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Environmental Accounting Practices and Environmental Capacity for Sustainable Economy

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ABSTRACT
This study investigated the relationship between environmental accounting practices and environmental capacity for sustainable economy in Nigeria. The environment provides resources with which companies operate. The question is how is the environment taken care of, to continue to serve these companies into a foreseeable future? The study dwelt on disclosure of environmental cost information, contribution of companies to salvage the environment for sustainable economy and collaboration between companies and regulatory agencies to improve the environment. In order to achieve the objectives of the study, a survey research was carried out. Data was collected from twenty two (22) companies in production business in Nigeria. The study was descriptive in nature. The findings were discussed from answers to questionnaire. A linear regression model was used to provide findings for the study. The findings revealed that there was a significant relationship between environmental accounting practices and environmental capacity for a sustainable economy in Nigeria (F-statistics – 0.000; Adjusted R^2 – 0.911); there was a significant consequence on non-compliance by companies (F-statistics – 0.012, Adjusted R^2 – 0.506). The study recommended effective collaboration among organizations to improve the environment for a sustainable economy; companies should adopt preparation of environmental profit and loss account; companies should provide for environmental cost in their annual budget which is different from corporate sustainability; Companies in Nigeria should adopt Global reporting initiative and companies should plan towards zero emissions.

Keywords: Environmental Accounting, Environmental capacity, Environmental Cost, Environmental Liabilities, Sustainable economy.

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I. INTRODUCTION

The environment denotes the area of existence and the field of operations. The environment has political, social, technological, legal, cultural, physical, geographical and economic scopes. Its scope may be local or international. There are forces in the environment that interplay which result into dynamic, simple, volatile or complex environment. This makes it difficult for businesses to thrive to achieve their set objectives. The environment determines what type of strategies a business organization will adopt to cope with it. Environment with positive conditions (peaceful co-existence and favourable topography) will be conducive for business progress and greater contribution to the national economy (Osemene, Kolawole, & Oyelakun, 2016).

This positive development brings about sustainable development. In another vein, environment with negative conditions will result into hostility that will make it difficult and impossible for business organizations to operate and survive, this threatens the sustainability of such organizations (Osemene et al., 2016). Looking at recent developments in Nigeria, one may be poised to say the environment is harsh, hostile, volatile, non-conducive for sustainable economy. The concept of Sustainable Development Goals (SDG) was born at the United Nations Conference on Sustainable Development, Rio+20, in 2012. The aim was to produce a set of universally applicable and acceptable goals that balance the three dimensions of sustainable development which are environmental, social and economic (Dike-Wozuru & Leyira, 2018).

The Global Goals replaced the Millennium Development Goals (MDGs), which in September 2000 rallied the world around a common 15-year agenda to challenge the indignity of poverty. The MDGs was designed to drive progress in income poverty, access to improved sources of water, primary school enrollment, and child mortality (Beredugo & Mefor, 2012). The Global Goals was instituted to do the same with a target date of 2030 since it replaced MDGs. This new initiative applies to all countries, promotes peaceful and inclusive societies, creates better jobs and addresses the environmental challenges of our time particularly climate change. Environmental information (EI) helps the society and companies to recognize the impact on the environment of business decisions (Dike-Wozuru & Leyira, 2018).

Carlson & Moses (2001) and Dike-Wozuru & Leyira, (2018) stated that by making use of current business information technology, such as Internet-accessible tools, and industrial environmental management tools, standards, policies and legislation, an information system for Environmental Information management has been designed. Environmental information provides managers with information on risk management, cost structure and investment options which confront companies.

For the economy to be sustainable, various micro and macro-economic forces must be operating in conducive environment. These forces are government regulation, unstable policies, dilapidated infrastructure, multiple taxes, levies and fines, corruption in high places, unstable power supply, insurgency, militancy, high-level of unemployment, currency devaluation, high inflation, unfriendly financial sector, and negative social values (Rounaghi, 2019). These factors constitute problems for indigenous firms to thrive hence they fail to contribute effectively to Nigeria's GDP, this also makes it impossible for the economy to become sustainable because there is no growth in various economic indices that determine sustainable economy (Hussain, Halim, & Bhuiyan, 2016).

Local business organizations find it difficult to compete with big multi-nationals considering their financial muscle. As a result of the foregoing, these indigenous firms are suddenly exposed to big competitors who possess great business advantage ranging from advanced technology to substantial financial resources; this is in addition to possessing powerful brands and a high quality of management and marketing expertise (Dawar & Frost, 1999; Paschal, Anyanwu, & Eke, 2017). This trend has forced some big firms to relocate to neighbouring West African countries like Ghana for operational efficiency and sustainability. In some instances, some companies have closed down thereby increasing unemployment rate and inflation.

