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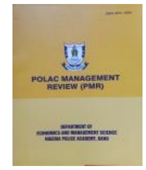

SUSTAINABILITY PERFORMANCE ON CORPORATE TAX AVOIDANCE OF LISTED OIL AND GAS COMPANIES

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Abstract

The study examines the effect of sustainability performance on tax avoidance of listed oil and gas companies in Nigeria. The study adopted sample size of six (6) listed oil and gas companies in Nigeria from Nigeria Exchange Group and the relevant data was extracted from the annual financial reports and account of the sampled listed oil and gas companies for a period of twelve years, from (2010 – 2021). Secondary data was used, and analyzed using Pearson correlation and regression analysis with aid of STATA. The result of the study found that sustainability performance has no significant impact on tax avoidance of the listed oil and gas companies in Nigeria. The study recommends that there is need for corporate organizations to engage the service of tax consultants to organize the firm's financial dealings in such a way that the firm suffers a minimum tax liability.

Keywords: Corporate Tax, Oil, Gas, Sustainability, Company

1. Introduction

Tax avoidance is a way companies engage in aggressive tax planning activities to reduce the payment of tax liability by using the loopholes in the tax frame work which in turn is detrimental to the revenue generation and performance of any nation. Tax avoidance is a great issue of concern to any nation, and it should not be viewed lightly since it leads to a decrease in tax revenue of a country which is used for the development and supply of social amenities. The aspect of corporate tax avoidance has received less attention from researchers (Dyreng et al., 2010). One of the disadvantages of tax avoidance is the fact that corporate tax avoidance leads to a substantial loss of revenues going to the purse of government. These lost revenues have implications in the provision of public goods, general government administration as well as fiscal policy.

In the most recent literature, tax avoidance has gained more and more attention. As a result, tax evasion has garnered increased attention in the most recent research. Oil and gas businesses in Nigeria are under increasing pressure to increase their commercial operations and minimize their tax burden. As a result, they impose tax evasion as a means of maintaining their absolute business performance. In effect Oil and gas corporations in Nigeria are under increasing pressure to increase their commercial operations and decrease their tax burden. As a result, they impose tax evasion as a means of maintaining absolute corporate performance (Emeka & Ngozi, 2022).

Business organizations utilize sustainability as a strategy to maximize revenues, diversify, differentiate their products, and assess how well their enterprises are performing internationally in relation to their environment. The growth of strategic thinking, however, emphasizes the necessity of undertaking initiatives targeted at incorporating social and environmental considerations into the corporate decision-making process. Consequently, businesses that effectively integrate their people and environment are regarded as socially responsible (Nnamani et al., 2017). The repercussions of business development on the environment and society include environmental deterioration, natural disasters, global warming, and social unrest. As a result, a large number of corporate organizations assume equal accountability for social and environmental challenges in addition to financial issues. One argument is that companies mirror the concerns of their stakeholders and the escalating social norms. Contrarily, taxes are required payments made by the government against the earnings of both individuals and businesses. According to Uniamikogbo et al. (2019), tax aggressiveness is essential for management to minimize a company's tax burden. Tax aggressiveness is an attempt to use lawful barriers to avoid tax refunds or minimize tax payments. It is an attempt to use lawful barriers to avoid tax refunds or minimize tax payments.

Since the beginning of the tax system, tax avoidance has plagued it and seems to have no easy solution. Some have blamed the situation on tax authorities not living up to expectations regarding the administration of taxes, while others attribute it to the unpatriotic nature of taxpayers. This could be because of the annual rate revisions that result in an increasing tax burden (Adebisi et al., 2013). These challenges include corruption, weak governance, insufficient locally financial support, crooked local and foreign operators, lack of suitable infrastructures, underdeveloped local contractors, non-existence of reliable R&D centers and technical expertise deficiency among others. Tax avoidance damages vital common spaces required for the proper operation of regulatory compliance, organizational integrity, and society. It is not merely a financial issue for tax authorities. A more comprehensive and all-encompassing knowledge of the effects of tax avoidance behavior on organizations and society can be obtained by characterizing it as a sustainability issue.

