WEST AFRICAN JOURNAL OF BUSINESS AND MANAGEMENT SCIENCES
FACULTY OF BUSINESS ADMINISTRATION
IMO STATE UNIVERSITY, OWERRI
NIGERIAN EDITION
VOL. 10 NO. 2 JUNE 2021

EFFECT OF SUSTAINABILITY REPORTING ON CORPORATE PERFORMANCE OF SELECTED COMPANIES IN NIGERIA

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Abstract

The broad objective of this study is to examine the effect of sustainability reporting on corporate performance of listed non-financial firms in Nigeria. To achieve this objective, the study specifically sought to ascertain the extent to which environmental sustainability reporting, social sustainability reporting, health and safety sustainability reporting, and economic sustainability reporting affect accounting and market performance proxies (Gross Profit after Tax, Earnings before Interest and Tax&Return on Capital Employed). In this study, we employ ex-post facto research design on a panel data set secondarily sourced from related annual financial reports. Pooled Ordinary Least Square (POLS) regression analysis was first conducted and diagnosed to ensure that there is no violation of vital least square assumption. However, the formulated hypotheses were tested based on the uniqueness of the model. In this study least square dummy variable regression is employed on Return on capital Employed and Gross Profit after Tax margin models while Robust Least Square Regression analyses technique was employed on Earnings before Interest and Tax model and the probability values, (p- values) from all the regression results formed the basis for decision making. However, the findings reveal that environmental sustainability reporting has a positive significant effect on performance measure of earnings before interest and tax but insignificant effect on return on capital employed and gross profit after tax margin. This is seen to be consistent with the legitimacy theory which suggest that corporate duties do not end at reaping profit but commitment to environmental support programs and activities will result in profit for shareholders. We also find that social sustainability reporting has both positive and negative effect on performance in that while it is seen to be negative on return on capital employed and gross profit after tax, its effect on earnings before interest and tax is positive. Therefore, we recommend that policies that will sustain reporting on environmental issues (such as mandatory disclosure on environmental issues) should be encouraged since this has shown to be beneficial to the health and survival of the firms. Furthermore, corporate managers should show genuineness in their motives and purposes while pursuing social responsibility objectives as this will minimize the risk of incurring losses. Moreover, corporate organizations should strive towards satisfying specific needs of customers as this will go a long way to increase the chances that policies on social responsibility engagement will get approval, and accordingly minimize corporate losses.
Keywords: Sustainability Reporting, Firms Performance, Return On Asset, Corporate Social Responsibility.

Introduction

Background to the Study

The key objective of any organization is to consistently grow and survive on a long-term basis. Most managers are also aware that their organizations are part of a large system which has profound direct and indirect influence on their operations. This implies that if these organizations must effectively and efficiently meet their objectives, they should properly adapt themselves to their environments (Baboukardos & Rimmel 2016). Adapting organizations (especially large firms) to their environments signifies a reciprocal or symbiotic relationship between the 'duos' as typified by systems model of viewing business. Considering the current environmental crisis, businesses must give more to their environment. In 2011, the International Federation of Accountants (IFAC) developed a sustainability framework, enabling business organizations to incorporate sustainability issues in their business approach, process and reporting practices. The reporting aspect of IFAC's sustainability framework involves providing audit and assurance on sustainability performance to enhance the credibility of sustainability reports, incorporating sustainability impacts in financial statements, and employing narrative reporting to capture sustainability information not included in financial statements.

Furthermore, studies have shown that there is continuing concern about nature fragmentation and loss of biodiversity, shortages in freshwater availability, over-fishing of the seas, global warming, extreme weather events, air pollution, water pollution, environmental noise and utter neglect and disregard for the protection of the immediate environment, much more the future environment. This type of environmental unsustainability associated with continuously rising demand and a shrinking resource base now spills over into social and economic instability. Therefore, following from the above, many businesses are looking to be part of the solutions. Business is central to the problem and must be central to the solution (Choi & Lee 2018). Indeed, the expectations of corporate responsibility in areas such as environmental protection, human rights, human capital, and product safety are rising rapidly. Key stakeholders such as shareholders, employees, and financial institutions want business to be responsible, accountable and transparent. Unerman, Bebbington and O'Dwyer (2007) states that human activities taking place today are regarded by some people as having a detrimental impact on the society, ecology and economy which future generations will experience. Indeed, this is a position ever more widely accepted by A growing number of people all over the world. For example, only a very small proportion of scientists currently argue that human activity is not a major contributory factor to the global warming which is causing wide scale environmental damage – and which is likely to cause even more damage to the ecosphere unless substantive action is taken to reduce levels of many pollutants.

Even more, scholars argue that the growing social injustice been experienced, and the growing damage to the ecosphere, are a result of a dominant – and almost unquestioned – objective of maximizing economic growth characterized by energy and material-intensive production and exploitative social relations, is socially and environmentally unsustainable (Unerman et al, 2007). In the view of Hu, Du and Zhang (2020) business leaders' response to these issues help companies to mitigate risks, protect corporate brand and gain competitive advantage while helping to reduce poverty and improve the quality of life for many. In some

extreme cases, companies may see their licenses to operate threatened overnight if their key stakeholders perceive significant discrepancies between their own and the company's values. Unerman et al (2007) maintains that one way to look at these issues is in terms of long-term need to ensure that economic activity is socially and environmentally sustainable. In the short-term it may be possible to have economic growth, while damaging society and the environment but in the long-term this is impossible (Abdullah, Ashraf & Sarfraz 2017).

