variation in financial performance of listed companies on Nigerian Stock Exchange (EP: β_1 = .618, t(340) = 5.16, p < 0.05; Liquidity LIQ: β_3 = 0.031, t(340) = 2.62, p < 0.05). However, Firm size (FZ) and Leverages had no significant effect on financial performance of listed companies in Nigeria (FZ: β_2 = -.001, t(340) = -.07, p > 0.05; LEV: β_4 = -.0001, t(340) = -.45, p > 0.05). The study concluded that Environmental Sustainability Practices are significant factors pivotal to the generation of sustainable Financial Performance and thus recommended that management of firms should integrate Environmental Sustainability Principles in corporate strategy in order to harness the potential benefits.*

1   INTRODUCTION

Globally, it is debated that the corporate sector is largely responsible for the numerous environmental problems that have plagued the world today. Therefore, environmental sustainability practices are vital issue for consideration. The incorporation of environmental initiatives in the strategic decisions of companies is considered a potent measure to generate strategic benefits that will enhance competitive advantage and positively impact financial performance. (Ameer & Othman 2011).

In the contemporary world the fundamental objective of corporate entities is no longer profit maximization in accordance with Shareholders' theory, rather the new businesses paradigm is focused on maximizing wealth for stakeholders. Although businesses are set up in the interest of the owners. The priority placed on financial performance for the benefit of shareholders has led to less attention being paid on environmental sustainability practices. This school of thought is no longer tenable in the modern world where key stakeholders make legitimate demands on the firms and failure to consider the interest of these stakeholders poses a threat to the existence of the firms. For firms to meet their long term objectives and secure their going concern (without any threat to their long term existence), it is imperative to embrace environmental initiatives and programs that enables them generate sustainable (short and long term) financial performance.

In Nigeria, industrialization and human population are growing rapidly with the attendant increase in corporate activities. As at 30th June 2018 there were 169 listed companies in Nigeria spread across different sectors of the economy (NSE 2018). This is against 49 companies listed in 1975. These companies engaged in different activities that have environmental

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consequences. The Board and management of these companies are concerned about the implications of embracing environmental sustainability on financial performance (Okafor, 2018).

In 2015, the Nigerian Stock Exchange developed Sustainability Disclosure Guideline as part of the project designed to integrate sustainability reporting in the financial reporting process of listed companies. This is in recognition of the impact of environmental sustainability practices on corporate performance (The NSE, 2015).

The research to establish a link between environmental sustainability practices and financial performance is still inconclusive. Most of the research carried out on environmental sustainability practices and financial performance focused on advanced markets with little attention paid on less developed or emerging markets. Although some studies have been conducted on the relationship between environmental sustainability practices and financial performance in the context of developing markets including Nigeria, very few studies have linked environmental sustainability to financial performance considering all the listed firms on Nigeria Stock Exchange, whilst controlling for corporate characteristics (size, liquidity and leverage). Reviews of studies show that knowledge gap exists in these areas. This study therefore examined the effect of environmental sustainability practices on financial performance of listed companies in Nigeria, controlling for size, liquidity and leverage.

2   Review of Literature

2.1   Conceptual Review

According to Joyanti and Goovda (2014), environmental sustainability refers to the practices engaged by firms to achieve financial performance without compromising their capacity for long term growth considering the internal and external resources. These practices are conceived within the context of operational efficiency, responsiveness to the demands of stakeholders and in the context of exploiting and improving existing sustainable competencies. Basically, the environmental sustainability relates to reduction of the impact of an organization's operation on the natural system (both living and non-living) and the ecosystems (land, air and water). This environmental input indicator relates to items such as material, energy and water while the environmental output includes emissions, effluents and waste.

Business operations are undertaken in the general ecological environment. The impact of some business operations on the ecological environment causes the destruction of natural habitat and pollution of the ecosystem. Damage to the ecological environment has negative implications on the business profitability and sustainability such as bad reputation that impedes on turnover and profitability, high cost of compensation for destruction and cost of penalties and litigation. To avoid these negative implication management undertake measures such as investments in technologies to reduce the risk associated with the destruction of the ecological system in addition to the regular environmental impact assessment.