Sustainability reporting has a significant effect on the financial performance of listed oil and gas firms in Nigeria. This study therefore, recommends among others that, listed Nigerian oil and gas firms should emphasize more on reporting their sustainability activities as it is capable of improving their financial performance. The policy makers and standard setting organizations should facilitate the issuance of a sector specific reporting guidelines to facilitate compliance.

Most of these studies on effect of sustainability performance on tax avoidance of listed oil and gas companies, at the same time, it recommends that necessary measures should be taken by the tax authority to improve revenue collection and reduce tax avoidance. It also proposed that campaign against corruption, public enlightens on tax matters and revision of tax processes should be undertaken. In the light of the identified gaps, this study seeks to examine the effect of sustainability performance on tax avoidance of listed oil and gas companies in Nigeria.

The main objective of this research is to ascertain the effect of sustainability performance on tax avoidance of listed oil and gas companies in Nigeria. The specific objectives include:

i. To ascertain the effect of sustainability performance on effective tax rate of listed oil and gas companies in Nigeria.

ii. To ascertain the effect of sustainability performance on cash effective tax rate of listed oil and gas companies in Nigeria.

2. Literature Review

2.1 Conceptual Issues

Concept of Tax Avoidance

Tax avoidance is the use of legal methods to minimize the amount of income tax owed by an individual or business. This is generally accomplished by claiming as many deductions and credits as are allowable. It may also be achieved by prioritizing investments that have tax advantage, such as buying tax free municipal bonds. Individual tax payers and corporations can use forms of tax avoidance to lower their tax bills. Tax credits, deductions income exclusion, and loopholes are forms of tax avoidance. These are legal tax breaks offered to encourage certain behaviors, such as saving for retirement or buying a home. Tax avoidance is unlike tax evasion, which relies on illegal methods such as underreporting income.

Tax avoidance is a legal strategy that many taxpayers can use to avoid paying taxes or at least lower their tax bills. In fact, millions of individuals and business use some form of tax avoidance to cut down how much they owe to the internal revenue service (IRS) legal and legitimately. When

Used in this context, tax avoidance is also referred to as a tax shelter.

Tax payers can take advantage of tax avoidance through various credits, deductions, exclusions, and loopholes such as;

i. Claiming the child tax credit

ii. Investing in a retirement account and maxing out your annual contributions.

iii Taking the mortgage tax deductions.

iv Putting money in to health savings account.

Credits and deductions (and, therefore tax avoidance) must first be approved U.S. tax code. Once done, these provisions can be used for the benefit or relief of some or all taxpayers. Tax avoidance is built into the internal revenue code (IRC). Lawmakers use the tax code to manipulate citizen behavior by offering tax credits, deductions, or exemptions. By doing so, they indirectly subsidize certain essential services such as health insurance, retirement saving, and higher education. Or they may use the tax code to advance national goals, such as greater energy efficiency.

Laws known as General Anti-Avoidance Rule GAAR statutes, which prohibit aggressive tax avoidance, have been passed in several countries and regions including Canada, Australia, New Zealand, South Africa, Norway, Hong Kong and the United Kingdom. In addition, judicial doctrines have accomplished the similar purpose, notably in the United States through the business purpose and economic substance doctrines established in Gregory v. Helvering and in the United Kingdom in Ramsay. The specifics may vary according to jurisdiction, but such rules invalidate tax avoidance that is technically legal but is not for a business purpose or is in violations of the spirit of the tax code. Tax avoidance represents a firm's deliberate efforts to reduce its tax liabilities through either legal or illegal means or strategies. Since the boundary between legal and illegal acts is not clear, the legality of a firm's tax position is determined by the authoritative bodies after the fact. Thus, there is no clear ex ante distinction between legal tax avoidance and illegal tax evasion.

Hanlon and Heitzman (2021) depict the types of tax avoidance behavior on the continuum ranging from a common tax saving strategy of municipal bond investments (legal tax avoidance) up to aggressive tax strategies including tax shelters (illegal tax evasion). Using this model, a firm's tax avoidance strategy can be placed anywhere on the continuum depending upon the degree of aggressiveness the firm pursues in the course of reducing its tax liabilities. A firm's tax strategy and practice are proprietary information as its tax return is not public information. Tax researchers try to develop inference about a firm's tax policy using proxies that are selected from its financial statements.

