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EFFECT OF CORPORATE SUSTAINABILITY ON FIRMS' PERFORMANCE IN NIGERIA (2011 – 2020)

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ABSTRACT: *This study examined the effect of corporate sustainability on firms' performance in Nigeria covering the period ten years ranging from 2011 to 2020. It was necessitated by the cost implication of Corporate Sustainability on Firms' performance in Nigeria. Specifically, the objectives of the study are to examine the effect of economic, environmental and social sustainability on the profit for the year of the selected firms in Nigeria. This study adopts ex-post facto research design as the researcher made use of past data in the form of secondary data to investigate the effect of corporate sustainability on performance of firms. Four (4) major high sustainability firms were purposively selected based on the complete availability of data for the period under review and their greatest effect on environment in Nigeria namely; Julius Berger Nigeria Plc., Conoil Plc., Nigeria Breweries Plc. and Dangote Cement Plc. The study used secondary data extracted from the annual reports of the selected firms. Panel data regression method was used to estimate the parameters of the model. The major findings of the study were that economic, environmental and social sustainability have probability values of 0.184406, -0.124495 and 0.064896 respectively which implies that they have non significant impact on profit for the year of selected firms in Nigeria. It is therefore the recommendation of this study that firms should be intentional and strategic in incorporating sustainability measures in their business activities.*

KEYWORDS: Corporate Sustainability, Firms' Performance, Economic, Environmental, Social Sustainability, Nigeria

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INTRODUCTION

BACKGROUND TO THE STUDY

For optimal performance, management of firms should take into account economic, social and environmental factors. Sustainability is meeting the needs of the present generation without compromising the ability of future generations to meet their own needs (Brundtland, 2015). It is current actions which are legal, taking into account present conditions and circumstances while providing and preserving the system for optimal operational position in future. Firms should be accountable for beneficial and harmful effects of their activities on the society and environment in which they exist and operate. Thus disclosure of these effects in a proper sustainability report, which provides a detailed description of their governance structure, stakeholder engagement approach and 'triple bottom line' performance which emphasizes three aspects; people (social), profits (economic) and planet (environmental) (Elkington, 2008).

Managers of firms, which operate on a going concern basis, are part of a large system which receives the positive and negative effect of their operation; and as such they must adapt to the environment for them to achieve their objectives effectively and efficiently. Ekwueme (2017) asserts that the big corporations once looked upon as the exclusive concern of their owners, are now viewed as being responsible to the society also. This implies that firms in addition to maximization of profit and shareholders wealth also act towards maximizing stakeholders' benefits thus in line with the concept of sustainability. Thus, White (2009) maintains that the pressure for corporations to reassure the public of their good behavior has increased. He further emphasizes that organizations are paying attention to their shareholders as well as their stockholders.

There is an increased expectation for all firms to be more transparent in how they treat the environment, handle their corporate governance issues, treat their employees, and treat their communities. In this light, Epstein (2018) maintains that corporations have become more sensitive to social issues and stakeholder concerns and are striving to become better corporate citizens. Whether the motivation is concern for society and environment, government regulation, stakeholder pressures, or economic profit, the result is that managers must make significant changes to effectively manage their economic, environmental and social impact.

These sustainability issues are viewed as having an effect on overall performance of firms. Firm performance comprises non-financial performance as well as financial performance. Non-financial performance includes amongst others such things as market share, product quality, employee development and training, employee safety provisions, research and development. Financial performance includes profit for the year, earnings per share, return on assets, return on investments etc.

It is based on the foregoing that this study is aimed at carrying out an empirical analysis of the effect of corporate sustainability on firm financial performance in Nigeria covering the periods 2011-2020.

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Statement of Problem

Sustainability is a method to create actual and real value in systems that meet the requirements of the present without jeopardizing future generations' ability to fulfill their own needs. The sole aim of every business is to continue to make profit and continue in perpetuity while meeting the expectations of all stakeholders. Management of organizations must engage in practices and corporate strategies that would aid the accomplishment of going concern objectives. Nigerian organizations are a subset of the international space with the economy being driven by the manufacturing and service sectors, and the incorporation of sustainability ethics to business approach and processes are gradually taking over higher positions on the itinerary of policy makers, market regulators, firms and shareholders alike.

Environmental, social and economic (ESE) themes remain a great priority for shareholders; it is imperative for businesses to build ESE considerations into continuing strategy, measure with the right metrics, disclosures and transparency, bringing it up during meetings and using investor proposals to force firms to take action. However, business sustainability implementations in Nigeria are faced with major barriers which are shortage of financial resources; a lack of time; a dearth of information; risks associated with executing a new sustainable practice; current policies and regulations; and existing organizational culture. To ensure the success of successful sustainable business practice, cohesive processes, endless upgrading, investor meetings and streamlining processes are important. It is in view of the aforesaid that the study evaluates the effect of corporate sustainability on performance of selected firms in Nigeria.