However, Okanga and Gronewald (2017) posited that aside from investment in appropriate technologies and constant environmental impact assessment (as a proactive measure), employee competence also contributes to minimizing risks of damage to the ecological environment. Employee incompetence may lead to mistakes, accidents and negligence that are potentially disastrous to the ecological environment. By implication, improved business operations arising from improved employee welfare, improved ecological environment have a positive impact on firm profitability and value. It is against this backdrop that scholars argued that , in order to achieve sustainable financial performance, firms should undertake measure to improve environmental sustainability.

2.1   Theoretical Framework

Stakeholders' theory serves as the base for this study. The theory was developed by Freeman (1984). The theory proposes that organizations embrace sustainability practices as a means of fulfilling their ethical, social and moral obligations to stakeholders and simultaneously maximize shareholders wealth. According to Freeman (1984), stakeholders is "any group or individual who can affect or is affected by the achievement of the organization's objectives". These include employees, the community, customers and suppliers, government agencies, shareholders and the public (Friedman & Miles, 2006).

The underlying proposition of the stakeholder theory is that the achievement of corporate long term objectives is a function of its meeting the expectations of varied interests. The ability or otherwise of management to manage harmoniously the relationships that the firm has with its stakeholders will impact on its success. This requires the prioritization of the interest of diverse stakeholders and also addressing and balancing their claims. Furthermore, the recognition of multiple stakeholders' expectation is instrumental for firm financial performance (Orlitzky, Schmidt & Rynes,

2003). According to Olanrewaju and Johnson-Rokosu (2016), an organization's stakeholder can be classified into internal and external. While the internal includes management, the board of directors and employee; external are shareholders/investors, customers, communities and government agencies. Thus the theory perceives the firm as a nexus of contracts between management and shareholders on one hand and government agencies, employees, community and other stakeholders on the other hand. In other words from the perspective of stakeholders' theory, management should look beyond the myopic management –shareholder relationship to consider all other relevant stakeholders including those within the value chain, (Oyebamiji, 2015).

2.2 Empirical Review

Okafor (2018) asserted that business operations are undertaken in the general ecological environment hence the impact of some business operations on the ecological environment causes the destruction of natural habitat and pollution of the ecosystem. To alleviate this problem, the managements of businesses conduct regular analysis to evaluate the implications of their activities on the ecological environment. The result of the assessment enables management to initiate programs to mitigate the negative business implications and improve public perception about the business entity. This position was buttressed by Worae and Ngwakwe (2017) who stated that damage to the ecological environment has negative implications on the business profitability and sustainability such as bad reputation that impacts negatively on turnover and profitability, high cost of compensation for destruction and cost of penalties and litigation.

Similarly, Nyirenda, Ngwakwe and Ambe (2013) averred that, in order to avoid the negative implications of business activities on the environment, management must undertake measures such as investments in technologies to reduce the risk associated with the destruction of the ecological system in addition to the regular environmental impact assessment. However, Okanga and Gronewald (2017) posited that aside from investment in appropriate technologies and constant environmental impact assessment (as a proactive measure), employee competence also contributes to minimizing risks of damage to the ecological environment. Employee incompetence may lead to mistakes, accidents and negligence that are potentially disastrous to the ecological environment. By implication, improved business operations arising from improved employee welfare, improved ecological environment have a positive impact on firm profitability and value. It is against this backdrop that scholars argue that to improve and sustain financial performance, management should undertake initiatives in the area of corporate sustainability. To preserve the environment, firms engage in effective sustainability initiatives which include sustainable quality products, clean air, and conservation of water, clean water, recycling, clean energy and afforestation.

Theoretically, environmental sustainability practices impacts financial performance in varied ways (Ching, Gerab & Toste, 2017). Environmental sustainability initiatives oriented to enhance energy efficiency, minimize carbon emission, improve health and safety of the worker, community development can lead to lower costs, improved corporate image, create a competitive advantage on various markets and revenue increases with a direct positive impact on profitability for companies (Lopez, Garcia & Rodruguez, 2007). This is consistent with the stakeholder theory which proposes that besides meeting the needs of shareholders, firms should consider the variety of stakeholders. However, when environmental sustainability practices are uncoordinated and discretionary, the result impacts negatively on financial performance thus, Companies that conceive the practice as a means of image laundering and compliance to rules and regulation usually adopt discretionary approach that fail to harness the potential benefits (Dafwa & Hammarstrom, 2015).