Lisowsky et al. (2013) illustrate five empirical proxies over the continuum from the legal tax avoidance to the illegal tax evasion, such as a Generally Accepted Accounting Principles (GAAP) effective tax rate, a cash effective tax rate, total book-tax differences, permanent book-tax differences, discretionary permanent book-tax differences, and reportable transactions. As the reportable transactions represent business transactions that are crafted solely to evade taxes without business purposes, the Internal Revenue Service (IRS) requires tax payers to disclose all reportable transactions in a corporation's income tax returns. Accordingly, the reportable transactions are placed at the right end of the continuum as a proxy for the most aggressive tax avoidance strategy while the GAAP effective tax rate at the left end to capture all types of tax avoidance strategies. Further, as more than one party is involved in developing corporate tax strategies, analytical studies in corporate tax research are sparse.

Concept of Sustainability

Sustainability refers to the strategy adopted by corporate entities to reduce negative environmental impact resulting from operations in a particular market. According to Becker (2016); sustainability is a modern concept of development; where qualitative factors relating to environment and socio-economic variables are given priority by corporate entities in the process of rendering their services and operations. Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources we also need social and economic resources.

Clough (2019) defines sustainability as a process that helps create a vibrant economy and a high quality of life. While respecting the need to sustain natural resources and protect the environment.it expresses the principle that future generations should live in a world that the present generation has enjoyed but not diminished. According to Rolf (2017), sustainability is achieved when all people on earth can live well without compromising the quality of life for future generations. Sustainability is a systematic concept, relating to the continuity of economic, social, institutional and environmental aspects of human society. It is intended to be means of configuring civilization and human activity so that society, its members and its economics are able to meet their needs and express their greatest potential in the present. Sustainability affects every level of organization, from the local neighborhood to the entire planet. Historically, the term 'sustainable' arose among those with environmental concerns, and most of literature and assessment instruments reflect this emphasis. However, it is increasingly recognized that sustainability cannot be achieved without addressing social justice issues. There can be no sustainable communities and institutions without social justice. An academic institution committed to sustainability should help students understand the roots of today's injustices and motivate them to seek justice and humaneness in full integration with understanding the roots of environmental degradation and modeling environmentally sustainable practices.

Sustainability Performance

The most commonly accepted definition of sustainability performance is attributed to the Brundtland Commission. Dyllick and Hockerts (2020) define sustainability performance as ''meeting the needs of a corporation's current direct and indirect stakeholders without compromising its ability to meet the needs of future stakeholders as well".

Sustainability performance focuses on meetings the needs of the present without compromising the ability of future generation to meet their own needs" (World Commission on Environment and Development, 2006). For the business enterprise, Sustainability performance means adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future (International Institute for Sustainable Development, 1992). For industrial development to be sustainable, it must address important issues at the macro level such as: economic efficiency (innovation, profitability, and productivity). Sustainable businesses can survive shocks because they are intimately connected to healthy economic, social and environmental systems.

Zairi and Liburd (2021) defined sustainability performance as 'the ability of an organization to adapt to change in the business environment to capture contemporary best practice methods and to achieve and maintain superior competitive performance'.

Sustainability within a business creates value for customers, investors, and the environment.

2.2 Empirical Review

Recently and over the years sereral studies were conducted related to sustainability within and outside the oil and gas sector which include; Cortez 2011, Brainlee and Susan 2015, Bisig and Hummel 2017, Clarisse and Rasmimi 2018, Arise et al 2020, Astrid and Kashan 2020, Ogunmakin et al 2020, Echobo 2021, Egolum 2021,Mujiani 2021, Refianan and Dewi 2020, Supriyati and Dwi 202, Omaliko and Erinoso 2022.