Objectives of the Study

The main objective of this study is to examine the effect of corporate sustainability on firms' performance in Nigeria. The specific objectives are to:

1. Determine the effect of economic sustainability on profit for the year of selected corporate firms in Nigeria;
2. Ascertain the effect of environmental sustainability on profit for the year of selected corporate firms in Nigeria; and to
3. Appraise the effect of social sustainability on profit for the year of selected corporate firms in Nigeria.

Research Questions

In line with the objectives of this study, research questions are as follows:

1. What is the effect of economic sustainability on profit for the year of selected corporate firms in Nigeria?
2. How does environmental sustainability affect profit for the year of selected corporate firms in Nigeria?
3. What is the effect of social sustainability on profit for the year of selected corporate firms in Nigeria.

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Statement of Research Hypotheses

The following null hypotheses were tested in the course of the study:

Ho_1: Economic sustainability has no significant effect on profit for the year of selected corporate firms in Nigeria

Ho_2: Environmental sustainability has no significant effect on profit for the year of selected corporate firms in Nigeria.

Ho_3: Social sustainability has no significant effect on profit for the year of selected corporate firms in Nigeria

REVIEW OF RELATED LITERATURE

Conceptual Review

Conceptual, theoretical and empirical reviews were carried out in this section.

Corporate Sustainability

Corporate sustainability ensures the management of resources needed to thrive as an organization and profitable in the long run, has hedged its risks and takes shocks as they may occur. Business sustainability focuses on two categories: its effect on the environment and the society focusing on the long term. With roots in social justice and other movements, it is a rounded approach that considers conservation, social and financial dimensions, knowing that all must be considered together to find lasting wealth with history rooted in post industrial revolution (Anderson, 2018).

Corporate sustainability was first coined in 1994 by John, the founder of a British Consultancy called Sustain-Ability (Elkington, 2014). His argument was that firms should be preparing three different bottom line accounting pillars (and quite separate). One is the traditional measure of corporate profit. The "Bottom-line" of the profit and loss account. The second is the bottom line of a company's "People account"; a measure in some shape or form of how socially responsible an organization has been throughout its operations. The third is the bottom line of the company's "Planet" account measure of how environmentally responsible it has been. Sustainability accounting aims to measure the financial, social and environmental performance of the business entity over a period of time.

Mary (2018) asserts that corporate sustainability means creating long-term shareholder value by embracing opportunities and managing risks arising from social, environmental and economic factors. The May's Report also specified advantages of corporate sustainability. Sustainable behavior adds value to commercial endeavors and makes good business sense. It is specifically a helpful instrument to manage corporate image. It helps in assessing the capabilities and effectiveness of business administration and management. It leads to a shift in the organizational focus from short-term to long-term goals. Transparency is an essential element of corporate sustainability. It can be assessed along various dimensions like energy efficiency, community relations, eco-design, materials efficiency, product recyclability, and employee relations. Corporate sustainability may be seen as the intentional acts of corporate

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firms ensuring that their activities in the short-run do not have negative long-run consequences. It is the integration of economic, social and environmental concern into corporate activities for continuous operation. The firm strives to get the best out of the present while cautious actions are taken not to affect future operations (Umukoro, 2019).

Corporate Sustainability Reporting is a broad term generally used to describe a company's reporting on its economic, environmental and social performance. It can be synonymous with triple bottom line reporting, corporate responsibility reporting and sustainable development reporting, but increasingly these terms are becoming more specific in meaning and therefore subsets of sustainability reporting (KPMG, 2018).

Schaltegger (2014) defines sustainability reporting as a subset of accounting and reporting that deals with activities, methods and systems to record, analyze and report, firstly, environmentally and socially induced financial impacts and secondly, ecological and social impacts of a defined economic system (example, a company, production site, and nation). Thirdly, sustainability reporting deals with the measurement, analysis and communication of interactions and links between social, environmental and economic issues which constitute the three dimensions of sustainability. Global Reporting Initiative (GRI) (2011) defines sustainability reporting as the practice of measuring, disclosing and being accountable to internal and external stakeholders for organizational performance towards the goals of sustainable development.

Similarly, the Dow Jones sustainability index in KPMG (2008) looks at sustainability reporting as a business approach that creates long term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments. Corporate sustainability leaders achieve long term shareholder value by gearing their strategies and management to harness the market's potential for sustainability products and services while at the same time successfully reducing and avoiding sustainability costs and risks. Therefore, sustainability reporting is the accounting activities in a firm concerned with preparation and presentation and/or disclosure of sustainability information (economic, social and environmental) to stake holders for performance evaluation and informed decision.