Therefore, if business as a whole operates in a manner which causes damage to the society thereby causing a break down in the social harmony necessary to provide a stable context for operation, then such business activities are neither economically nor socially sustainable. In the longer term if business activities cause a level of damage of the ecosphere such that it cannot sustain human life on the scale we currently enjoy, then this is clearly neither socially nor economically sustainable as there can be no economic activities - let alone economic growth – without human life to sustain it.

Therefore, there is now increasing awareness that companies are made increasingly responsible for consequential environmental and social impact of their activities to the host communities and other stakeholders. According to Ekwueme (2011) the big corporations once looked upon as the exclusive concern of its owners is now viewed as being responsible to the society also. This implies that companies are no longer paying attention to the maximization of shareholders wealth alone but as noted by Gupta and Gupta (2020), are embracing activities that tend to maximize the benefits accruable to all the stakeholders. This to a larger extent means that companies are responding positively towards issues of sustainability. Thus White (2009) maintains that the pressure for corporations to reassure the public of their good behaviour has increased organizations attention towards their stakeholders as well as their stockholders. Business managers are beginning to see that this approach to conducting business has to become a part of the strategy for their companies in order to prosper in the future. There is increased expectation for all companies to be more transparent in how they treat the environment, how they handle their corporate governance issues, how they treat their employees, and how they treat their communities. According to Epstein (2008) 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 more effectively manage their social, economic and environmental impact. In the views of Hart (2007) corporations are the only organizations with resources, technology, the global reach, and, ultimately the motivation to achieve sustainability. In response to their sustainable development policies and practices, many companies claim that they recognize their social and environmental responsibilities, in addition to their economic responsibilities, and are seeking to manage and account for these activities in an appropriate manner.

Statistics from Global Reporting Initiative (GRI) reflect the trend in Sustainability Reporting and as noted by Peiyuan, Xubiao and Ningdi, (2007) the number of enterprises writing sustainability reports based on GRI framework worldwide increased from 150 in 2002 to 750 in 2005. The number of sustainability reports registered on the GRI Reports List increased by 22 percent (GRI, 2011). Therefore, an understanding of the basis of this reporting system,

and how it affects corporate performance is very crucial in determining the essence of its application. This provides justification for this study as to whether sustainability reporting reflects on the performance of listed firms in Nigeria.

Statement of the Problem

People all over the world are expressing considerable concern for damage to the environment by companies and its effects on their lives. There have been calls for firms to engage in activities in a sustainable and responsible manner. Adegboyegun, Alade, Ben-Caleb, Ademola, Eluyela,and Oladipo (2020) observed that such call were not really heard as information about sustainability are not really been captured in the annual reports of some corporations which makes them not accountable to their immediate environment. Also, there is now an increasing awareness that companies should be made responsible for consequential social impact of their activities to the host communities and other stakeholders which have put pressure on companies to reassure the public of their good behaviour. As a result, companies are no longer paying attention to the maximization of shareholders wealth alone but are now embracing activities that tend to maximize the benefits accruable to all the stakeholders. Firms are being conscious that involvement in controversial events that may damage the company's credibility and reputation in the market, may negatively affect both financial and market performance and the sustainable growth of the company (Oprean-Stan, Oncioiu, Iuga & Stan 2020). This to a larger extent means that companies are made to respond positively towards issues of sustainability making it clear that sustainable development is an important concept to the future fortunes of nations and individuals (White, 2009; Edwards, 2005).

The realization that being social and environmentally responsible can facilitate achieving long-term growth goals, raising productivity, and optimizing shareholder value has made sustainability issue major concern for businesses of all sizes in an attempt to preserve capital for future generations (Oprean-Stanet et al 2020). This consciousness has led increasing number of firms to provide sustainability reports in addition to the traditional reporting framework. It is worthy to note here that while some countries of the world have made regulations for sustainability reports others are providing information about sustainability issues on voluntary basis. (Hu, Du & Zhang 2020).

Some extant studies focus on determinants influencing sustainability disclosures in firms (Sharma, Panday & Dangwal, 2020; Vitolla, Raimo, Rubino & Garzoni, 2020; Dyduch & Krasodomska, 2017; Kuzey & Uyar, 2017; Giannarakis, 2014; Hahn & Kühnen, 2013). Others focused on value relevance of sustainability disclosures (Aureli, Gigli, Medei & Supino, 2020; Cordazzo, Bini & Marzo, 2020; Baboukardos & Rimmel, 2016; Ntim, Opong & Danbolt, 2012). Another category of research on sustainability reporting are those that examined the link between sustainability disclosures and firm performance which is closely related to this present study.