The recent pandemic that started in March 2020 also contributed to some of the challenges faced by some business organizations which culminated into retrenchment of some employees. Every sector of the economy was affected by the economy except banking and telecommunication sub sectors considering their role to citizens. The National Bureau of Statistics (NBS) reported negative 6% drop in GDP for quarter 2 2020. Environmental accounting is an essential tool that supports environmental capacity for business survival and preserve business for future generations to come (Ironkwe & Success, 2017). Members of the United Nations are now in the process of defining a set of Sustainable Development Goals (SDGs) to finish the job of the MDGs. Nigeria, as a member of United Nations is in dire need to implement especially industry, innovation, infrastructure; sustainable cities and communities; and climate action (Dike-Wozuru & Leyira, 2018).

Nigeria, like most of the developing countries is a mono economy nation and derives the majority of its earning from the oil and gas industry, an industry that is heavily dependent on environmental resources and consequently degrades which pollutes the environment (Ironkwe et al., 2017). In Nigeria, we are operating in an environment that threatens our natural resources and continued survival of businesses. It can be seen that the more an environment is depleted the more difficult it becomes for capacity for survival, the environment will not be able to serve future generations (Beredugo & Mefor, 2012). The raw material produced will become reduced as the environment is no longer productive to generate more yields.

Many world commissions on environment and development recognized the need for integrated environmental and economic accounting in 1987 when it called for an annual report and audit on changes in environmental quality and in the stock of the nation's environmental resource assets (Sakmar, Wackemagel, Gali & More, 2011; Dike-Wozuru & Leyira, 2018). The aim of the report was to obtain the true picture of wealth and health of the national economy and assess the achievement for sustainable economy. This has encouraged many countries to formulate and implement environmental and resource accounting frameworks hence many industrialized countries have fairly well established system of environmental and resource accounts that quantify the relationship between the environment and the economy.

Developing countries have also commenced the process of establishing environmental accounts. As a result of the contribution of environment to the survival of firms, the environmental accounting systems are linked to some extent with the national accounts of their respective countries (Elpeanuzo & Udih, 2015). Nigeria is not left behind in formulating environmental accounting framework that will report on environmental activities that impact on capacity for survival of corporate organizations. In recent time, environmental pollution becomes so severe and has attracted stakeholders' attention, this has given environmental accounting a special place in accounting (Osemene et al., 2016).

Paschal et al., (2017) defined Business environment as an aggregation of factors (forces and conditions) that surround and affect an organization in its day-to-day existence. These factors can also be described as uncontrollable or external that hinder the progress of the organization and ability to achieve its corporate objective. The response of an organization to these factors will determine its success or failure. Indigenous manufacturing companies require to fashion out good strategy to cope with intense competition from big players considering currency devaluation, operational cost, imported input materials and other production cost. This requires the company to be innovative and proactive to keep abreast of development in its environment.

It is true there has been increasing awareness on climate change and environmental degradation around the world as it affects our existence. Some of the environmental challenges include ocean levels rising, global warming, and deforestation. This study seeks to evaluate the impact of environmental accounting practices on the environmental capacity for sustainable economy in a challenging environment of Nigeria. This raises some research questions such as: What is the impact of environmental accounting practices and environmental capacity on sustaining economy? What strategies are put in place by the survivor companies to cope with the volatile environment? These questions have drawn the following hypotheses:

Ho1There is no significant relationship between environmental accounting practices and environmental capacity and sustainable economy.

Ho2: There are no consequences to non-compliance with environmental accounting practices and environmental capacity.

II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Conceptual Framework

Conceptual framework is a conceptual model that describes how a researcher makes a logical understanding and relationship among several factors that have been identified in a research problem. Environmental Protection Agency-EPA (1995) as cited by Boyd (1998) stated that A successful environmental management system should have a method for accounting for full environmental costs and should integrate private environmental costs into capital budgeting, cost allocation, process/product design and other forward-looking decisions. Most corporate information and decision systems do not currently support such proactive and prospective decision making. Environmental accounting is a branch of accounting whose target is to incorporate both economic and environmental information in the company's books.

Panigrahi, Zainuddin, and Azzizan (2015) stated that the system of environmental accounting provides both financial information in monetary units, and non-financial information in physical units. It can be prepared at the corporate level or at the level of a national economy through the System of Integrated Environmental and Economic Accounting (SIEEA), a satellite system to the National Accounts of Countries (among other things, the National Accounts produce the estimates of Gross Domestic Product otherwise known as GDP). Environmental accounting is also known as Green Accounting or Resource Accounting or Integrated Economic and Environmental Accounting which incorporates the use of or depletion of natural resources (Al-Mawali, Al Sharif, Rumman, & Kerzan, 2018). An environmental accounting system consists of environmentally differentiated conventional accounting and ecological accounting (Hamoud, Abdul Rahman, & Ahmed, 2018).

Environmental Capacity-

This refers to the maximum population size of a biological species that can be sustained in an environment given the food, habitat, water, and other resources available. In the same vein, it also means the maximum number of individuals of a given species that an area's resources can sustain indefinitely without significantly depleting or degrading those resources (Ibrahim & Primiana, 2015). This can also include non-degradation of our cultural and social environments and not destroying the physical environment in ways that would negatively affect the future generations (Paschal et al., 2017). Recent global Covi-19 attack is an example of dieback which has claimed so many lives between 2019 and 2021. The Boko Haram insurgency in the North Eastern part of Nigeria is another incident worthy of mentioning which has affected both lives and property. This has made the area uninhabitable for people in that environment and some immigrated to other parts of the country.