Economic Sustainability

Economic sustainability implies a system of production that satisfies present consumption levels without compromising future needs. The 'sustainability' that economic sustainability seeks is the 'sustainability' of the economic system itself. The notion of 'economic sustainability' was originated by Hicks. In his classic work Value and Capital (1939), Hicks defined 'income' as 'the amount one can consume during a period and still be as well off at the end of the period'. Traditionally, economists, assuming that the supply of natural resources was unlimited, placed undue emphasis on the capacity of the market to allocate resources efficiently. They also believed that economic growth would bring the technological capacity to replenish natural resources destroyed in the production process. Today, however, a realization has emerged that natural resources are not infinite. The growing scale of the economic system has strained the natural resource base.

Economic sustainability does not simply refer to gross national product, exchange rates, inflation, and profit, but it relates to production, distribution, and consumption of goods and

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services (Mohamed & Antia, 2018). It is the production process that takes into account the present and future needs such that both would be satisfied.

Environmental Sustainability

Environmental sustainability involves ecosystem integrity, carrying capacity and biodiversity. It requires that natural capital be maintained as a source of economic inputs and as a sink for wastes. Resources must be harvested no faster than they can be regenerated. Wastes must be emitted no faster than they can be assimilated by the environment (Kahn, 1995). The theoretical framework elaborated by Kahn posits that economic, social and environmental 'sustainability' must be 'integrated' and 'interlinked'. They must be coordinated in a comprehensive manner. A hypothetical case of deforestation in a developing country context follows to illustrate this 'integration' and 'inter-linkage'. This example amounts to a gross oversimplification, but it nonetheless describes how the economic, the social, and the environmental substrates of 'sustainability' relate to one another. Thus one can define environmental sustainability as a system of operation by an entity such that its activities do not disrupt the equilibrium in the hemisphere.

Financial Performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business to generate revenue (Investopedia, 2016). It is also a measure of the result of a firm's policies and operation in monetary terms. Oil company performance is usually evaluated using parameter such as net profit margin for the year, gross profit margin for the year, return on capital employed, return on equity, share price, improvement in the employee performance and returns on Assets (Dermerguckunt & Huizinga, 1999; Naccur, 2003).

Theoretical Review: Legitimacy Theory

The legitimacy theory was developed by Dowling and Pfeffer in 1975. This is a widely used theory. Within legitimacy theory, organizations seek to ensure they operate within the bounds and norms of their respective societies, meaning that they want their activities to be seen as legitimate. Legitimacy has been defined by Lindblom (1994) in an organization's perspective as a condition or status which exists when an entity's system is harmonious with the value system of the larger social system of which the entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to the entity's legitimacy. Legitimacy theory is derived from political economy and relies on the idea that the legitimacy of a company to operate in society depends on an implicit social contract between the company and society. Managers should regularly attempt to ensure that their company complies with its social contract by operating within society's expectations and to disclose information that indicates that the company is not in breach of the norms and expectations of society.

This work is anchored on the legitimacy theory. The justification for anchoring this study on legitimacy is based on the fact that legitimacy theory explains the relationship between corporate social disclosure and communities as companies are bound by the social contract to meet the communities' expectations and changes. The theory advocates that the legitimacy gap will likely occur when company performance does not turn out to be what has been expected. If there is a huge gap, it can be said that it may threaten the company's image and reputation which will discontinue company business activities. It is agreed that one of the ways firms react

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to the legitimacy gap is by disclosing environmental information in a way as to show they are environmentally responsible. This is indeed linked to the present study.

Empirical Literature

Amedu (2019) examined the value relevance of the economic dimension of corporate sustainability reporting among manufacturing firms in Nigeria. The study adopted a longitudinal research design. The sample consisted of thirty firms randomly selected from the floor of the Nigerian Stock Exchange. The study relied on secondary data retrieved from annual reports for the period 2010-2018. The hypotheses were validated using panel data regression technique. The results revealed that economic-sustainability and social sustainability reporting of quoted manufacturing firms were value relevant. This is not surprising as the annual reports were largely skewed towards financial disclosures and items having material economic relevance to a firm. For disclosures on environmental sustainability, on the overall, manufacturing firms were silent on such issues despite the attention that environmental issues are receiving globally. For disclosures on social sustainability, though some disclosures were done that did not cover important areas such as labor and management relations, labor practices and grievance mechanism, freedom of association and collective bargaining (employee engagement), and anti-corruption and public policy, the firms were silent.