Emmanuel and Mary (2022) investigated the effect of environmental conservation, sustainability, and financial performance of listed oil and gas companies in Nigeria, spanning from 2011-2020. The study adopted ex-post facto as its research design and the data were gathered from the listed oil and gas companies on the Nigerian Stock Exchange as of 31st December 2020. A sample of 11 listed oil and gas companies was selected out of the 13 listed oil and gas companies on the Nigeria stock exchange.

Emeka and Ngozi (2022) investigated the relationship which exists between tax aggressiveness moderated by firm size and sustainability of oil and gas firms in Nigeria. In order to determine the relationship between tax aggressiveness and corporate sustainability, tax aggressiveness was measured using effective tax rate while corporate sustainability on the other hand was proxy using social-environmental performance.

Similarly, Ngu (2021) examined the effect of petroleum profit tax on the performance of listed oil and gas firms in Nigeria. In achieving this objective, the ex-post facto research design was employed and secondary data were collected from the annual reports of 6 listed oil and gas firms involved in the upstream sector in Nigeria covering 2012-2018. Simple linear regression technique was used to analyze the data using views to determine the effect of the independent variable (Petroleum Profit Tax) on the dependent variables (Return on Assets and Earnings per Share).

Uche et al. (2021) examined the effect of ownership structure on firm value of listed oil and gas firms in Nigeria. Specifically, the study determined the effect of managerial ownership, government ownership, ownership concentration and CEO ownership on firm value of oil and gas firms from 2010 to 2019. Similarly, Nwobu et al. (2021) assessed the level of corporate sustainability disclosures in an environmentally-sensitive industry in Nigeria - the oil and gas industry. The paper aims to evaluate the extent of sustainability disclosure in the annual report’s oil and gas industries. The study retrieves secondary data on sustainability disclosure for 10 years (2010 - 2019) from eight oil and gas industries listed in the Nigerian stock exchange through a desktop approach and content analysis methodology. Content analysis of the sustainability disclosure is to identify items of sustainability disclosed in the annual reports.

Mohammed and Abdulkarim (2021) examined the effect of sustainability reporting on financial performance of quoted Nigerian oil and gas firms. The population of the study comprises 12 listed oil and gas firms in Nigeria. Census sampling technique was adopted and filter was used. For firm to be selected it must be listed on or before 1st January 2009 and remain listed up to 31st December 2019. The firm must also publish their annual reports for the relevant period of the study. Based on these, five firms that failed to meet the set criteria were filtered out. This study makes use of Return on Asset to measure financial performance. Secondary source was used to collect the relevant data. Data in relation to sustainability reporting were extracted from the firm’s annual reports as well as standalone sustainability reports. However, data in relation financial were collected from the firm’s annual reports. Data for this study were analyzed using STATA 13 statistical software.

Akor and Okey (2021) investigated the relationship between sustainability accounting and performance of selected quoted oil and gas companies in within the period of 2012-2017. Specifically it examined the relationship between environmental accounting and return on assets of quoted oil and gas companies in

Nigeria. Explanatory and correlational design was adopted for the study while secondary data was utilized for the study. Data was gathered from annual reports and accounts of the companies available on their websites and from Nigerian Stock Exchange (various years). The data collected was from the period 2012 to 2017. The result of the study showed that there is no significant relationship between environmental accounting and return on assets of the oil and gas companies in Nigeria under study. The study therefore recommends that amongst others that the management of the oil and gas companies should channel efforts towards engaging in adequate environmental accounting disclosure as a way of increasing stakeholders trust and showing more transparency in their operations. This could in turn lead to achieving better financial performance.

Oboh and Nosa (2021) examined the impact of corporate social responsibility on tax avoidance in Nigeria. In a bid to achieve this, data was collected from the annual reports and accounts of banks quoted on the floor of the Nigerian stock exchange. The result shows that CSR has insignificant impact on tax avoidance of DMBs in Nigeria.

Hummel et al. (2017), undertake a research on sustainability performance and tax avoidance. The result of the study portrays a positive relationship between tax avoidance and sustainability performance and is robust across the environmental and social dimensions of sustainability and various measures of tax avoidance. The overall study provides novel insight into the association between corporate social performance and corporate tax avoidance.