Sustainable Economy

In theory, the economy exists to support society and enhance human well-being. It is the system within a society where limited resources (land, labour, capital) are managed fairly and sustainably. Even those concerned about only business and not the fate of the planet recognize that the viability of business itself depends on the resources of healthy ecosystems—fresh water, clean air, robust biodiversity, productive land—and on the stability of just societies (Chouinard, Ellison, & Ridgeway, 2011). Sustainable economy suggests that businesses are not conducted in a conducive environment that is not harmful to human life. It is not sufficient for businesses to operate at a lower cost and consumers pay lower prices for the products if it will result in more harm than the benefits obtained (Palmer & Truong, 2017).

The cost of damage to the environment might be unquantified through accounting process which environmental accounting is addressing. It is assumed that successful businesses are associated with sustainable businesses because they are able to manage their costs and environment in which they are operating. Chouinard et al, 2011 stated that First, "prices" are now being calculated for many things that had been considered priceless;

second, capital is flowing into companies known to manage those costs well; and third, indices are being established that allow disparate contributors in a supply chain to converge on sustainability standards. Inability to attach prices to resources makes it difficult to think about trade-offs which involve sustainability decisions.

Human activities depend on the environment without which they cannot survive. If there is no vegetation or animals in the forest, it becomes very difficult for human existence (Hamoud et al., 2018). The United Nations Environment Programme estimates, for example, that one-third of global food production depends on animal and insect pollination, and the value of this service is $200 billion annually. The World Bank, in its 2011 report "The Changing Wealth of Nations," set the estimate for all the planet's natural resources—its forests, rivers, wetlands, wildlands, farm and grazing lands, minerals, oil and coal, oceans, biodiversity of species—at about $44 trillion dollars, with $29 trillion belonging to developing nations (Chouinard et al, 2011).

Not many organizations consider preparing environmental profit and loss account to see the impact of their operations on the environment where they are operating. If P&L is not being prepared, a line item should be dedicated to environmental cost so that it will be easy to identify the cost and see its impact on the business, what percentage of environmental cost is in operational cost. This will also help to see the impact on the environment. In April 2011, Puma, a sports footwear, announced that it would commence issuing environmental profit and loss statement that would account for the full economic impact of the brand on its ecosystem. Chouinard et al, 2011 stated that Puma commissioned PriceWaterhouseCoopers to help develop the EP&L statement, and both companies hope to create a model robust enough to be adopted by others. "This is nothing to do with corporate social responsibility and the green agenda," Chris Knight, of PwC's sustainability practice, told *The Financial Times*. "It is hard-nosed economics".

Sustainable investing is preferred to socially responsible organization in recent times. Chouinard et al, 2011 averred that since investors increasingly seek out companies with positive environmental, social, and governance performance not because they are morally admirable but because they are more viable in the long run. There is a reporting system (Global Reporting Initiative – GRI) adopted by over 2,000 companies across the world to report their environmental, social and economic performance and the Carbon Disclosure Project. This was set up to align businesses with stakeholders to set appropriate sustainability goals based on industry benchmarks and to identify best practices for reaching them.

The GRI has more than 200 valuable activities for sustainable companies in four areas which are: governance, stakeholder engagement, disclosure and performance. When companies use standardized protocols like the Global Reporting Initiative to report their progress, investors are better able to evaluate companies' relative performance (Chouinard et al, 2011). Innovation by companies in their way of operations may contribute to a sustainable economy. The change will be easier if we can produce goods using carbon-neutral or low-carbon raw and recycled materials. Plastics manufacturers want ethylene, not crude oil; wind turbine manufacturers want steel, not iron ore and coke; server clusters need electricity, not coal (Kemp-Benedict, 2015).

Environmental Costs

Emeakponuzo et al., (2015) state that the true environmental costs to a firm can be far broader, including costs of resources both those directly related to production and those involved in general business operations, waste treatment and disposal costs, the costs of poor environmental reputation and the cost of paying an environmental risk premium. These are costs incurred in furtherance of the business, or prevention of breach of, environmental laws, regulations and company policy. White, Becker and Savage (1993) categorized into two areas which are:

a. Those that directly affect a company's profitability, they are described as private costs

b. These are costs to individuals, society and the environment for which a company is not accountable, they are called societal cost. They can be classified as: Conventional costs, potentially hidden costs, Contingent costs, and Image Relationship costs.

Ofoegbu and Megbuluba, (2016) cited Irish, (2000) saying that environmental accounting includes environment related expenditure, environmental benefits of products and details regarding sustainable operations. Environmentally differentiated accounting measures effects of the natural environment on a company in monetaryterms. Environmental accounting can still be defined further as accounting system that aims at achieving sustainable development, maintaining a favourable relationship with the community, and pursuing effective and efficient environmental conservation activities. This allows a company to identify the cost of environmental conservation during the normal course of business, identify benefit gained from such activities, provide the best possible means of quantitative measurement (in monetary value or physical units) and support the communication of its results.