Akabom, Temitayo and Onyeogaziri (2018) examined the effect of economic corporate sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria. To determine the association between sustainability reporting and corporate performance, data were obtained from the audited financial statements of the three brewery firms under study for a period of five years (2012-2016). The result of the study showed that economic performance disclosure, environmental performance disclosure and social performance disclosure have no significant effect on return on asset (ROA) of selected quoted firms in Nigeria.

Camelia et al. (2020) investigated whether there is a positive or negative linear relationship between sustainability reporting, inadequate management of economic and governance (ESG) factors, and corporate performance and sustainable growth. The financial and market performances of firms are both analyzed in this study. Sustainable growth at the company level is introduced as a dimension that depends on sustainability reporting and the management of ESG factors. In order to achieve the main objective of the paper, the methodology here focused on the construction of multi-factorial linear regressions, in which the dependent variables are measurements of financial and market performance and assessed corporate sustainable growth. The independent variables of these regressions are the sustainability metrics and the control variables included in the models. Most of the existing literature focused on the causality between sustainability performance and financial performance. While most impact studies on financial performance are restricted to sustainability performance, this study referred to the degree of risk associated with the inadequate management of economic, social, and governance factors. This work examined the effects of ESG risk management, not only on performance, but also on corporate sustainable growth. It is one of the few studies that addressed the problem of the involvement of firms in controversial events and the way in which such events impact the sustainability and sustainable growth of the company.

Ameer and Othman (2011) examined economic sustainability practices and corporate financial performance: A study based on the top global corporations. The target population of this study consisted of 100 sustainable global firms in 2008 which were selected from a universe of 3,000

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firms from developed countries and emerging markets. The result revealed a significantly higher mean sales growth, return on assets, profit before taxation, and cash flows from operations in some activity sectors of the sample firms compared to the control firms over the period of 2006–2010. Also, the findings showed that the higher financial performance of sustainable firms increased and were sustained over the sample.

Iheduru and Okoro (2019) used the cross sectional data to examine the effect of economic corporate sustainability on the profitability indicators of Nigeria quoted firms between 2008-2017. Data was sourced from the financial statements of the firms. Twenty firms were selected from the population of quoted firms in Nigeria. Return on equity, earnings per share and return on investment were proxy for profitability while sustainable reporting was proxy by economic, social, environmental and corporate governance disclosure. The panel data model was tested using the Hausman test. Model one and two validated the fixed effect while model three validated the random effect. The results found that economic disclosure and social disclosure have positive but insignificant effect on return on equity of the selected firms while environmental and corporate governance disclosure have negative and insignificant effect on return on equity, all the predictor variables have positive and insignificant effect on earnings per share of the firms and that economic, social and environmental disclosure have positive effect on return on investment while corporate governance disclosure have negative effect on return on investment of the selected firms in Nigeria.

Aifuwa (2020) examined the impact of economic corporate sustainability on firm performance in developing climes. A systematic content analysis approach was adopted in the study and it formed the basis for the researcher's conclusion and recommendations. The findings of reviewed extant literature showed that there were inconclusive findings on the impact of sustainability reporting on firm performance. However, a large number of works submitted a positive relationship between sustainability reporting and firms' performance. Secondly, financial performance measures often used by researchers include the profitability measures, return on assets and return on equity (ROA and ROE) and market-based measure, earning per share and dividend per share (EPS and DPS), and the fourth version of the Global Reporting Initiative (GRI) framework in calculating sustainability disclosure index via content analysis. Thirdly, the study also found that sustainability disclosure level was low in developing climes compared to other developed climes. He observed some methodological flaws in extant literature on the sector investigated and sample size employed.

Kwaghfan (2015) ascertained the impact of economic sustainability reporting on corporate performance of selected quoted firms in Nigeria. The research employed ex-post facto design. The sample for the study was made up of 64 firms selected from 76 non-financial firms quoted on the Nigerian stock exchange. The research utilized secondary data. A model specification based on a regression model was used. The statistical technique employed in testing the hypotheses was the student t – test statistic. Findings from this study showed that sustainability reporting impacted positively on financial performance of firms investigated. Firms are therefore encouraged to adopt this reporting system.

Gilbert (2018) determined the effect of economic corporate sustainability on the profitability of listed pharmaceutical firms in Nigeria. An ex–post facto research design approach was adopted for the study. The population of this study comprises all pharmaceutical firms listed on the floor of the Nigeria Stock exchange. Secondary data were obtained from the annual report of the firms of seven (7) sampled firms which covered from 2012 to 2017 financial year.