2.3 Theoretical Review

Agency Theory

The studies of the agency theory assume that tax evasion is a firm's strategic choice that is defined by an employment contract (actual or implied) between shareholders and tax managers. Chen and Chu (2005) indicate the suboptimal level of employment contracts resulting from a firm's tax avoidance strategy for two reasons. First, managers should be assured with ex ante compensations for future efforts to reduce tax liabilities. Thus, the level of compensation is not tied with the level of managers' actual effort. Second, managers' attempt to reduce a firm's tax liabilities would compromise the integrity of its internal control systems as any illicit tax evasion plans should be executed in a clandestine manner. Thus, managers could create on purpose and take advantage of the opaque internal control function for their own personal gains at the expense of shareholders. Their analysis is consistent with Desai and Dharmapala (2006) and Desai et al. (2007).

Desai and Dharmapala (2006) propose a complementary association between rent extraction and tax shelters as managers' experience reduced costs for rent extraction under the environment of tax sheltering. Even though shareholders would like to achieve an increase in after-tax firm value through providing incentives to managers, they do not want the managers to use tax shelters, which would serve as tools for rent extraction as well. Nonetheless, the complementary association is not held for well-governed firms as managers can be kept in check. Thus, tax shelters can improve the value of firms with strong corporate governance.

Desai et al. (2007) further extend an interaction between corporate taxes and corporate governance among three parties: the tax authorities, insiders, and shareholders. Insiders would perceive an increase in marginal benefits from rent extraction in the high-tax regime because of high before-taxable income. Strengthened tax enforcement, however, would discourage insiders from engaging in rent extraction and thus help a firm's value appreciation. Tax revenues would increase through raising a tax rate under the environment of strong corporate governance. On the other hand, under the environment of weak or ineffective corporate governance, raised tax rates would backfire.

Ability to Pay Theory

Ability to pay theory is the theory of taxation that the level of taxation should be related to the tax payer's ability to pay. Taxpayers with higher incomes pay tax at a higher rate than those on low incomes. This is the basis of progressive taxation. Many taxes, such as VAT, fuel tax, or sales tax, are not linked to the purchaser's ability to pay and therefore regressive taxation. Kendrick (1939) propounded this theory which states that taxes should be levied on individuals and companies according to their ability to pay. This implies that tax burden should be placed on companies and individuals with higher income. Kendrick (1939) stated that money for public expenditure should come from "him that hath" instead of "him that hath not". This implies that more tax burden should be placed on companies and individuals with higher income. It does not assume any commercial or semi-commercial relationship between the state and the citizens.

According to this theory, a citizen is to pay taxes just because he can and his relative share in the total tax burden is to be determined by his relative paying capacity. This doctrine has been in vogue for at least as long as the benefits theory. A good account of its history is found in Seligman. This theory was bound to be supported by socialist thinkers because of its conformity with the ideas and concepts of justice and equity. The basic tenet of this theory is that the burden of taxation should be shared by the members of society on the principles of justice and equity and that these principles necessitates that the tax burden is apportioned according to their relative ability to pay. Someone who earns more should pay more tax while an individual who earns less should pay less tax. For the purpose of listed oil and gas companies' liquidity which is the basis on which they can provide funds for reinvestment and recapitalization, the ability to pay tax should be considered seriously to enable them have enough liquid asset to make viable and profitable investment in their business operations. This is in line with progressive taxation principle, fairness and equity.

3. Methodology

3.1. Research Design

Quantitative approaches that were adopted to establish the relationship between sustainability performance and tax avoidance of listed oil and ascertaining of the effect of past factors on the present happening or event. The data were extracted from the annual report of the oil and gas companies on the Nigeria Exchange Group. The population of the study comprises all incorporated listed oil and gas companies registered with the Nigerian Exchange Group (NGX). The study sampled six (6) selected companies; the study makes use of audited financial reports in generating coherent data for supporting the research subject matter.