Environmental conservation is defined as the prevention, reduction, and/or avoidance of environmental impact, removal of such impact, restoration following the occurrence of a disaster, and other activities (Dike-Wozuru & Leyira, 2018). The environmental impacts are the burden on the environment from business operations or other human activities and potential obstacles which may hinder the preservation of a favorable environment.

Ecological accounting measures the influence a company has on the environment, but in physical measurements. Gray et al, (2001) stated that accounting provides a very selective yet powerful symbolic representation of the corporate entity. The language of assets, liabilities, costs and profits define the operational and ontological limits of the enterprise and provide a technique which configures the organizational autonomy and sensitivity to environmental disturbances (Cucchiella, D'Adamo, Gastaldi, Lenny, & Rosa, 2017).

External impacts on the natural environment relate to the organization's use of resources and generation of emissions and waste. These impacts can be measured, for example in terms of tons of carbon dioxide emitted, but also in monetary terms, such as costs for acquiring certificates for greenhouse gas emissions. Environmental accounting is usually involved in several areas, such as: energy accounting; waste accounting; environmental criteria in capital expenditures, target setting for efficiency improvements (Bhate, 2002; Dike-Wozuru & Leyira, 2018). The entire concept of an accounting transaction is bound to the idea of private cost. The result is that many social costs in the form of polluted air, water and soil, and the large palette of ecological damage are not recognized by the accounting process (Deegan & Gordon, 1996; Dike-Wozuru & Leyira, 2018).

a. The disclosure of environmental accounting regarding environmental conservation activities of companies and other organizations, including public interest organizations and local public entities, provide a means for stakeholders to understand, evaluate, and give their support to such efforts (Rounaghi, 2019). Environmental accounting continues to take root as part of the social system. A lot of organizations have started paying attention to the environment as a result of its impact on their business activities. It should be noted that Environmental accounting data is not only used by companies or other organizations internally, but is also made public through disclosure in environmental reports. Umoren, Akpan, and Okafor (2018) stated that companies are expected to engage in environmental accounting and reporting so as to reassure the stakeholders of their: commitment to environmental responsibilities, compliance with national environmental laws and guidelines, compliance with requirements of financial reporting, demonstration of environmental concerns, and communication of the same to a broad range of stakeholders.

The environmental accounting focuses on two areas:
a. National/regional environmental accounting, and
b. Environmental accounting for companies and other organizations.

The environmental accounting is composed of the following factors: Environmental conservation cost (monetary value), Environmental conservation benefit (physical units), The economic benefit of environmental conservation activities (monetary value)

The environmental accounting system also identifies, measures, and communicates the environmental conservation benefit, which is the environmental performance portion represented in physical units. The results of environmental accounting can be furthermore used for analysis and evaluation.

Environmental accounting is organized in three sub-disciplines: global, national, and corporate environmental accounting, respectively. Corporate environmental accounting can be further sub-divided into environmental management accounting and environmental financial accounting.

Global environmental accounting is an accounting methodology that deals with areas which includes energetics, ecology and economics at a worldwide level.

National environmental accounting is an accounting approach that deals with economics on a country's level. Internationally, environmental accounting has been formalized into the System of Integrated Environmental and Economic Accounting, known as SEEA. SEEA grows out of the System of National Accounts. The SEEA records the flows of raw materials (water, energy, minerals, wood, etc.) from the environment to the economy, the exchanges of these materials within the economy and the returns of wastes and pollutants to the environment (Nasreen, Anwar, & Ozturk, 2017). Also recorded are the prices or shadow prices for these materials as are environment protection expenditures. SEEA is used by 49 countries around the world.

Corporate environmental accounting focuses on the cost structure and environmental performance of a company. This is further divided into environmental management accounting and environmental financial accounting (Ozokcu & Ozdemir (2017); Emeakponuzo & Udih, 2015).

a. Environmental management accounting focuses on making internal business strategy decisions. It can be defined as:"*...the identification, collection, analysis, and use of two types of information for internal decision making.* Ofoegbu and Megbuluba, 2016 cited Debnath, Bose and Dhalla, 2011, defining Environmental management accounting as a set of methods and techniques which can be used to collect and provide information for administration in the area of the business mutual relationship with the environment.

b. Environmental financial accounting is used to provide information needed by external stakeholders on a company's financial performance. This type of accounting allows companies to prepare financial reports for investors, lenders and other interested parties. Ofoegbu and Megbuluba, (2016) stated that Environmental financial accounting provides general purpose financial information on the organization, for external users (creditors, customers, potential investors, and shareholders).

Purpose of Environmental Accounting Framework

The purpose of an Environment Accounting Framework is to satisfy the following over a regulated area: (a) to raise awareness of environmental issues. (b) to develop guidelines to assist in identification of environmental issues and evaluation for reporting purposes. (c) to provide education programs across disciplines focused on environmental issues and their accounting treatment. (d) to develop environmental accounting practices with recommendations on best practices (Hussain et al. 2016).

Limits of Environmental Accounting

The following constitute limits to the use of Environmental Accounting system: (a) Complex and highly interdependent manufacturing processes or office locations. (b) The cost of collecting accounting information may outweigh its benefits in some cases. (c) There is difficulty in preparing meaningful estimates of the business benefits of adopting a green strategy.