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Data were analyzed using ordinary linear regression. The results showed that there is a negative and insignificant relationship between economic disclosure index and Return on Assets whereas both environmental and social disclosure indexes have statistical positive but insignificant relationship with Return on assets of pharmaceutical firms in Nigeria. The findings further revealed that the environmental disclosure index has a statistical negative and insignificant relationship to return on equity whereas there is a positive but insignificant relationship to both economic and social disclosure indexes and return on equity of pharmaceutical firms in Nigeria. Finally, the result established also that the economic disclosure index has a statistically positive but insignificant relationship with net profit margin whereas there is a negative and insignificant relationship between environmental disclosure index and net profit margin of pharmaceutical firms in Nigeria.

Nwandu (2018) examined the effect of economic sustainability reporting on company's performance using twenty selected Nigerian firms over the period of five years with GRI index as proxy for sustainability and return on asset as a measure for performance. The specific objectives include determining the effect economic, environmental and social performance disclosures have on return on assets. The study utilized secondary data obtained from annual reports of the firms under study. The hypotheses developed for this study were tested using multiple regression analysis via SPSS version 23.0. The study revealed that economic performance disclosure and environmental performance disclosure have no significant effect on return on assets while social performance disclosure has significant effects on company's performance.

Adeyemi and Oluwaseyi (2014) studied corporate governance and the economic sustainable banking sector in Nigeria. Their study focused on the relationship between corporate governance mechanisms and commitments to sustainable banking. The sources of data were primary in nature while analysis of variance, frequency distributions and chi-square statistics were employed to analyze the data collected. They found that Nigerian banks have not shown enough commitment towards sustainable banking. Their finding also shows that general accountability, level of board responsibility and transparency has not been impressive enough vis-a-vis sustainable banking requirement

Mwanja et al. (2018) examined the impact of the level of disclosing corporate social responsibility (CSR) on corporations' financial performance (CFP). The study's statistical population consisted of listed firms in the Tehran Stock Exchange in 1391, which in this study content of 83 corporation samples was analyzed to assess the level of corporations' disclosing corporate social responsibility through reports on the activities of the board. For this purpose, 105 disclosure indices were analyzed in three economic, social and environmental dimensions using a zero-one procedure and rating of each corporation's disclosing corporate social responsibility was extracted to determine their level of disclosure. To investigate the association between variables of this research, the level of corporations' disclosing corporate social responsibility CSRD (independent variable) and performance metrics based on accounting data and market data (dependent variable) are considered. In this study, to analyze research data and the models estimation, the multiple-linear regression test was used and control variables have included size, financial leverage, industry, age and financial risk. Based on the research results, there is a significant relationship between the level of disclosing corporate social responsibility and financial performance criteria of corporations based on both accounting data and market data.

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Gap in Literature

A critical examination of the existing and reviewed empirical studies reveals that there is an avalanche of studies on the concept of business sustainability. However, it can be clearly noticed that the majority of the studies on the concept under investigation were on reporting. There is a clear difference between corporate sustainability reporting and corporate sustainability activities. This study is focused on achieving the latter while the majority of the reviewed empirical studies are anchored on the former.

METHODOLOGY

Research Design

This study adopted the *ex-post facto* design as the researcher made use of past data in the form of secondary data to investigate the effect of corporate sustainability on performance of firms. *Ex-post facto* research is chosen as a suitable research design for this work because the dataset obtained for analysis were wholly secondary data from the firm's annual report. The population of this study comprises 48 firms listed/quoted on the Nigerian Exchange Group (NGX Group). Four (4) major high sustainability firms were judgmentally selected based on their greatest effect on the environment in Nigeria. Firms that did not participate in sustainability activities or that had not kept data pertaining to sustainability were excluded, therefore the four firms namely; Julius Berger Nigeria Plc., Conoil Plc., Nigeria Breweries Plc. and Dangote Cement Plc. were found useful for the study. These firms were selected using the judgmental sampling technique. Judgment sampling, also referred to as authoritative sampling, is a non-probability sampling technique where the researcher selects units to be sampled based on his own existing knowledge, or his professional judgment. In the context of this study, the researcher having examined the annual reports of the quoted/listed manufacturing firms, selected the aforementioned firms. The data were for the period of ten years ranging from 2011-2020.