Similarly, Oti and Mbu-Ogar (2018) examined the influence of environmental and social disclosures on the financial performance of listed Oil and Gas companies in Nigeria. The study was predicated on stakeholders' and legitimacy theory which explains the interdependence of organizations and society. The study employed secondary data to extract information from the published annual reports of companies. Based on Global Reporting Initiative (GRI) guidelines the study developed a checklist of three themes namely Employee Health and Safety, Waste Management and Community Development as measures of environmental and Social Disclosures. The financial performance was measured through Return on Capital Employed. The study finds that employee health and safety is negatively related to financial performance. Waste Management is significantly positively related to financial performance indicating that waste management can debe deployed as an effective environmental strategy to protect the environment and engender customer loyalty and patronage. Community development indicates a non-significant impact on financial performance suggesting that companies should do more in the area of community development to avoid hostility by pressure groups that will negatively impact on operations and in turn affect financial performance.

Nyirenda, Ngwakwe and Ambe (2013) investigated the environmental practices of a mining firm in South Africa to discover

any relationship with the firm's financial performance. In the study environmental practice was represented by carbon reduction, energy efficiency and water usage while financial performance is represented by return on equity and moderated by profit margin ratio, asset turnover and an asset to equity ratio. The result indicates a weak relationship between environmental practices and a return on equity of the firm. This result lends credence to the assertion by Worae and Ngwakwe (2017) that environmental practices are not necessarily driven by financial motives rather by a moral obligation to mitigate the impact of climate change and adhere to environmental regulations.

Similarly, Ajide, Oyetade and Anisere (2014) explored the relationship between environmental sustainability and financial performance of SMEs located in Lagos, Nigeria. Survey research design was used to extract the views of 100 respondents randomly selected. Statistical analysis was performed using descriptive and correlation techniques. The study found a significant positive relationship between environmental sustainability and financial performance. The result also showed that SMEs had a policy of communicating to stakeholders on their environmental actions. These findings further suggest that environmental sustainability is an important strategic tool for management to achieve higher performance.

Arising from this review, the study could infer that several studies examined environmental sustainability and financial performance without consensus in their findings. Moreso, most of these studies did not cover all the sectors simultaneously. Similarly, most of the studies carried out survey to examine opinion of stakeholders, with limited number examining actual environmental suastainability accounting practices.

3   METHODOLOGY

This study employed *ex-post facto* research design. Population of the study covers all the firms listed on the Nigerian Stock Exchange as at December 31, 2018. Purposive sampling technique was employed to select (34) firms spread across the eleven (11) sectors that produced sustainability reports either as integral part of annual reports or as a separate report within the period of study (2008 – 2017). The design enabled a critical assessment and analysis of the cause and effect relationship of variables being examined in this study. The study employed the sustainability framework of the Global Reporting Initiative (GRI4) and the Nigerian Stock Exchange sustainability framework as benchmark to assess the extent of companies' involvement in environmental sustainability based on the Themes and Indicators prescribed by the Guidelines. Both descriptive and inferential statistics were adopted. Content analysis was employed to analyze the content of Annual Reports or Sustainability reports issued by the listed companies. Content analysis is considered the most systematically classified and quantitative technique useful for trend analysis. This technique has been widely used in prior studies (Uwuigbe & Jimoh, 2012; Olanrewaju & Johnson-Rokosu, 2016).

The dependent variable (financial performance) was measured by Return on Asset, Profit Margin, and Earnings Per Share. The model developed for the model study is expressed in mathematical equation (1)

$$FP_{it} = \beta_0 + \beta_1 EP_{it} + \beta_2 SZ_{it} + \beta_3 LIQ_{it} + \beta_4 LEV_{it} + \varepsilon_{it}$$

Where:
ROA = Return on Asset;
PM   = Profit Margin;
EPS =Earnings per Share
SZ = Firm Size;
LIQ   = Liquidity;
LEV = Leverage
The *a priori* expectation is $\beta_{0} + \beta_{1} + \ldots\ldots\ldots + B_4 > 0$

For a focused analysis, pre-estimation and diagnostic tests were carried out. For pre-estimation tests the study conducted descriptive statistics, correlation analysis and variance inflation factors tests. Pooled OLS, Fixed Effect and Random Effect analysis were performed at the estimation level. To determine the most appropriate estimator between the fixed Effect and Random effect, Hausman test was conducted while Breusch-Pagan LM test was used to confirm the Hausman test, to ascertain which analysis between the random effect and Pooled OLS is most suitable. For the diagnostic tests, Heteroskedasticity test, cross-sectional dependence test and serial correlation test was conducted using Cook-Weisberg test, Pesaran CD test and Wooldridge test to determine whether the residuals of the model are constant over time; if there are issues of dependence across the residuals of the model; and whether the coefficients and the error terms in the model are correlated over the periods of study.