Environmental Laws in Nigeria

Laws are enacted to guide and protect the environment from being abused or destroyed since the environment does not have capacity to protest. The environment becomes unusable, irrelevant and unproductive when it is abused beyond recognition. Hakeem and Joseph (2014) cited in Ofoegbu and Megbuluba (2016) that laws are established to mitigate the threatening environmental problems which emanate from human activities in the quest for economic growth and development.

Environmental related Acts and Decree were promulgated before Nigerian independence under different circumstances by her colonial master- Great Britain but not properly coordinated. In the 1950s, the Criminal Code Act and Noxious Act were enacted to control odour and noise pollutions against neighbours. At the late 1960s and early 1970s, some Acts such as Water Courses Act of 1969, and Refining Act of 1974 were enacted to control oil pollution of land and navigable waters, and the fishing methods. Other laws and Acts promulgated to protect the environment include; the mineral Act of 1969, 1973 and 1984; Oil in navigable water Decree of 1968; Associated Gas injection Act of 1969 and Chad Basin development Act of 1973 to mention but a few. These laws and Acts were promulgated to resolve specific and identified environmental problems.

In 1979, the then Nigerian constitution stipulated the need for environmental hygiene, cleanliness, and refuse management of which the local government councils were responsible to supervise the activities. According to Onyali et al (2014) cited by Ofoegbu and Megbuluba, 2016, there are some other laws directed towards environmental conservation and protection that were made by different sectors or ministries in Nigeria before the creation of environmental institution.

The first legal document that made mention of environmental impacts and mitigation was the Fourth National Development Plan (1981-1985) was the first government document that addressed environmental impacts and risk mitigation. This document advised the public and private industries to produce the environmental impact assessment (EIA) of their projects and to acquire facilities for environmental assessments.

Decree 58 was passed in December 1988 by the then Military government later amended by Decree 59 of 1992 which led to Federal Environmental Protection Agency (FEPA) (now Ministry of the Environment) charged with the responsibility of controlling all issues relating to Nigeria Environment, its resources, exploitation, protection and management. It also has the responsibility to design environmental guidelines, standards and criteria. It is responsible for implementing and prosecuting defaulters of environmental standards.

The success rate from the activities of FEPA since inception and despite the funding and support enjoyed from the Federal government has not been encouraging and did not justify the efforts of the government considering the level of environmental degradation across the country. Ofoegbu and Megbuluba, 2016 cited

Omofonwa and Osadah (2008), inferred that the rate of environmental degradation is growing worse than what it was before the establishment of FEPA.

2.2 Theoretical Framework

The environment is an important factor that determines the progressive movement of corporate organizations and government policies which encourage viability of an economy. The environmental crisis is a consequence of people's reaction to some actions which impact negatively on the economy. There are three main classes of ethical theory which are teleological, utilitarian, and deontological. Various theories will be discussed but the study is anchored on stakeholders' theory.

Anthropocentric

This theory is human-centred which expresses the view that all environmental responsibilities and activities are derived from human concerns. Anthropo is derived from Anthropology which is the study of human societies and cultures and their development. This theory assumes only human beings as only morally significant with moral standing. Naess (1973) stated that anthropocentrism is believed to be the central problem in environmental philosophy where it was used to draw attention to a systematic bias in traditional western attitudes to the non-human world. Human beings can be said to be responsible for environment they design for themselves. The environment designed by human beings in a particular society dictates the sustainability of that economy. This goes to show that human beings are responsible for their environment.

Biocentrism

Wikipedia defines biocentrism as an ethical point of view that extends inherent value to all living things in a philosophical and ethical sense. This considers all human beings as being equal. Taylor (1986) provided four basic tenets described as a biocentric outlook on life:

a. Humans are equal members of the earth's community of life.

b. Humans and members of other species are interdependent

c. All organisms are centres of life in the sense that each is a unique individual pursuing its own good in its own way

d. Humans are not inherently superior to other living things

This theory is saying that human beings depend on other creatures to survive while other creatures can survive without human beings. This goes to show that human being should give consideration to other living creatures in the environment to achieve harmony. There is need to canvas for close relationship between human beings and the nature to have a conducive environment.

Ecocentrism

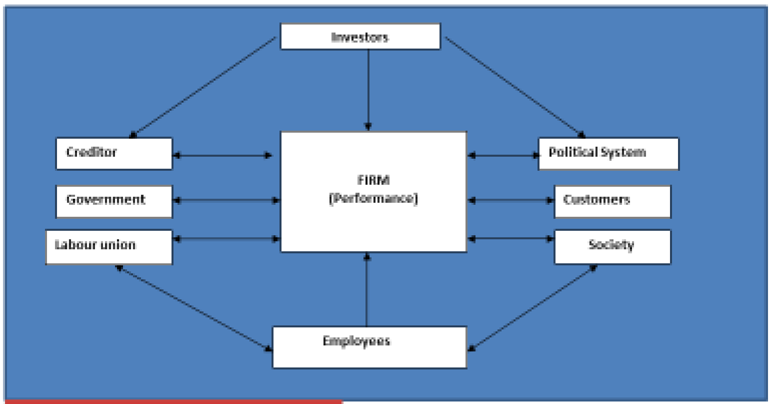
The dictionary meaning defines it as a philosophy or perspective that places intrinsic value on all living organisms and their natural environment, regardless of their perceived usefulness or importance to human beings. Ecocentrism considers the intrinsic value in ecosystems and the biological and physical features that they contain as well as ecological processes that connect them. There is need for harmonious relationship between human and other species to achieve a good and peaceful environment as they all need each other.