Existing research on the effect of sustainability reporting on firm performance have produced conflicting views. For instance. Albitar, Hussainey, Kolade and Gerged, (2020); Hongming, Ahmed, Hussain, Rehman, Ullah ans Khan (2020); Emeka-Nwokeji and Osisioma (2019); Amran and Siti-Nabiha (2017) Guthrie, Cuganesan and Ward (2016); Ifurueze, Lydon and Bingilar (2013) and Menassa (2010) document positive association between different measures of sustainability, social and environmental disclosures and performance of firms in different

countries. On the other hand, Ezejiofor, Rachael and Chigbo (2016); Dibua and Onwuchekwa (2015); Emeakponuzo and Udih (2015); Bessong and Tapang (2016), established a negative but insignificant link between sustainability disclosures and firm performance. Specifically, Nnamani, Onyekwelu, and Ugwu (2017); Usman and Amran (2015) measured environmental and sustainability disclosure with environmental disclosure, community involvement disclosure, human resource disclosure, product disclosures. Result shows that disclosing environmental-related information leads to a decrease in both accounting and market based corporate financial performance. In the light of these contradictory results obtained from existing literature conducted within the Nigerian space, this study is set to find out the effect of sustainability reporting on corporate performance of selected quoted companies in Nigeria. The study intends to provide up to date knowledge by providing evidence from all sectors of which most previous Nigerian authors did not consider. Furthermore, several studies have analyzed the impact of environmental, social and governance information reporting on firm performance, but only a hand few authors have considered corporate economic sustainability as it affects firm performance. Hence, this study is poised towards evaluating the effect of corporate sustainability reporting on firm performance in Nigeria.

Objective of the Study

The main objective for this study is to investigate the effect of sustainability reporting on corporate performance of listed companies in Nigeria. Specifically, this study intends to:

1. Ascertain the effect of environmental sustainability reporting on financial performance of listed firms in Nigeria
2. Evaluate the impact of social sustainability reporting on financial performance of listed firms in Nigeria.
3. Analyse the effect of economic sustainability reporting on financial performance of listed firms in Nigeria.
4. Examine the effect of health/safety sustainability reporting on financial performance of listed firms in Nigeria.

Research Questions

In line with the objectives of this study, the following research questions have been set up to guide this study.

1. What is the effect of environmental sustainability reporting on financial performance of listed firms in Nigeria?
2. What is the impact of social sustainability reporting on financial performance of listed firms in Nigeria?
3. To what extent does economic sustainability reporting affect financial performance of listed firms in Nigeria?
4. What is the influence of health and safety sustainability reporting on financial performance of listed firms in Nigeria?

Hypotheses of the Study

The following null hypotheses guided this study:

Ho_1: Environmental sustainability reporting has no significant effect on financial performance of listed firms in Nigeria

Ho_2: Social sustainability reporting has no significant effect on financial performance of listed firms in Nigeria.

Ho_3: Economic sustainability reporting has no significant effect on financial performance of listed firms in Nigeria.

Ho_4: Employee health and safety sustainability reporting has no significant effect on financial performance of listed firms in Nigeria.

Significance of Study

The significance of this research is viewed from two major perspectives; Practice and academic.

Practical Significance: This research will assist various stakeholders in the following ways:

- **Organizations Management**: Sustainability reporting is rapidly evolving; different standards and frameworks have emerged. This research will assist organizations management in determining which sustainability standards and guidelines to follow.
- **Regulatory Authorities**: From a regulatory perspective, there are currently no legislative requirements in Nigeria for companies to prepare and publish sustainability reports. This research will help in enhancing understanding of the scope of knowledge of regulatory authorities like Corporate Affairs Commission (CAC) and the legislative arm of government in putting in place regulations that encourage sustainability reporting.
- **Financial Reporting Council of Nigeria**: From standard setting perspective, there is currently no local standard for companies to prepare and publish sustainability reports. This research will serve as a wakeup call for the Financial Reporting Council of Nigeria to put machineries in place for Sustainability Reporting standard or guidelines.
- **Local Communities and other Stakeholders**: This research will help to educate local communities where these companies operate and other stakeholders like employees and social and environmental non-governmental organizations regarding the adequacy and potentials of corporate sustainability reporting to meet their information needs and help them hold companies to account.
- **Companies yet to adopt Sustainability Reporting**: This research will help companies that are yet to adopt Sustainability Reporting practices to understand the pros and cons of this evolving reporting system and its impact on corporate performance. They will be better placed to take decision on whether to adopt this reporting system or not.
- **Professional Accountancy Bodies**: This is a study on a contemporary issue in accounting development. It will enrich the mandatory continuing programs of professional accountancy bodies in Nigeria.

Academic Significance

In the area of academics, the significance of this research arose from the following ways:

- It will contribute to the enrichment of the literature on sustainability reporting.
- It will throw more light to students, scholars and academics on the relationship between sustainability reporting and corporate performance of companies.
- The research will serve as a body of reserved knowledge to be referred to by researchers.

Scope of the Study

The trust of this study is to ascertain the effect of sustainability reporting on corporate performance of companies listed on the Nigerian Stock Exchange. The independent variable of the study is sustainability reporting disclosure. The dependent variable of the study is corporate performance indicators measured as; Return on Asset; Return on Equity, Net Profit Margin and Earnings per Share. The study will cover a ten-year period starting from 2010 to 2019.

Review of Related Literature

Conceptual Literature

Sustainability

The concept of sustainability in the views of Aras and Crowther (2008) is a development that attempts to bridge the divide between economic growth and environmental protection, while taking into account other issues traditionally associated with development. sustainability seeks to develop the means for supporting economic growth while supporting biodiversity, relieving poverty and without using up natural capital in the short term at the expense of long-term development. World Commission on Environment and Development (1987) defines sustainable development 'as meeting the need of the present generation without compromising the ability of future generations to meet their own needs'. Aras & Crowther (2008) opine that sustainable development is often misinterpreted as focusing solely on environmental issues whereas, in reality, it is a much broader that encompass three general policy areas: economic, environmental and social.