Table 1: Selected Companies

S\No.	Company	Symbol	Year of Listing
1	Ardova Plc.	ARDOVA	1964
2	Conoil Plc.	CONOIL	1970
3	Eterna Plc.	ETERNA	1989
4	Japaul Gold and Ventures Plc.	JAPAULGOLD	1982
5	MRS Oil Nigeria Plc.	MRS	1969
6	Total Energies Marketing Nig. Plc.	TOTAL	1956

Source: Author's Compilation

There are many different methods and instrument of data collection, but for the purpose of this research, the researcher relied wholly on secondary sources of data. The data were extracted from the annual reports and the accounts of the sample oil and gas companies for a period of twelve years (2010-2021). Data collected were checked for completeness, categorized and coded and entered into a computer where it was summarized into frequency tables. The study adopted descriptive statistics, correlation analysis and regression analysis technique. The data are extracted and entered into STATA version 14 for descriptive analysis

Table 2: Variables, Measurement and Source

Variables	Proxies	Measurement	Source
Dependent Variable: Tax Avoidance	ETR	Tax liability divided by profit before tax	Hanlon and Heitzma (2018),
	CETR	Tax paid divided by profit before tax	Davis et al.(2016)
Independent Variable	Sustainability performance	Total amount spent on corporate social responsibilities divided by total assets.	Zairi and Liburd (2021)
Control Variable	Firm Size	Natural logarithms of firm's total assets	(Endri et al. 2020)
	Firm Age	Measured as the years of companies since incorporated	Ango and Aliyu (2020)
	Financial Leverage	Debt bearing interest divided by total assets	(Iqbal & Usman, 2018)
	Profitability	Profit before tax divided by total assets.	Dave (2012)

Source: Author's Compilation

3.2 Model Specification

The models used empirically in testing the hypothesis formulated for the study is as follows:

ETR/CETR = f(CSR, LEV, FAGE, FSIZE and ROA).. (1)

Express in equation form as follows:

$ETR_{it} = \beta o + \beta_1 CSR_{it} + \beta_2 LEV_{it} + \beta_3 FAGE_{it} + \beta_4 FSIZE_{it} + \beta_5 ROA_{it} + \varepsilon_{it}$ (2)

$CETR_{it} = \beta o + \beta_1 CSR_{it} + \beta_2 LEV_{it} + \beta_3 FAGE_{it} + \beta_4 FSIZE_{it} + \beta_5 ROA_{it} + \varepsilon_{it}$..(3)

Where:

ETR_{it} = Effective Tax Rate for Company i at time t

$CETR_{it}$ = Cash Effective Tax Rate for Company i at time t

CSR_{it} = Corporate Social Responsibilities for company i at time t

LEV_{it} = Leverage for company i at time t

$FAGE_{it}$ = Firm Age for company i at time t

$FSIZE_{it}$ = Firm Size for company i at time t

ROA_{it} = Profitability for company i at time t

β = Intercept

ε= Error terms

it= Firm i at time

4. Results and Discussion

4.1 Descriptive Analysis

The data relating to sustainability performance variable and tax avoidance in order to measure tax avoidance, the researcher used Effective Tax Rate (ETR), Cash Effective Tax Rate (CETR). The proxy for independent variable of this study is Corporate Social Responsibility (CSR) and financial leverage, firm size, firm age, and return on asset represents control variables. This is presented in

Table 3: Descriptive Statistics

Variables	Observation	Mean	Standard Deviation	Minimum	Maximum
ETR	72	0.2272	0.1822	-0.383	0.5491
CETR	72	0.2088	0.2282	-0.3157	0.7082
CSR	72	0.0004	0.0020	0	0.0172
LEV	72	0.2200	0.1569	0	0.7969
FS	72	10.7173	0.2467	9.9475	11.3196
AGE	72	41.6666	13.7973	16	64
ROA	72	0.0203	0.1083	-0.5573	0.1486

Source: STATA 14

The descriptive statistics of the constructs as indicated in Table 3 presents results for the mean and standard deviation of the entire variables used for the study. The Effective Tax Rate (ETR) has a mean value of 0.2272 with a standard deviation of 0.1822. The minimum and maximum values are -0.383 and 0.5491 respectively. Also, Cash Effective Tax Rate (CETR) has a mean value of 0.2088 with standard deviation of 0.2282 while the minimum and maximum values are -0.3157 and 0.7082 respectively. In same vein, corporate social responsibilities (CSR) have a mean value of 0.0004 with a standard deviation of 0.0020 while the minimum and maximum values are 0 and 0.0172 respectively.