Model Specification

The models according to the objectives are specified thus:

Implicitly: $PRO_{it} = f(ECOS_{it}, ENVS_{it}, SOS_{it})$ …………………….. (3.1)

The explicit panel econometric model is specified thus:

$$PRO_{it} = \beta_{0it} + \beta_{it}ECOS + \beta_{it}ENVS + \beta_{it}SOS + \mu$$

Where:

PRO = Profit for the Year

ECOS = Economic Sustainability (Measured with Firm Revenue)

ENVS = Environmental Sustainability (Measured with Litigation/Environmental Expenditures)

SOS = Social Sustainability (Measured with Staff Training/Development)

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i = Individual manufacturing company

t = Time Series

β's = structural Parameters to be estimated

μ = Stochastic Error Term

Description of Variables

In this research, the variables are represented as follows:

Variable	**Description**	**Measurement**
Performance	Performance in this study is a term used to measure the firm's overall financial health over a given period.	Profit for the year = Profit Before Tax minus Taxable Amount
Economic Sustainability	This refers to practices that support long-term economic growth without negatively impacting social, environmental, and cultural aspects of the community.	Firm Revenue = Product Price x Quantity
Environmental Sustainability	This is the practice and responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.	This is measured with litigation and environmental expenditures.
Social Sustainability	This includes a variety of issues revolving around firms' interactions with their employees. It refers to sets of actions that appear to support some social good, beyond the interests of the firm owners and which are required by law.	This is measured with staff training and development.

Method of Data Analysis

In order to estimate the parameters for this study, panel data regression analysis (longitudinal data) was employed because of the estimation of the selected manufacturing firms and the presence of both cross sectional and time series components. Panel data makes it possible to get a handle on the time ordering of variables and to monitor the individual trends over time (Berrington et al., 2006).

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Panel Diagnostic Tests

Consistency and Efficiency

Based on the law of large numbers, consistency could have been improved by the availability of quarterly data for each entity which would increase the number of observations for more precise and accurate estimates; however annual data were only accessible for most variables. Consistency was however enhanced through a balanced panel data set with complete cross sectional and time series data. Diagnostic tests conducted include, Panel unit root test,Hausman's test.

PRESENTATION AND ANALYSIS OF RESULTS

Descriptive Statistics

Table 1: Descriptive Statistics

	PRO	ECOS	ENVS	SOS
Mean	15.86305	11.80416	12.19123	15.38171
Median	15.32968	12.02884	12.04573	15.66891
Maximum	19.99233	15.59553	18.63852	20.98563
Minimum	12.05513	7.438384	6.473891	4.804021
Std. Dev.	2.098070	1.788875	2.178364	2.621967
Skewness	0.235151	-0.367378	-0.111751	-1.213837
Kurtosis	2.158358	2.707614	4.157158	8.264603
Jarque-Bera	1.936552	1.302824	2.893684	70.02010
Probability	0.379737	0.521309	0.235312	0.000000
Sum	793.1527	590.2080	609.5614	769.0855
Sum Sq. Dev.	215.6931	156.8036	232.5183	336.8609
Observations	40	40	40	40

Source: *Researcher's Computation Using E-views 10, 2022.*

PRO = Profit for the Year

ECOS = Economic Sustainability

ENVS = Environmental Sustainability

SOS = Social Sustainability

Table 1 reveals the descriptive statistics of the variables under analysis. It can be clearly seen that the mean/average for profit for the year (PRO), economic sustainability (ECOS), environmental sustainability (ENVS) and social sustainability (SOS) yielded ₦15.86305, ₦11.80416, ₦12.19123 and ₦15.38171 respectively. The median statistics for PRO is seen to be 15.32968 as against the value of ECOS which yielded 12.02884, ENVS on the other hand yielded 12.04573 and SOS yielded 15.66891. The variables are seen to be normally distributed except SOS as the Jarque-Bera (JB) statistics for PRO yielded 1.936552 with a corresponding

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probability value of 0.379737, ECOS yielded a Jarque-Bera Statistics of 1.302824 with a corresponding probability value of 0.521309. ENVS is seen to have yielded a Jarque-Berra statistics of 2.893684 with a probability value of 0.235312 and SOS yielded a Jarque-Berra statistics of 70.02010 and a probability value of 0.000000.

Unit Root Test

The unit-root test was conducted to ensure that the variables are stationary and to avoid estimating spurious regression output.

Table 2 :Unit-Root Test Results

Variables	**ADF Fisher Stat**	**Probability Value**	**Order of Integration**
PRO	17.7358	0.0233	I(1)
ECOS	19.2257	0.0137	I(1)
ENVS	31.9134	0.0001	I(1)
SOS	30.2107	0.0002	I(1)

Source: *Researcher's Computation Using E-views 10, 2022.*

It can be clearly seen from Table 2 that the panel variables are stationary at first difference. This is justified on the statistical output in Table 2 where the ADF-Fisher statistic yielded a corresponding p-value less than 5% level of significance.

Hausman Test

Table 3

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	87.826856	3	*0.0000

Source: *Researcher's Computation Using E-views 10, 2022.*

The essence of this test is to ascertain on either using the fixed or random effect output as the basis of our analysis. It is anchored on the hypothesis specified thus:

H_0: The suitable model is the random effects model.