Sustainability; COVID 19 Dimensions

Hakovirta and Denuwara (2020) noted that before the outbreak of corona-virus (COVID-19) the world was highly focused on increasing environmental problems and social issues that many believe arose from controversial economic policies and the global trade. In their views, sustainability is a term and concept used to bring balance and also create responsibility for economic activity and development. but proposed a rethink and redefinition of sustainability as the intersection of the economy, environment, society and human health. In their study, they argue that the significance of adding human health as one of the sustainability development goals can be seen through the results of the COVID-19 pandemic. It is practically impossible for life to go on as usual when the health of the society quite dramatically crumbles down due to a human health risk of global magnitude (Hakovirta & Denuwara 2020). The authors argued further that sustainability pillars had been addressing issues that concerns humanity and draw a global connection, but the role of human health has been relegated to be more of a local, individual-level topic. With reference to 'Good Health' as the third agenda in the United Nations sustainable development goals Hakovirta & Denuwara (2020) concluded that including human health aspect into the definition of sustainability becomes important.

Corporate Sustainability Reporting

There is no single, generally accepted definition of sustainability reporting. It 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, 2008). Schaltegger (2004) defines sustainability reporting as a subset of accounting and reporting that deals with activities, methods and systems to record, analyses and report, firstly, environmentally and socially induced financial impacts and secondly, ecological and social impacts of a defined economic system (example, a company). Thirdly, sustainability reporting deals with the measurement, analysis and communication of interactions and links between social, environmental and economic issues constituting the three dimensions of sustainability (Ioannou & Serafeim (2019).

Sustainability Reporting is becoming more prevalent, driven by a growing recognition that sustainability related issues can materially affect a company's performance, demands from various stakeholder groups for increased levels of transparency and disclosure and the need for companies (and the business community more generally) to appropriately respond to issues of sustainable development (KPMG 2008; Ivan, 2009). According to Parliament of Australia (2010) sustainability reporting involves companies and organizations demonstrating their corporate responsibility through measuring and publicly reporting on their economic, social and environmental performance and impacts. However, some of the more useful definitions of sustainability reporting include that given by the Global Reporting Initiative (GRI). According to GRI (2011) sustainability reporting is the practice of measuring, disclosing and being accountable to internal and external stakeholders for organizational performance towards the goals of sustainable development. Similarly, 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 cost and risks. According to Arndt, Isenmann, Brosowski, Thiessen and Marx-Gomez (2006) sustainability reporting has its roots in environmental or non-financial reporting respectively. It describes a development path towards a concept of balanced reporting of an organization, often communicating the three pillars of environmental, social and economic performance and its mutual interrelations what in business terms is called the triple bottom line approach, or corporate social responsibility reporting respectively.

Corporate Environmental Sustainability Reporting

Environmental reporting and its later development into sustainability reporting has been the most important aspect of accounting and the environment especially in the last two decades (Gray, 2014). Environmental reporting provides a strategic framework for achieving a holistic re-appraisal of corporate performance. Although it is not a new concept, environmental reporting remains an interesting area of discourse for academics and an intensely debatable issue for business managers and their stakeholders. According to Deegan and Rankin (1996) corporate environmental sustainability reporting refers to the way and manner by which a company communicates the environmental effects of its activities to particular interest groups within society and to society at large. Companies through the process of environmental communication may seek to influence the public's perception towards their operations. They attempt to create a good image as they interact with the environment at large, including the use of natural resources, and company's impact on earth's ecosystems, compliance with

environmental regulations, leadership in addressing climate change, energy-efficient operations, renewable energy, natural resource conservation, pollution prevention programs, strategy towards sustainable development and programs to engage stakeholders for environmental improvement. Considering that accounting provides the most important corporate system of information collection and analysis, in environmental accounting context it means that someone has the duty to give an explanation for how resources have been used (Schaltegger & Burritt 2000). Therefore, the ultimate goal of environmental accounting is to prepare environmental reports for interested users. According to the European Environmental Agency (EEA), environmental reports are "the principal vehicle for company communication on the environment and a fair and credible reflection of the company's environmental activities (EEA, 1998).

Environmental reports are provided to inform stakeholders about companies' environmental responsibilities, ensure business transparency and create the reputation of responsible partners that contribute to environmental protection and the quality of life of the local community. A pre-requisite for good environmental reporting is the establishment of an environmental management system and also the foundation for any substantive environmental accounting (Gray, 2014). Therefore, the integration and synergies between environmental management system and environmental accounting are needed in encompassing environmental aspects. Disclosure of environmental information can be viewed as an instrument, which can help in the management of precious environmental resources (Batra, 2013). Environmental reporting can be considered as business practice that demonstrates companies' commitment to addressing environmental issues. However, the implementation of environmental accounting, collecting environmental data and preparing environmental reports is not an easy task. There are many obstacles that can affect this process. Through previous research, authors discuss various influencing factors. For example, Doody (2010), points to knowledge deficiency, owner and manager attitudes, human resources, finance, customer attitudes, operational structure of a company as well as legislation and accreditation, as the barriers in implementing environmental practices. Hillary and Burr (2011) point out that not engaging employees in the process of environmental management, lack of internal skills, knowledge and experience, complexity of the management system, unclear benefits, limited human resources and cost of external support, are the main barriers to environmental management implementation which are likely affect the implementation of environmental reporting processes.