Furthermore, from the Table 3 financial leverage has a mean value of 0.22%, with minimum and maximum values of 0% and 0.79%. This shows a lower variation in financial leverage of the sampled listed of oil and gas companies as portrayed by the standard deviation of 0.15%, which is lower than the mean value. The zero minimum value indicates that some sampled the listed of oil and gas companies do not have debt bearing interest at a particular period. In the same vein, firm size of the listed oil and gas companies in Nigeria has the minimum and maximum values of 9.9475 and 11.3196 respectively. The average value of the firm size 10.7173 with the standard deviation of 0.2467. The average firm age is approximately 42 years. This shows that, on the average, the sampled oil and gas companies are 42 years with a standard deviation of 14 years with minimum and maximum values of 16 and 64 years, respectively. This indicates that whereas some of the oil and gas companies were incorporated Nigeria in 1994, some were incorporated since 1951. This gives an insight as to whether being incorporated earlier will result in companies making the issues of sustainability performance important. Lastly, the Return on Asset (ROA) has a mean value of 0.0203 with a standard deviation of 0.1083 while the minimum and maximum values for the periods -0.5573 and 0.1486 respectively.

4.2 Correlation Matrix

The result of Pearson correlation of the dependent variable (tax avoidance) and explanatory variable (effective tax rate and cash effective tax rate) is presented. The correlation measures the strength and direction of relationship between all pair of variables of the study:

Table 4: Correlation Result

	ETR	CETR	CSR	LEV	FS	AGE	ROA
ETR	1.0000						
CETR	0.6530	1.0000					
CSR	0.2306	-0.0203	1.0000				
LEV	-0.0771	-0.0644	-0.0170	1.0000			
FS	0.2448	0.3510	0.0282	-0.0010	1.0000		
AGE	0.2657	0.3465	0.0198	-0.2600	0.7635	1.0000	
ROA	0.5034	0.3104	0.0454	-0.4779	0.1476	0.2755	1.0000

Source: Annual Reports and financial statement of STATA 14

The table shows the correlation matrix between the explanatory variables of the study. The values of the correlation coefficient vary from -1 to 1. The sign of the correlation coefficient indicates the bearing of the association whether positive or negative. The complete value of the correlation coefficient indicates the strength, with larger values indicating stronger relationships. The correlation coefficients on the main diagonal are 1.0000, because each variable has an absolute positive linear relationship with itself.

The correlation coefficient of the independent variable (sustainability performance) and the dependent variable (effective tax rate and cash effective tax rate) are very weak and negatively correlated, as the coefficients are far from zero, which indicates that a decrease in those variables leads to an increase in the amount spent on tax avoidance of the listed oil and gas companies in Nigeria. Also, effective tax rate, firm size, firm age, financial leverage have a very weak and positive correlation with tax avoidance of the listed oil and gas companies in Nigeria.

4.3 Regression Analysis

The study uses two dependent variables for determining the impact of sustainability performance of listed oil and gas companies in Nigeria. These two explanatory variables are Effective tax Rate (ETR) and Cash Effective Tax Rate (CETR). The study hypothesizes no significant impact between the explanatory variables and sustainability performance. Table 4 below reports the results of the regression analysis of the study.