Stakeholders Theory

This is a view of capitalism that stresses the interconnected relationships between a business and its customers, suppliers, employees, investors, communities and others who have a stake in the organization. The theory argues that a firm should create value for all stakeholders, not just shareholders. The theory was popularized by Freeman in 1984 and it was gradually introduced to management theory since the '80s. Freeman (1984), argued that corporate bodies have a wide coverage of accountability than the traditional representation of agency theory. Wheeler et al., (2002), was in support of this argument saying that stakeholders' theory is a product of sociology and organizational disciplines that identify a good array of other stakeholders in an organization.

Muhammad, Ukairo, & Buhari, (2019) quoted from Achchuthan and Kajananthan (2013), that the stewardship theory is same as stakeholders' theory which means that companies are social entities that affect the welfare of many stakeholders. The stakeholders refer to a group or individuals who interact with the companies and are affected by the achievement of the companies' objectives. According to Achchuthan and Kajananthan (2013) cited by Muhammad, Ukairo, and Buhari, 2019, they posited that the corporate board of directors and the CEO, acting as stewards, are more motivated to act in the best interests of the firm rather than for their own interests because they view the firm as an extension of themselves. This implies that the top management tends to give much attention to the long-term success of the firm compared to shareholders. It can be seen here that stakeholders' theory is only applicable to quoted companies in which management plays the role of serving all stakeholders rather than maximizing the shareholders' wealth as in SMEs' case.

The Stakeholder Model



Source: Owolabi, (2012)

2.3 Empirical Review

Rounaghi (2019) examined the economic analysis of using green accounting and environmental accounting to identify environmental costs and sustainability indicators. The findings revealed that environmental accounting is an all-inclusive machinery for introducing environmental considerations into business decisions. The study also revealed that introduction of internal environmental costs in the accounting system will help companies make decisions that will improve the environmental performance and, by introducing themselves as the green business to the capital market, will increase the shareholder's wealth and will providean environmental accounting system based on the idea of classical accounting evolution.

Dike-Wozuru and Leyira (2018), in their study investigated the relationship between environmental accounting practices and sustainable development in Nigeria. Data was collected from 34 companies having environmentally related issues in Nigeria. The study findings revealed that: Stakeholders should increasingly require companies to manufacture goods efficiently and at competitive prices without harming the environment; to enhance sustainable development by reducing the environmental impact while increasing the value of an enterprise, satisfying human needs; contributing to the quality of life, and resource intensity through environmental performance reporting occasioned by the ratio between an environmental variable and financial variable that measures the environmental performance of an enterprise with respect to its financial performance.

Ofoegbu and Megbuluba (2016), in their study, examined the influence of firm characteristics on the quality of Corporate Environmental Accounting Information Disclosure (CEAID) in the Nigerian manufacturing companies. They used ex-post facto and content analysis research designs. The study made use of seven year period (2008 – 2014) annual reports of 10 quoted manufacturing firms. The pooled panel data least square regression model was used to estimate the influence of the independent variable on the dependent variables. The results proved strongly that firm financial performance has a significant impact on the quality of CEAID, but firm size had no impact on CEAID. The descriptive analysis showed that the highest quality of CEAID as examined using the Global Reporting Initiative and ISO 14301 environmental requirement is far below standard at 2.5%. They concluded that voluntary CEAID alone would not enhance the quality of CEAIDin the manufacturing firms in Nigeria.

Eze, Nweze, and Enekwe (2016), in their study identified environmental accounting issues and the effects of these environmental factors on the life of Nigerians. It was revealed that organizations who voluntarily disclose their environmental activities enjoy high level of competitiveness. The study showed further that environmental accounting motivates organizations to track their green-house gas emissions and other environmental elements against reduction or elimination point. They recommended that companies should adopt acceptable and uniform standards for the purpose of control and measurement of performance, and products with less waste or emission during their life cycle should be designed.

Emeakponuzo and Udih (2015) in their study, examined 25 quoted companies from different sectors of the economy, and found that much attention has not been given to the cost of natural resources damages in project evaluation. The results of their hypotheses testing using Chi Square and Kendall Coefficient of Concordance at 5% level of significance showed that environmental accounting practice is significant in benchmarking standard for corporate reporting and that compliance with Nigerian environmental protection laws has no significant influence on environmental accounting practices due to insufficient enlightenment, enforcement, and compliance. They recommended that accounting professionals should be trained in environmental accounting methods and the FRCN should develop an accounting standard that will incorporate full consideration of financial and physical impacts of business activities on the environment.