Corporate environmental reporting has become a tool for promoting companies' communication, demonstrating their accountability regarding environmental issues, and providing useful information for decision-making. It refers to the systematic and holistic statements of environmental burden and environmental efforts in organizations' activities, such as environmental policies, objectives, programs and their outcomes, organizational structures, in accordance with the general reporting principles of environmental reporting (Ministry of the Environment, Japan Government, 2004). Motivating forces for environmental reporting can be both internal and external, tangible and intangible, financial or ethical, and the reasons for reporting have been changing over the years. The Global Reporting Initiative (2011) has documented that some of the main motives for the reporting are: a) to show commitment and

to be transparent, b) to demonstrate the ability to participate in competitive markets, c) to plan activities, become more sustainable and position the company, and d) to comply with regulations.

Corporate environmental reporting is a contemporary management tool that companies can use to provide information to external stakeholders and to find opportunities to improve internal processes, gain benefits and ensure its own sustainability. Environmental reports enable: greater distinction of companies in terms of environmental risk, which is the purpose sought by the business community; and (b) adequate accountability to the community, which is the purpose sought by the regulating entities, non-government organizations, and by society (Borges & Bergamini, 2001). Companies report environmental information to respond to stakeholder expectations and contribute to the welfare of society (Morsing & Schultz, 2006), to manage their own legitimacy (Reverte, 2009), to preserve their reputation (Reynolds & Yuthas, 2008), and to make profitability in the long run by reducing information asymmetry (Merkl-Davies & Brennan, 2007; Du, 2010).

Corporate environmental reporting as an important part of sustainability reporting instills discipline and helps a company think about and define its long-term while raising awareness of sustainable practices in the whole organization (ACCA, 2013). Corporate environmental reports are the result of functioning an internal system for collecting, analyzing and processing data on the company's environmental aspects. Hence, it is a systematic and formal approach to addressing environmental impacts and integrating environmental issues into business processes. Due to the growing pressure for companies to consider environmental effects of their operations, accounting and disclosure of environmental matters have rapidly been emerging as an important dimension of environmental management (Batra, 2013).

Corporate Social Responsibility Reporting

Corporate social responsibility includes improving human resource related practices (e.g. employees' training and development, employee' health and safety, diversity, equal opportunity, and wage discrimination issues), addressing consumers' issues (e.g. customers' health & safety, product labeling, communication practices, customers' complaints, and compliance with product laws), protecting human rights (e.g. freedom of association, removing child labor issues, non-discrimination, and other safety measures etc.), and addressing other issues of broader stakeholders and community concerns such as: involving local community, reducing corruption, showing public policy concerns, discouraging anti-competitive behavior, and complying with law (GRI 3.1 2011). The concept gained prominence as a result of the ethical perspective of the organizations which recognizes the value of social responsibilities in addition to their prime objective of wealth maximization.

Corporate social sustainability can be described as a company's commitment to behave socially and environmentally responsible while striving for its economic goals. It includes the company's relationship with all its stakeholders, from market-related stakeholders (customers, share owners, suppliers), to internal (e.g. employees, board of directors) or societal stakeholders (e.g. government, Non-Governmental Organizations). It is assumed that the variety of stakeholders and their concerns lead to corporate responsibility including economic, environmental and social aspects. (Zink & Steimle 2008). Corporate social responsibility is a hard–edged business decision. Not because it is a nice thing to do or because people are forcing

us to do it but because it is good for our business (Akinyomi, 2013). According to McWilliams and Siegel (2001) corporate social responsibility refers to doing all those activities which are not forced by law of those countries in which they are running their businesses and which are not for the primary benefits of the business but for the benefits of the society." Likewise, corporate social responsibility is expressed as a persistent commitment by the businesses regardless of their nature, to behave in a way that align with ethics and contribute to the economic development by fine-tuning and improving the standard of living of the people.

Mughal, (2014) argue that it is a persistent commitment by businesses regardless of their nature, to behave in a way that is in line with ethics and contribute to economic development, and have been declared as an integral part of governance. The views of Tilt (1999), documents that corporate social responsibility is a mechanism whereby companies disclose the social and environmental aspects of their corporate activities to their stakeholders. It is also seen as the process of communicating information (both financial and non-financial) about the resources and social performance of the reporting entity (Dutta & Bose, 2007). Furthermore, it is seen as an organization's commitment to operate in an economically and environmentally sustainable manner while recognizing the interests of all its stakeholders (Carrol 1991). But Dahlsrud (2008) opine that corporate social responsibility is a social construct that cannot be universally defined. However, for the success of any organization, corporate social disclosure is dependent upon its corporate social orientation, values, and largely, on its ethical orientation (Logsdon & Yuthas, 1997).

The European Commission (2002) provides a broader definition of corporate social responsibility, stating that "corporate social responsibility is about companies having responsibilities and taking actions beyond their legal obligations and economic/business aims. These wider responsibilities cover a range of areas but are frequently summed up as social and environmental where social means society broadly defined, rather than simply social policy issues. This can be summed up as the triple bottom line approach: i.e. economic, social and environmental". Rahman (2011) then explored the dimensions of corporate social responsibility concept and concluded with a ten dimension which corporate social responsibility cover to include: obligation to the society, stakeholders' involvement, improving the quality of life, economic development, ethical business practice, law abiding, voluntariness, human rights, protection of environment, transparency and accountability.