The study conducted t-test and f-test at 5% level of significance to test for the individual and joint effects of the explanatory variables on the explained variable. The analysis was performed using multiple regression analysis with the aid of Stata/IC 11.0 software.

4 RESULTS, INTERPRETATION AND DISCUSSION OF FINDINGS

Tables 1 shows the results of the pre-estimation analysis conducted (variable characteristics, correlation and variance inflation factor tests) are depicted in Tables 2 and 3 respectively.

Table 1: Descriptive Statistics for Environmental Sustainability Practices and Financial Performance Variables

Variable	Mean	Maximum	Minimum	Std. Dev.
ROA	0.096	0.710	-0.290	0.126
EPS	4.062	7.832	-2.511	8.540
PM	1.002	6.437	-1.940	3.219
EP	0.278	0.860	0.000	0.285
LEV	13.427	33.433	0.000	6.938
LIQ	1.298	23.920	0.070	1.481
SZ	7.376	9.610	-1.400	1.735

Source: Extract from Stata Output (2019)

Return on Asset (ROA): Table 2 shows Mean = 0.09, STD = 0.126 indicating the extent to which discretionary accruals for the distribution exhibit inconsiderable clustering around the average. The mean value of the return on asset is 9% although small, but positive implying that the utilization of firms assets generates a positive operating surplus. In addition, it shows that firms in Nigeria generate marginal value for their stakeholders within the sampling period. Furthermore, the level of management's efficiency in employing assets profitably is low at 9% and is not good enough to attract potential investors. However, the descriptive statistics shows that on the average all the sampled firms have some form of environmental practices in their corporate reports. The standard deviation which is a measure of dispersion for all independent variables is 12.6% connotes that there are insignificant differences in the attributes of the sampled subjects. The maximum value of 0.71 and the minimum value -0.29, show that firms in Nigeria have different efficiency levels and different levels of practices. The range further indicates that while some firms within the sampled subject generate high positive returns to stakeholders others generate negative returns implying mixed performance.

Earnings per Share (EPS): The mean value of earnings per share is 4.062. This shows that on the average the selected listed firms generate high returns to their shareholders therefore giving them good value for their investments. It equally shows that many of the firms have capacity for high payouts. The STD of 8.540 indicates significant differences in the characteristics of the sampled firms in generating earnings for their shareholders. The maximum value of 7.83 and the minimum value of -2.51 further suggest that there is disparity in the degree of profitability among the selected listed firms. Thus, some firms are generating high returns for their stakeholders; some are operating at a loss.

Profit Margin (PM): The mean value of profit margin is 1.00. This suggest that on the average the selected listed firms ratio of net profit before tax to net sales is positive and high. Thus, they are not operating at a loss. Further, it shows that management's efficiency in managing costs is high leading to high profitability. The statistics equally shows that the sampled companies may have competitive advantage leading high market share and margin on sales. The maximum value for the profit margin is 6.44 and the minimum value is -1.94.This shows that there is a marked difference in performance among the sampled companies.

Environmental Practice (EP): The mean value of environmental practices is 0.28. This implies that on the average the selected listed firms practice about 28 per cent of the environmental themes contained in the GRI4 Guidelines. This value is relatively low meaning that the environmental performance of most of the selected firms is well below average. The STD of EP reveals 0.285 implying that the level of divergence in environmental practices among the sampled firms is low. In addition, the maximum value for environmental practices is 1.00 and the minimum value is 0.00. This shows that some firms' environmental practice is high while others totally ignore environmental issues.

Firm Size (SZ): The mean value of the logarithm of total asset is given as 7.38. This suggests that on the average firms have enough assets to carry out their business activities. In addition, the maximum and the minimum values are given as 9.61

and -1.40 respectively indicating a high level of disparity among sampled firms. This level of disparity is further supported by a STD of 1.783 showing a large dispersion around the mean value.