Table 5: Regression Results

Variable	**ETR**		**CETR**	
	Coef.	p->|t|	Coef.	p->|t|
CSR	18.4131	0.038	-4.5365	0.714
LEV	0.2582	0.062	0.1663	0.389
FS	0.0530	0.656	0.1836	0.269
Age	0.0014	0.509	0.0023	0.442
ROA	0.9405	0.000	0.6276	0.019
Cons	-0.4872	0.684	-1.9052	0.254
R-sqaured				
Within	0.2031		0.0618	
Between	0.8667		0.7406	
Overall	0.3586		0.2053	
Prob>F	0.0000		0.0044	

Source: Generated by the Researcher using STATA 14

The multiple linear regressions equation becomes

$ETR= -0.4872-18.4131CSR_{it}+0.2582\ LEV_{it}-0.0530\ FS_{it}+0.0014\ AGE_{it}-0.9405\ ROA_{it}+\varepsilon_{it}$

$CETR= -1.9052- -4.5365CSR_{it}+0.1663\ LEV_{it}-0.1836\ FS_{it}+0.0023\ AGE_{it}-0.6276\ ROA_{it}+\varepsilon_{it}$

Presents the Random Effects (RE) regression result of the explanatory variables (sustainability performance, leverage, firm size, firm age and return on asset) and the dependent variable (ETR and CETR). Also the results from the Hausman test that were conducted for model one and two (0.1762 and 0.5058) were found to be significant, meaning that the results of fixed effect was rejected. Hence, random effect results were selected for the two model as presented in Table 4.3.

The p-value indicates the fitness and reliability of the model to show a statistically significant relationship between explanatory and dependent variables. Hence, the p-value of 0.0000, 0.0044 for the two models provides evidence that the model were fit. The cumulative R^2 of 36% (0.3586) for model one, 21% (0.2053) for model two, which gives cumulative effect of explanatory variables jointly on the dependent variable (ETR and CETR). This means that 36% and 21% of the total variation in sustainability performance of the listed oil and gas companies in Nigeria were caused by corporate social responsibility, leverage, firm size, firm age and return on asset while the remaining of the total variation in the corporate social responsibility is caused by other variable not included in the model.

4.3 Test of Hypotheses

The result revealed that sustainability performance has an insignificant and positive impact on effective tax rate of listed oil and gas companies in Nigeria which is justified by coefficient of 18.4131 and p-value of 0.038. The null hypothesis one (H01) which says that sustainability performance has insignificant effect on effective tax rate of listed oil and gas companies in Nigeria failed to reject. This is in line with the studies of Nwaorgu et al. (2020) concluded that sustainability performance has an insignificant effect on effective tax rate. Which is against the study of Emeka and Ngozi (2022), concluded that sustainability performance has significant and positive relationship with effective tax rate of listed oil and gas companies in Nigeria.

Similarly, the result also shows that sustainability performance has insignificant and positive impact on cash effective tax rate of listed oil and gas companies in Nigeria which is justified by coefficient of -4.5365 and p-value of 0.714. The null hypotheses two (H02) which stated that sustainability performance has insignificant effect on cash effective tax rate of listed oil and gas companies in Nigeria failed to reject. This finding is in line with studies of Frank et al. (2009), which stated that sustainability performance has an insignificant effect on cash effective tax rate. And an inconsistency which stated that, sustainability performance has a significant positive effect on cash effective tax rate Davies et al. (2016) and Hoi et al. (2013). In summary, this implies that sustainability performance has no significant effect on tax avoidance of listed oil and gas companies in Nigeria.

5. Conclusion and Recommendations

Based on the findings, the study has reached a conclusion that impact of sustainability performance has no significant and positive relationship with tax avoidance with the help of corporate social responsibility use as a tool to measure sustainability performance. It has to do with environmental impact on the performance of a business. With the help of interaction with the environment, it helps companies to sustain the business. At the same vein, the impact of the interaction on tax avoidance makes companies to pay minimum tax with the help of donation to charitable organization, donation of scholarship. By making provisions to all this when realized, it will reduce operating profit or profit before tax which means that tax liability will be lower.

On the basis of the findings and conclusions, the following recommendations are made

i. There should be more improve in the effectiveness of tax administration by ensuring proper and equitable tax assessment and timely collection.

ii. The tax execution agencies should create good relationship with the professional associations involved in tax matters so as to increase their support in reducing tax malpractices perpetrated by tax payers with the connivance and often active support of external auditors and tax consultants.

iii. There should be accountability and transparency on the part of government officials in the management of tax revenues for the benefit of the citizens and the growth of Nigerian economy.

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