Corporate Economic Sustainability Reporting

Economic sustainability aims to keep the capital intact. If social sustainability focuses on improving social equality, economic sustainability aims to improve the standard of living. In the context of business, it refers to the efficient use of assets to maintain company profit over time. As stated by the UK Government (Annual Report 2000, January 2001) Maintaining high and stable levels of economic growth is one key objective of sustainable development, hence, abandoning economic growth is not an option. Sustainable development is more than just economic growth and the quality of growth matters as well as the quantity." Critics of this model acknowledge a great gap in modern accounting practices which did not include the cost of damage to the earth in market prices (Hawking, 2010). A more recent approach to economics acknowledges the limited incorporation of ecological and social components in this model. New economics is inclusive of natural capital (ecological systems) and social capital

(relationships amongst people) and challenges the mantra of capital that continual growth is good and bigger is better, if it risks causing harm to the ecological and human system (Benn et al., 2014).

Corporate Employee Health & Safety Reporting

The nature of modern corporate worker wellbeing and security arrangement has driven analysts to note that announcing on worker can best be portrayed as "worker washing" (Behm & Schneller 2011; O'Neill; Flanagan & Clarke 2016) because it ventures a positive picture of companies that, whereas giving authenticity, it ought to reflect a company's work conditions or workers' encounters. Work environment is seen as all perspectives of the plan and administration of the work framework that influence employees' interactions with the working environment. This may incorporate the physical plan, counting formats and the built environment, division of work, utilize of innovation, supervisory structures, human asset administration techniques, and co-worker intelligence that can influence the physical, mental, and enthusiastic work-load which decides the positive or negative results of work for the worker. Be that as it may, there have been calls to move forward the wellbeing of workers through corporate social duty (Granerud 2011; Montero, Araque, Rey, Zwetsloot, & van Scheppingen 2009; Dijkman 2013). But relative to other zones of corporate social responsibility, such as the characteristic environment, there is a need for information around how representative concerns are tended to incorporate social duty detailing.

Corporate Performance

The subject of corporate performance has received significant attention from scholars in various areas of business and strategic management (Jat, 2006). It has also been the primary concern of business practitioners (managers and entrepreneurs in all types of organizations) because corporate performance is essential in organizations success stories because of their perceived effectiveness and efficiency in managing their operations and their positive contributions to the well-being of their stakeholders. Whereas, low performance organizations are owing to their lack of such essential attributes (Makhamreh, 2000).

Performance is however, a difficult concept, in terms of definition and measurement. It has been defined as the end result of activity, and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated and the objectives to be achieved through that evaluation (Hunger & Wheelan,1997). According to Encyclopedia of Business (2011) performance measures can be grouped into two basic types: those that relate to results (outputs or outcomes such as competitiveness or financial performance) and those that focus on the determinants of the results (inputs such as quality, flexibility, resource utilization, and innovation). This suggests that performance measurement frameworks can be built around the concepts of results and determinants. Zuriekat, Salameh and Alrawashdeh (2011) on the other hand opines that performance measurement systems are considered information systems that are used to evaluate both individual and organizational performance. Until recently, companies concentrated on the use of financial performance measures as the foundation of performance measurement and evaluation purposes. According to Lin and Liu (2005) in business management, financial ratios are usually one of the indicators used to evaluate a firm's performance. Generally, the financial information of a company's

business operations will be reported in the yearly financial statements, and a financial ratio simply constitutes one item divided by another in the financial statement. Financial ratios can be viewed as a preliminary reference for the analysis of the business performance. This agrees with Osisioma (1996) assertion that "ratios relate one set of values to another, with the resulting quotient serving as a measure, a standard or a norm by which performance is judged."

Methodology

Research Design

The study adopted *ex-post facto* and analytical research design base on secondary data collated from annual financial reports of selected listed non-financial companies in Nigeria. This research employed an *ex-post facto* since the event has taken place therefore, the data already exist and no attempt will be made to manipulate the data of the variables of the study. Furthermore, the study used an analytical design to examine the effect of corporate sustainability reporting on firm performance of listed non-financial companies in Nigeria.

Sources of Data

This study employed secondary source of data. Annual reports of the sampled firms were used to obtain information on the variables of corporate sustainability reporting proxies of environmental social responsibility, economic and employee health and safety reporting. Also, proxies of firm performance which include; return on capital employed, gross profit after tax margin and earnings before interest and tax margin were collated from related company annual financial reports. The data instrument is by means of documentation in which data from annual reports of the selected companies in Nigeria (Nigerian Stock Exchange) were extracted. The final compilation of the data set was carried out by Machame Ratios a registered corporate body saddled with the responsibility of collecting empirical data for related research studies.

Population of Study

This research work covers a population of listed non-financial firms in Nigeria. Non-financial firms listed on Nigeria Stock Exchange between January, 1st 2010 and December 31st 2019 was one hundred and six (106). Therefore, the population of the study consists of all 106 non-financial listed firms in Nigeria as at December 31st 2019. We employed non-financial listed companies as result of similarities in operations and activities. Also, we observed there was less concentration of similar studies towards these sub-sectors in our prior related literature.

Sample and Sampling Technique

In this study, I obtained the sample from the population based on the nature of this research work, where we need to employ cross sections (non-financial listed companies) that possess similar characteristics and attributes. Particularly, we draw the sample size through a procedure of purposive non-probability sampling technique with concern for available and accessible of relevant information needed for the study. First, we deselect all firms that got listed into the stock exchange after year 2010 which is the start period for this study. This is done to ensure a balanced panel data structure and also a homogenous periodic scope necessary for the estimation process. We also deselect all firms which lacked/incomplete information needed for the estimation hence, the sample size resulted to seventy-five (75) non-financial companies selected from the entire population. Furthermore, we note that these non-financial listed companies show strong similarities in reporting structure, availability of

information completeness and relevance in data points for the study within the period under review.