H_1: The suitable model is the fixed effects model.

Decision: Since the probability of the Hausman specification test yielded a probability value of 0.000 and it is less than 0.05, this therefore compels us to reject the null hypothesis and thereby conclude that the suitable model is the fixed effects model.

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Fixed Effect Panel Regression Output

Table 4

Dependent Variable: PRO
Method: Panel Least Squares
Date: 07/15/22 Time: 21:39
Sample: 2011 2020
Periods included: 10
Cross-sections included: 4
Total panel (balanced) observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	21.03537	2.852042	7.375547	0.0000
ECOS	0.184406	0.201015	0.917375	0.3656
ENVS	-0.124495	0.140859	-0.883827	0.3832
SOS	0.064896	0.132822	0.488592	0.6284

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.786023	Mean dependent var	15.81159
Adjusted R-squared	0.747119	S.D. dependent var	2.398656
S.E. of regression	1.206220	Akaike info criterion	3.370488
Sum squared resid	48.01388	Schwarz criterion	3.666042
Log likelihood	-60.40975	Hannan-Quinn criter.	3.477351
F-statistic	20.20375	Durbin-Watson stat	1.885029
Prob(F-statistic)	0.000000		

Source: *Researcher's Computation Using E-views 10, 2022.*

Table 4 clearly shows the regression estimation carried out to examine the effect of corporate sustainability on firm performance of selected firms in Nigeria. The linear regression output shows that the numerical coefficient for economic sustainability (ECOS) yielded a positive numerical estimated coefficient at the magnitude of 0.184406. This practically entails that there is a positive relationship between ECOS and the performance of selected firms in Nigeria. One can also say that the numerical coefficient implies that a unit increase in ECOS yields a corresponding increase in performance of firms by 0.184406 units and vice-versa.

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Furthermore, the numerical coefficient for environmental sustainability (ENVS) yielded a negative value at the magnitude of -0.124495. This implies that ENVS expenditures contribute negatively to the performance of the selected firms in Nigeria. It further implies that with a unit increase in ENVS, it will lead to a -0.124495 unit decrease in the performance of firms measured with profit for the year (PRO). It finally implies that there exists an inverse relationship between ENVS and PRO for the period under analysis.

The numerical coefficient of social sustainability (SOS) yielded 0.0648. This positive value implies that there exists a positive relationship between environmental sustainability expenditures and the performance of selected firms measured with profit for the year. This value clearly shows that with a unit increase in SOS, the level of firm performance is expected to increase by 0.06489 units.

Coefficient of Determination (R-Squared) in the Table 4 shows that R-squared value is 0.786023, which implies that approximately 79% of the variation in PRO is explained in the model by the changes in ECOS, ENVS and SOS; leaving approximately 21% to the error term. This also means that the line of best fit is highly fitted.

The F-statistics is used to test the statistical significance of the entire regression plane. The result of F-statistics is 20.20375 with a corresponding probability of 0.000000 which implies that the overall regression is statistically significant. This also means that all the independent variables taken together will impact significantly on the performance of the firm.

The test of autocorrelation is a test that evaluates if the error terms in a series are serially correlated. The value of the Durbin-Watson from Table 4 yielded 1.885029. This implies that there is no presence of autocorrelation problems in the model. It further implies that the error terms are negatively but insignificantly serially correlated.

Test of Hypotheses

The hypotheses stated earlier in this research were tested using the p-value extracted from the regression estimation.

The decision rule is to reject the null hypothesis (**Ho)** if the probability is less than or equal to 0.05 and to accept the null hypothesis (**Ho)** if the probability is greater than 0.05.

Test of Hypothesis One

Ho_1: Economic Sustainability has a non-significant effect on profit for the year of selected firms in Nigeria.

From the above analysis in Table 6, it is clearly seen that the probability value for ECOS yielded 0.184406 and it is obviously greater than 0.05. This compels the acceptance of the null hypothesis (Ho_1) which states that economic sustainability has no significant effect on profit for the year of selected manufacturing firms in Nigeria.

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Test of Hypothesis Two

Ho_2: Environmental sustainability has no significant impact on profit for the year of selected firms in Nigeria.

From Table 4, it is clearly seen that the probability value for environmental sustainability (ENVS) yielded -0.124495 and it is obviously greater than 0.05. This compels the acceptance of the null hypothesis (Ho_2). Hence; environmental sustainability has no significant impact on profit for the year of selected firms in Nigeria.

Test of Hypothesis Three

Ho_3: Social sustainability has no significant impact on profit for the year of selected firms in Nigeria.