Liquidity (LIQ): This is defined as the ratio of liquid asset to current liability. The mean value is given as 1.30 and this suggests that the selected listed firms are liquid as the liquid asset is greater than their liquid liability. However, the maximum and minimum values were given as 23.92 and 0.07 respectively. This suggests the liquidity value of the firms differs substantially across the sampled companies and time period. This statistic is supported by the value of STD of 1.481 which shows a large disparity among firms.

Leverage (LEV): Leverage is defined as the ratio of debt to equity and the mean value for all the selected firm is 13.43. This suggests that on the average 13.43% of the capital of the sampled firms is represented by debt while 86.57% is equity meaning that the firms are low geared. However, the maximum value is given as 33.43 and the minimum is 0.00. This shows that some firms included in the sample size are highly geared while others are 100% equity financed. This level of dispersion is supported by a STD value of 6.938.

Regression Analysis

Table 2(a): Regression Result for Environmental Sustainability and Financial Performance (FP). - Without Control Variables

Dependent Variable: FP

Variables	Pooled OLS	Random Effect	Fixed Effect	PCSEs
EP	0.575***	0.431**	0.247	0.575***
	(4.32)	(2.29)	(1.00)	(4.99)
	{0.000}	{0.022}	{0.317}	{0.000}
SZ				
LIQ				
LEV				
Constant	0.155	0.224	0.271	0.155
	(2.65)	(2.77)	(3.32)	(1.94)
	{0.008}	{0.006}	{0.001}	{0.053}
Adjusted R^2	0.088	0.095	0.089	0.088
F	$_{(3,336)}$ =11.92*** 0.000	-	$_{(3,303)}$ =0.44 0.726	
Wald Test (Prob)	-	8.19**(0.04)	-	90.48***(0.00)
Hausman Test (Prob)	-	-	0.339	
Bresuch-Pagan RE Test(Prob)	-	119.16*** (0.00)	-	-
Heteroscedasticity Test(Prob)	-	42.89*** (0.00)	-	-
Auto Correlation Test(Prob)	-	1.129 (0.296)	-	-
Pesaran CD Test(Prob)	340	4.655*** (0.00) 340	340	-
Observations				340

* Significant at 10%, ** Significant at 5%, *** Significant at 1%.
PCSEs means linear regression, corrected panels correlated standard errors
Source: Extract from Stata Output (2019)

Table 2(b): Regression Result for Environmental Sustainability and Financial Performance (FP). - With Control Variables

Dependent Variable: FP

Variables	Pooled OLS	Random Effect	Fixed Effect	*PCSEs
EP	0.618***	0.486**	0.312	0.618***

	(4.54)	(2.49)	(1.23)	(5.16)
	{0.000}	{0.013}	{0.221}	{0.000}
SZ	-0.001	-0.004	-0.005	-0.001
	(-0.06)	(-0.27)	(-0.33)	(-0.07)
	{0.954}	{0.789}	{0.743}	{0.941}
LIQ	0.031**	0.019	0.013	0.031***
	(2.01)	(1.40)	(0.94)	(2.62)
	{0.046}	{0.160}	{0.346}	{0.009}
LEV	-0.0001	-0.0003	-0.0003	-0.0001
	(-0.26)	(-0.57)	(-0.68)	(-0.45)
	{0.799}	{0.569}	{0.498}	{0.656}
Constant	0.130	0.232	0.295	0.130
	(1.04)	(1.56)	(1.84)	(0.92)
	{0.298}	{0.118}	{0.066}	{0.359}
Adjusted R^2	0.091	0.105	0.096	0.091
F	$_{(6,333)}$	-	$_{(6,300)}$ =0.46	
	=6.68***			
	0.000		0.834	
Wald Test (Prob)	-	10.20(0.116)	-	103.54***(0.00)
Hausman Test (Prob)	-	-	0.768	
Bresuch-Pagan RE Test(Prob)	-	115.11*** (0.00)	-	
	-	41.63*** (0.00)	-	-
Heteroscedasticity Test(Prob)	-	1.136 (0.294)	-	-
	-	4.332*** (0.00)	-	-
Auto Correlation Test(Prob)	340	340	340	-
				-
Pesaran CD Test(Prob)				340
Observations				

Source: Extract from Stata Output (2019)

In the model controlling for the effect of firm size, liquidity and leverage in the relationship between corporate sustainability and financial performance, Pooled OLS, fixed effect and random effect analyses was carried out. While, Hausman test was conducted to determine the most appropriate estimating technique out of the three techniques, that is Pooled OLS, fixed effect and random effect; the result of the Hausman test with ρ-value of 0.768>0.05 showed that random effect is the most appropriate estimator. Also, the result of Breusch-Pagan Lagrangian multiplier test with ρ-value of 0.00<0.05 confirmed the report of the Hausman test on the appropriateness of the Random effect.