Method of Data Analysis

The data set was first subjected to pre-regression analyses which includes; descriptive statistics analyses, correlation analyses and the test for normality of residua. The descriptive statistics was employed to examine the characteristics of the data: Mean Maximum, Minimum, and Standard Deviation. The correlation analysis was adopted to evaluate the association between the variables and to check for possible co linearity among the variables of interest. Regression analyses technique as a method of data analyses was employed to establish the effect of corporate sustainability reporting and firm performance and also identify the direction of the effect if any. However, the regression analysis was subjected to diagnostic checks involving; test for multicollinearity, heteroscedasticity, and test for fixed and random effect. Specifically, the need to control for heteroscedasticity and company fixed effect which was seen to be present in the fixed effect model as suggested by the Hausman specification test prompted the use of Robust Least Square regression estimator and Least Square Dummy Variable regression estimator.

Method of Data Collection

Content Analysis

In this study, we employed content analysis method for collecting data particularly for the proxies of corporate sustainability reporting of environmental sustainability, social responsibility and employee health and safety reporting. Content analysis is defined as a method in which qualitative data are converted to quantitative data systematically to aid analysis (Clarke & Gibson-Sweet, 1999). This method is defined as a research technique that aid in making replicable and valid inferences from data and assumes that the extent of disclosure signifies the importance of the disclosed topic to reporting entity (Campbell, (Craven & Shrives 2003). In content analysis, word Counts, Sentence Counts, Average Lines and Proportion of Pages could be employed and a researcher is free to choose the method considered most convenient (Hassan, 2012; Roca, & Searcy, 2012; Hackston & Milne, 1996; Alonso-Almeida, Llach, & Marimon, 2014 and Bollen, Skully & Wei, 2010). In this study, environmental sustainability, social responsibility and employee health and safety reporting information was collected from annual reports of the selected firms within the period under review by employing sentence count based on the argument that a researcher is free to choose any of the methods. Specifically, the final measurements of the independent variables were achieved by employing scoring index based on performance indicators selected from Global Reporting Initiative (2018) guidelines as applied in previous studies. Environmental, social, and health/safety disclosure indexes were calculated based on the number of occurrences and the level of disclosure. If there is an occurrence of an indicator in the company's financial statement, the researcher will assign the value of 1 but if there is no occurrence of such indicator, the researcher will assign 0. The index score is arrived at by dividing the sum of occurrences by the total number of possible scores.

Model Specification

The study specifies three econometric models to determine the effects of sustainability reporting on corporate performance of companies listed on the Nigerian Stock Exchange this study modified the models of Hongming, Ahmed, Hussan, Rehman,Ullah and Khan (2020), Nwokeji and Osisioma, (2019). We specify the functional form of the model as:

Performance = F (Environmental Sustainability Reporting, Social Responsibility Reporting, Economic Sustainability Reporting, Employee Health & Safety Reporting, and Earnings Yield) ………… (1)

Where performance proxies are; Return on Capital Employed, Gross Profit after Tax Margin and Earnings before Interest & Tax. Hence, we re-write the functional form as;

Return on Capital Employed Model

ROCE = F (Environmental Sustainability Reporting, Social Responsibility Reporting, Economic Sustainability Reporting, Employee Health & Safety Reporting, and Earnings Yield) ………… (2)

Gross Profit after Tax Margin Model

GPTM = F (Environmental Sustainability Reporting, Social Responsibility Reporting, Economic Sustainability Reporting, Employee Health & Safety Reporting, and Earnings Yield) ………… (3)

Earnings before Interest & Tax Model

EBIT = F (Environmental Sustainability Reporting, Social Responsibility Reporting, Economic Sustainability Reporting, Employee Health & Safety Reporting, and Earnings Yield) ………… (4)

Furthermore, we specify three econometric models in order to test our stated hypotheses shown below as***:***

Model 1 **Return on Capital Employed**

$$roce_{it} = \partial_0 + \partial_1 envd_{it} + \partial_2 csrd_{it} + \partial_3 hsed_{it} + \partial_4 eaps_{it} + \partial_5 eayd_{it} + £_{it} \quad \text{.......................} (5)$$

Model 2 **Gross Profit after Tax Margin**

$$gptm_{it} = \partial_0 + \partial_1 envd_{it} + \partial_2 csrd_{it} + \partial_3 hsed_{it} + \partial_4 eaps_{it} + \partial_5 eayd_{it} + £_{it} \quad \text{.......................} (6)$$

Model 3 **Earnings before Interest & Tax Model**

$$ebit_{it} = \partial_0 + \partial_1 envd_{it} + \partial_2 csrd_{it} + \partial_3 hsed_{it} + \partial_4 eaps_{it} + \partial_5 eayd_{it} + £_{it} \quad \text{.......................} (7)$$

Where:

ROCE = Return on Capital Employed
GPTM = Gross Profit after Tax Margin
EBIT = Earnings before Interest & Tax Margin
ENVD = Corporate Environmental Sustainability Reporting
CSRD = Corporate Social Responsibility Reporting
HSED = Corporate Employee Health & Safety Reporting
EAPS = Corporate Economic Sustainability Reporting

EAYD = Earnings Yield
∂0 = Model intercept
$\partial_1 .... \partial_5$ = Coefficient to be estimated, where $\partial 1 .... \partial_5 > 0$
it = Cross Section of listed companies with time variant
£ = stochastic error term