Lu and Abeysekera, (2014) in their study "Stakeholder Power, Corporate Characteristics, Social and Environmental Disclosure; China" reviewed the annual reports of 100 firms listed on Chinese Stock Exchange for the period 2008. They used disclosure index to measure the quantity of environmental information, the weight disclosure index of 5 exposure types to measure quality and ordinary least square regression to analyse the data. They found out that size and financial performance had a significant positive relationship with the quality and quantity of social and environmental disclosure in China.

Beredugo and Mefor (2012) examined the impact of environmental accounting and reporting on sustainable development in Nigeria. The study made use of Pearson correlation coefficient and OLS were used to analyze the data. The findings revealed that there is a significant relationship between environmental accounting and reporting and sustainable development. It also revealed that there are consequences for non-compliance with environmental accounting and reporting. Environmental accounting encourages organizations to track their GHG emissions and other environmental data against reduction targets.

Sharifah, (2010) in his study examined the Quantity and Quality of Environmental Reporting practice of 243 listed companies in Malaysia. A content analysis approach was used to determine the quantity and quality of the environmental information disclosure in annual reports. He concluded that there is a positive and significant relationship between the amount and quality of environmental reporting and company size and environmental sensitivity.

III. Methodology

The research design adopted for the study was the survey and secondary source type. The secondary sources were the documents in existence ahead of this study which were related to the research topic. The secondary source data included those information obtained from internet, textbooks, journals, National dailies and other publications.

Questionnaires were sent to 22 NSE listed firms (covering Breweries, Cement, Agriculture, Conglomerates, Paints, Food & Beverages and Pharmaceutical). Finance managers were asked to answer 14 questions regarding the application of Environmental accounting practices and Environmental capacity for sustainable economy in their firms. Out of 22 questionnaires sent out, 22 (100%) were returned and found to be useful. The high response rate of 100% was due to number of respondents and nature of questions posed to them. The questionnaire was structured into two parts with a total of 14 questions. A rating scale for various categories has been used to elicit responses. In the questionnaire form, direct questions were used to identify the firm's name, age, location, position of the officer and business industry.

A 5-point Likert Scale was used to examine the respondent's perception and find out how strongly he or she agrees or disagrees with the statements. This indicates the application of Environmental accounting practices that reflects Environmental capacity for sustainable environment. Some of the items focused on contribution of firms to the environment, adoption of environmental accounting practices and collaboration among firms to salvage the environment. This measure was used by Ferreira et al. (Ferreira et al., 2010). Simple frequency of answers was taken to each question using the highest response to prepare the findings.

IV. RESULTS AND FINDIGS

Ho1: There is no significant relationship between environmental accounting practices and environmental capacity and sustainable economy.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.961[a]	.924	.911	.210	.924	72.699	3	18	.000	1.981

a. Predictors: (Constant), Environmental section in financal, Provide Assistance, Heavy invsmt in Env control

b. Dependent Variable: Accounting practices

The model summary above shows that the independent variables (reflection of environmental costin accounting system, heavy investment in environmental control, budget allocation for environmental control in annual budget, preparation of Environmental P & L to reflect the impact of business on the environment, and a section of financials dedicated to environmental activities) were significant on the dependent variable of accounting practices and environmental capacity for sustainable economy in Nigeria at 0.000 which is less than 0.05 level of significance hence the null hypothesis was rejected and alternate hypothesis was accepted. The null hypothesis which states there was no significant relationship between environmental accounting practices and environmental capacity and sustainable economy was rejected while the alternate hypothesis was accepted stating there was a significant relationship between environmental accounting practices and environmental capacity and sustainable economy.

The result also showed Adjusted R square of 0.911 which reflects that 91.1% of independent variables of independent variables accounted for changes in dependent variables while 8.9% of changes were outside the independent variables.

Companies do not reflect environmental costs in their financials as a line item hence it makes the financials incomplete showing true and fair position. Even where companies incur expenses or capital on environmental activities, it becomes incomplete if they are not captured appropriately in their financials. They cannot present such financials to obtain any favour from the government on environmental activities since it does not reflect any environmental cost.

The study revealed that not many companies invest in environmental control activities that preserve the environment from degradation and damages. An unsafe or degraded environment is not conducive for investment hence it affects economic sustainability of any nation. There are companies that operate in areas affected by flood and other environmental hazards during raining season but they care less about solving the flooding problem, waiting for government to handle the challenge. To achieve a sustainable economy, there must be a conducive partnership between corporate organizations and the government.

Some companies do not care about the environment where they operate. They expect the government to handle every activity claiming that they have paid their dues in form of income tax to the government. They consider environmental improvement as solely government's responsibility. This attitude needs to be corrected through effective monitoring system by government agencies.

The study revealed that some organizations do not set aside any allocation for environmental cost in their annual budget. This goes to show that they do not plan for the environment that makes them to operate to make profit. It is important to plan for the environment that provides us with the opportunity to operate.