Three diagnostic tests (heteroskedasticity test, auto-correlation test and cross-sectional dependence test) were carried out to determine the presence of econometric problem in the model and also to know the best estimating technique to be adopted. The results of these tests with ρ-values of (ρ = 0.00<0.05; ρ = 0.294>0.05, and ρ = 0.00<0.05) revealed that the model has heteroskedasticity problem, that is the residuals of the model are not constant over time; there is non-existence of auto-correlational problem in the model indicating that the residuals and the coefficients of the model are uncorrelated over time, and also, the model has cross-sectional dependence problem, which implies that the standard errors of the model are correlated over time. Based on the results of the diagnostic test, which showed that there are presence of heteroskedasticity and cross-sectional dependence problem in the model, the Random effect as chosen based on the result of the Hausman test and Breusch-Pagan Lagrangian multiplier test thus turned inappropriate. Also, due to the fact that the number of cross-sections, that is number of selected firms is greater than the period covered (N>T: 34>10); therefore, the relationship between environmental sustainability and financial performance was estimated using Pooled OLS with linear regression correlated panels with correlated standard errors (PCSEs).

The result of the PCSEs regression analysis as depicted in Tables 2(a) and (b) revealed that environmental sustainability practices and liquidity have significant positive influence on financial performance of listed firms in Nigeria at 1% chosen

significant levels (t_{cal} = 5.16, ρ of 0.000<0.01; t_{cal} = 4.99, ρ of 0.000<0.01). While firm size and leverage exert insignificant negative influence on financial performance (t_{cal} = -0.07, ρ of 0.941 > 0.1; t_{cal} = -0.45, ρ of 0.656 > 0.1).

Using the coefficients of the individual independent variables in explaining the magnitude of the effect as shown in Table 2; the result of the analysis revealed that a unit increase in environmental sustainability practices would lead to 61.8% increase in financial performance and when the firm size increases by 1 unit, the financial performance would decline by 1%. Also, a unit increase in firm's liquidity would result to 3.1% increase in its financial performance while an increase in firm's leverage position would result to a decline in the financial performance by 0.1%.

The result of the coefficient of determination (Wald test = 103.54 with ρ of 0.00 < 0.05) which measures the joint effect of all the explanatory variables on the dependent variable showed that environmental sustainability practices, firm size, liquidity and leverage jointly have significant influence on financial performance of listed firms in Nigeria. The adjusted R^2 of 0.091 showed that the environmental sustainability practices, firm size, liquidity and leverage jointly caused 9.1% variation in financial performance of listed firms in Nigeria. This implies that 90.9% variation in the financial performance of listed firms in Nigeria is as a result of other factors that are not captured in this model.

5   Discussion of findings

The empirical findings from this study revealed significant positive relationship between environmental sustainability practices and financial performance of the 34 sampled companies listed on the Nigerian Stock Exchange. The result indicates that environmental practice has a positive and significant impact on financial performance. For the control variables, the regression result show that firm size and leverage exerted insignificant negative impact on financial performance while liquidity exerted positive significant impact on financial performance.

The findings of environmental practice support the stakeholders' theory as the result indicates the extent to which sampled firms employ environmental practice to create harmony amongst key stakeholders and secure their license to operate. The positive relationship suggests that on the average, the sampled firms embrace environmental sustainability practice at a level where the potential benefits are realized. When Firms embrace environmental sustainability practice as part of its strategic business decisions it engenders improved competitive advantage that reflects on financial performance. Strategic environmental practice results to cost savings and cost reduction in the long run that positively impacts financial performance. It also results to effective stakeholder engagements that improves relationships and provides veritable platform for conflict resolutions. This result is consistent with the *a-priori* expectation of this study that predicts positive association between elements of corporate sustainability and overall financial performance. This finding is consistent with the results of Okafor (2018) and Ahmed, Zakaree and Kolawole (2016) that found a positive relationship between environment as a component of CSRD and financial performance. However, the results contradicts the findings of Lopez, Gacia and Rodriguez (2007) that found a negative relationship between CSR and PBT and Sila and Cek (2017) who found a positive insignificant impact between environmental practice and financial performance.