From Table 4, it is clearly seen that the probability value for social sustainability (SOS) yielded 0.064896 and it is obviously greater than 0.05. This compels the acceptance of the null hypothesis (Ho_3). Hence social sustainability has no significant impact on profit for the year of selected firms in Nigeria

DISCUSSION OF FINDINGS

In the course of this study, three objectives, research questions and research hypotheses were outlined. To actualize them, the panel regression analysis was carried out on the corresponding variables and findings were made. These findings were discussed here accordingly.

Effect of economic sustainability on the profit for the year of selected firms in Nigeria: Findings of the analyses revealed that economic sustainability has a negative and no significant impact on profit for the year of selected firms in Nigeria. This simply entails that on the average, ECOS contributes negatively to the performance of the selected firms but not significantly. This further shows that even though ECOS is a dimension of expenditures, it is not burdening enough to take the firms out of business, hence; the insignificance. This is in line with the findings of Hasse et al. (2005) who examined the effect of economic sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria and discovered that economic sustainability reporting has no significant impact on firm performance.

Effect of Environmental Sustainability on the Profit for the Year of Selected Firms in Nigeria: Findings from the analysis revealed that environmental sustainability has a negative and insignificant impact on profit for the year of selected firms in Nigeria. This further entails that performance of firms do not increase proportionally with environmental sustainability related expenditures of the selected firms. This is in line with apriori expectation as environmental control definitely involves expenses. In conclusion, litigations reduce profit and deserve to be avoided or minimized. This is in line with the findings of Walumbwa et al. (2018) who carried out a study into the bi-directional relationship between corporate environmental sustainability reporting and firm performance in quoted Deposit Money Banks (DMBs) in Nigeria. The panel regression technique was used to analyze the data. The empirical findings show that there is no bi-directional relationship between environmental sustainability reporting and firm performance of quoted Deposit Money Banks (DMBs) in Nigeria.

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Effect of Social Sustainability (SOS) on the Profit for the Year of Selected Firms in Nigeria: Based on the regression results, it was found that SOS have a positive and insignificant impact on profit for the year of selected firms in Nigeria. SOS are direct expenditures from defaulting firms that have no economic or profit promise. The positive coefficients of SOS entails that there is a direct relationship existing between social sustainability measured with staff training/development and profit for the year of selected firms in Nigeria for the period under analysis. This is justifiable as community development/staff training expenditures are costs channeled to human capacity development, who in turn become efficient agents of the company in the short and long run. This finding is in agreement with the findings of Arong, Ezugwu and Egbere (2014) who examined the effects of corporate social sustainability disclosure on bank profitability in Nigeria and discovered that there is a positive relationship between the variables.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of Findings

1. Economic sustainability has a positive but non-significant effect (coefficient 0.184406) on profit for the year of selected firms in Nigeria.
2. Environmental sustainability has a negative but non-significant effect (-0.124495) on profit for the year of selected firms in Nigeria.
3. Social sustainability has a positive but non-significant effect (0.064896) on profit for the year of selected manufacturing firms in Nigeria.

CONCLUSION

This study has been able to carry out an empirical analysis of the effect of corporate sustainability on the performance of selected firms in Nigeria covering the period 2011-2020. Based on the findings of the study, it was concluded that economic and social sustainability impact positively on firms' performance in Nigeria while environmental sustainability costs adversely affect the performance of firms' in Nigeria. Thus the positive effect of corporate sustainability is greater, hence the need for firms to continue pursuing good corporate sustainability practices.

RECOMMENDATIONS

In the light of the findings of the study, the following recommendations were made:

1. Management of such firms should review their economic sustainability activities with a view to enhancing it for better outcome.
2. Firms should be however more careful not to keep incurring litigation claims by conducting their activities with serenity and consideration in line with the law and ethical expectations.

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3. Social sustainability measured with staff training was seen to have a positive but insignificant impact on the profit of the year. With this, the firms should ensure the continuous development of the capacity of their employees/staff.

CONTRIBUTION TO KNOWLEDGE

The importance of a research contributing to an existing body of knowledge cannot be overemphasized. This study was carried out to empirically investigate the effect of corporate sustainability on the performance of selected firms in Nigeria covering the period 2011-2020. Prior to now, studies have been carried out on the concept of corporate sustainability but were focused on sustainability reporting. This study contributed to the existing literature by evaluating the effect of corporate sustainability activities on performance and not just on reporting. This gives a clearer view on how specific corporate sustainability variables affect performance of firms in Nigeria.

Suggestions for Further Studies

This present study carried out an analysis on the effect of corporate sustainability on firm performance of selected firms in Nigeria. This study suggests a further study on the effect of corporate sustainability on the performance of hospitals and other medical institutions.

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