Ho2: There are no significant consequences to non-compliance with environmental accounting practices and environmental capacity to achieve sustainable economy in Nigeria.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.819[a]	.671	.506	.683	.671	4.075	7	14	.012	2.014

a. Predictors: (Constant), No Sanction for environmental violation, FEPA Collaboration, Collaboration with Health Agencies, Plan for zero emission, Adoption of GRI reporting, Agric invest for preservation, Collaboration with other companies

b. Dependent Variable: Non compliance

The model summary above shows that the independent variables (FEPA collaboration,investment in agriculture to preserve the environment and support government drive to feed the nation collaboration with other companies, collaboration with government health agencies, adoption of global reporting initiative, plan to achieve zero emission, sanction for violation of environmental law, and preparation of Environmental P & L to reflect the impact of business on the environment) were significant on the dependent variable of no significant consequences on non-compliance to environmental accounting practices and environmental capacity to achieve sustainable economy in Nigeria at 0.012 which is less than 0.05 level of significance hence the null hypothesis was rejected and alternate hypothesis was accepted. The null hypothesis states there were no significant consequences on non-complianceto environmental accounting practices and environmental capacity to achieve sustainable economy in Nigeria was rejected while the alternate hypothesis was accepted stating there were significant consequences on non-compliance to environmental accounting practices and environmental capacity to achieve sustainable economy in Nigeria.

The result revealed Adjusted R square of 0.506 which reflects that 50.6 per cent of independent variables of accounted for changes in dependent variables while 49.4 per cent of changes were outside the independent variables.

There was no much collaboration between many companies and Federal Environmental Protection Agency (FEPA). FEPA is the national agency responsible for coordinating environmental activities in Nigeria. Not many companies showed interest in agribusiness to preserve the environment and support the government drive to feed the nation.

Companies in Nigeria have not commenced preparing Environmental profit and Loss account to show the impact of their business operations on the environment.The study further revealed that there was no collaboration among companies in an area to repair damaged roads and preserve their environment from degradation and destruction.

There was no much collaboration by companies with government health agencies to provide primary health care to the citizens. The current economic situation in the country calls for effective collaboration for sustainable economy.Global Reporting Initiative as an international standard that captures environmental costs is not yet fully adopted by big companies in Nigeria for sustainability. Many companies are yet to plan for zero emissions meaning that the environment is saddled with environmental pollution that affects effective environment.

The implication of this study is that there is a lot to be done among Nigerian companies to improve environmental accounting and environmental capacity to sustain Nigerian economy.

V. CONCLUSION AND RECOMMENDATIONS

The problem of environmental degradation in Nigeria is an age long situation which attracted Federal government's attention. This had caused successive governments in Nigeria to establish environmental agency and ministry to reduce the impact of degradation on the economic situation of Nigeria. Government has invested so much in revamping the environment from degradation and destruction to make it conducive for investment and living. Government had invested so much in addressing the effect of environmental challenges in the North East due to Boko Haram attacks and Niger Delta areas due to attacks on refineries. These challenges impact on the lives of the people in these areas due to pollution of air, land and water. Environmental accounting improves the quality of decision making and accounting preparation that meets global practice to establish a standard of its greenhouse gas (GHG) emissions, energy usage, resource usage, and other important environmental indicators and set reduction targets and production patterns in protecting and managing Nigerian natural resources.

The manner of consumption of natural resources in Nigeria increases contribution to greenhouse gas emissions (GHG) and contribution to ozone layer depletion. Corporate companies have environmental capacity to contribute to a sustainable economy by changing their strategic focus on the environment by reducing the waste generated from production, improve the waste disposal methods, collaborate with other players in the industry, improve the working conditions and collaborate with industry regulators.

The study recommends that:

Government should make environmental reporting compulsory in company's annual reports. This will make them environmentally responsible which will add value to the environment and improve the economic system.

FEPA should be saddled with the responsibility of monitoring the environment and partner with various companies to improve the environment where they operate. This will instill spirit of collaboration among industry players to work together to salvage the environment from environmental degradation and threat. To achieve a sustainable economy, there must be a conducive partnership and collaboration between corporate organizations and the government.

Companies should be sensitized to understand their responsibility as corporate citizens beyond payment of tax. They should recognize their responsibility as custodian of the environment within which they are operating. The environmental capacity for sustainable economy will improve if the corporate citizens realize their responsibility towards the environment.

Companies should review their environment where they operate and make necessary budget to meet the need for environmental challenges such as flooding, security, air and water pollution. This will help preserve the environment from degradation, it will also help these companies to serve the environment longer than necessary.

Bigger manufacturing companies and banks should be encouraged to set aside a portion of their profit (minimum of 1%) to invest in agribusiness as they used to contribute a certain percentage of their profit to SMEs in the early 2000. This will help preserve the environment and achieve a sustainable economic system. This will go a long way to turn around our food production and environmental preservation.

Big manufacturing Companies and Banks should be made to prepare Environmental profit and Loss account to show the impact of their business operations on the environment. This will also encourage them to pay attention to preservation of environment where they operate since they are aware that they are going to present activities on them.

There is a greater need among Nigerian companies to adopt a Global Reporting Initiative as an international standard that captures environmental costs.

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