Firm size reveals a negative insignificant impact on financial performance. This is indicated by the sign of the coefficient. However, the influence of size is insignificant on financial performance. The negative coefficient implies that large firms do not have much latitude for improved financial performance because they are characterized by bureaucracy and inertia. Large firms are deemed to have attained the climax in the business life cycle that limits their potential for improved financial performance; at such stage they require corporate restructuring and business re-engineering to provide new vista for improved financial performance. The findings suggest that size of listed firms in Nigeria is a detrimental factor in the pursuit of sustainable financial performance. Further, it connotes ineffective and inefficient asset utilization by the corporate managers of the sampled firm within the time horizon of the study. This finding aligns with study of Lopez, Garcia and Rodriguez (2007) that found a negative insignificant effect between size and profit before tax but negates the *a-priori* expectation of this study that predicts a positive association between the two constructs. On the contrary, the finding negates the result of Waddock and Graves (1997) who found a positive impact.

From the result of the regression between environmental sustainability practices and overall financial performance, Leverage exerted negative insignificant influence on financial performance. This is not in tandem with our *a-priori* expectation which predicts a positive association. The negative association implies that increases in leverage will lead to decrease in financial performance suggesting an inverse relationship. Firms with high leverage have cash flow obligations in interest and capital repayment that restrains management from embarking on additional cash outlays. Also Leverage

does contain restrictive covenants that could limit the extent of environmental sustainability practices Firms may undertake. This result aligns with the findings of Uwuigbe and Egide (2012) and Dafwa and Hammarstrom (2015) that a negative association exists between leverage and performance.

Liquidity exerted positive significant effect on overall financial performance. This is indicated by the sign and direction of the coefficient and the p-value < 0.05. The positive sign aligns with the *a-priori* expectation of the study that predicts appositive association. The result also supports the Stakeholders' and Legitimacy theories that underpin this study. The result implies a linear direction in association such that increases in liquidity will result to increases in overall financial performance. This result suggests that availability of liquidity will provide management the incentive to undertake environmental sustain ability practices at a scale that is sufficient to generate sustainable financial performance for the benefit of key stakeholders. This finding agrees with Waddock and Graves (1997) who assert that firms with high liquidity ratio have the latitude to invest in environmental sustainability practices. However, the findings contradict Suttipun and Setyadi (2014) that found negative significant relationship between the variables.

The test of joint significance of environmental sustainability and control variables (size, liquidity and leverage) with the overall financial performance confirmed that environmental sustainability practices, firm size, liquidity and leverage jointly have significant influence on financial performance of listed firms in Nigeria. This implies that these variables are significant factors that influence the achievement of sustainable financial performance where they have been undertaken on a scale and manner sufficient to engender the desired benefits. The adjusted R^2 of 0.091 showed that the environmental sustainability practices, firm size, liquidity and leverage jointly caused 9.1% variation in financial performance of listed firms in Nigeria. This implies that 90.9% variation in the financial performance of listed firms in Nigeria is as a result of other factors that are not captured in this model. This implies a very weak predictive power of the explanatory variables suggesting that a greater part of the explained variable is caused by other factors that were not captured in the model.

6   CONCLUSION AND RECOMMENDATION

The study investigated the relationship between environmental sustainability practices and financial performance of companies listed on the Nigerian Stock Exchange. A model was developed to achieve the objective and the result of the regression test indicated that there is a positive and significant relationship between environmental sustainability practices and financial performance. Arising from the findings the study concluded that environmental sustainability practices, controlled by firm size, liquidity and leverage exerted significant effect on the overall financial performance. Specifically, Environmental sustainability practice and Liquidity made significant individual contribution to variation in financial performance of listed companies on Nigerian Stock Exchange.

Based on the findings, the study recommend that Board and Management of Firms should look beyond the Agency and Shareholders' theories rather they recognize the interest of relevant stakeholders such as employees, customers, government and shareholders. Firms should embrace the principles of environmental sustainability and incorporate the concept into corporate strategy. To realize the potential benefits of environmental sustainability, the concept should be integrated into the policies of the firm. This strategy will facilitate the management of associated risks and opportunities. Environmental Sustainability Practices should be considered as an investment that is pivotal to sustainable financial performance.

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