Data Presentation / Result

The study investigates the effect of corporate sustainability reporting on firm performance taking into account; corporate economic sustainability reporting, corporate environmental sustainability reporting, corporate social responsibility reporting as well as corporate employee health and safety reporting as proxies for corporate sustainability reporting for samples obtained from non-financial firms listed on the Nigerian Stock Exchange market for the periods 2010 – 2019. In line with related extant literature, we employ the variable of earnings yield as control variable for the model. In this study we engaged three different proxies for firm performance which include; Return on Capital Employed, Gross Profit after Tax Margin and Earnings before Interest and Tax. Furthermore, in identifying the possible environmental, social, economic as well as health and safety sustainability reporting that would affect firm's performance, we conducted pre regression analysis which includes descriptive statistics, correlation matrix, and data normality analysis. Table 4.1 below shows the mean (average), maximum, minimum standard deviation and sum for each of the variables of interest providing some insight into the nature of the selected Nigerian listed non-financial companies that were employed in this study.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
roce	729	0.65619	162.664	12.444	0.00000
gptm	729	0.55301	211.480	13.085	0.00000
eitm	729	0.08861	431.202	14.826	0.00000
envd	740	0.83374	79.736	10.708	0.00000
csrd	740	0.97586	11.578	5.989	0.00000
hsed	739	0.89647	49.592	9.546	0.00000
eaps	727	0.50717	232.587	13.316	0.00000
eayd	726	0.19508	379.403	14.511	0.00000

Table 4.6 Robust Panel Least Square Regression Estimates

Variable	LSDV_ROCE	LSDV_GPTM	RPLS_EITM
envd	-7.6326799	8.4330197	10.545225
	7.4627209	19.57322	2.604509
	-1.02	0.43	4.05
	0.3068	0.6667	0.0001
csrd	-13.997541	-39.484888	7.5418804
	4.12434	10.817316	2.2363641
	-3.39	-3.65	3.37
	0.0007	0.0003	0.0008
hsed	13.804984	16.306313	-2.6175369
	4.7075517	12.346964	2.6640356
	2.93	1.32	-0.98
	0.0035	0.1871	0.3262
eaps	.95330534	.40724516	.35071606
	.14791398	.38794868	.06620844
	6.44	1.05	5.30
	0.0000	0.2942	0.0000
eayd	.05740725	-.01803757	.22643471
	.00303865	.00796977	.00429958
	18.89	-2.26	52.66
	0.0000	0.0240	0.0000
N	724	724	723
r2	.60844449	.37417789	.80948612

STATA 16 Output
Authors Computation (2021)

Specifically, the study provide interpretation and make policy recommendation with LSDV & the Robust Panel Least Square models. The ROCE model goodness of fit as captured by the Fisher statistics (12.85) and the corresponding probability value (0.0000) shows a 1% statistically significant level suggesting that the entire model is fit and can be employed for interpretation and policy implication. An R^2 value of 0.6084 indicates that about 61% of the variation in the dependent variable is being explained by all the independent variables plus the control variables and company dummies in the model. This also proved that about 39% of the variation in the dependent variable is left unexplained but have been captured by the error term. Also, the GPTM model goodness of fit as captured by the Fisher statistics (4.94) and the corresponding probability value (0.0000) shows a 1% statistically significant level suggesting that the entire model is fit and can be employed for interpretation and policy implication. An R^2 value of 0.3742 indicates that about 37% of the variation in the dependent variable is being explained by all the independent variables plus the control variables and company dummies in the model. This also proved that about 63% of the variation in the dependent variable is left unexplained but have been captured in the error term. For EBIT model, the goodness of fit as

captured by the Fisher statistics (609.30) and the corresponding probability value (0.0000) shows a 1% statistically significant level suggesting that the entire model is fit and can be employed for interpretation and policy implication. An R^2 value of 0.809 indicates that about 81% of the variation in the dependent variable is being explained by all the independent variables plus the control variable in the model. This also proved that about 19% of the variation in the dependent variable is left unexplained but have been captured in the error term.

Summary of Findings

This study investigates the effect of corporate sustainability reporting on firm performance of listed non-financial companies in Nigeria. The scope of this study covers a ten-year period ranging from 2010 to 2019. The independent variables of interest which we employed to test the effect of corporate sustainability reporting on firm performance are: Corporate Environmental Sustainability Reporting, Corporate Social Responsibility Reporting, Corporate Employee Health and Safety Reporting, Corporate Economic Sustainability Reporting and together with a control variable of earnings yield. We employed accounting performance measures of Return on Capital Employed, Gross Profit after Tax Margin and Earnings before Interest and Tax. Through some rigorous regression analysis, we obtain the following results:

1. Corporate environmental sustainability reporting has a positive significant effect (5%) on performance measure of earnings before interest and tax but was found to have negative and positive insignificant effect on return on capital employed and gross profit after tax margin respectively during the period under investigation.
2. Corporate social sustainability reporting is seen to have significant effect across all the measures of firm performance. However, the effect is seen to be negative (5%) on return on capital employed, negative (5%) on gross profit after tax margin but positive (5%) on earnings before interest and tax during the period under consideration.
3. Corporate employee health and safety sustainability reporting is revealed to positively (5%) impact return on capital employed but its impact is seen to be insignificant on gross profit after tax and earnings before interest and tax during the period under investigation.
4. Corporate economic sustainability is revealed to positively (1%) affect return on capital employed and earnings before interest and tax margin (1%) but show an insignificant effect gross profit after tax margin during the period under assessment.
5. Earnings yield is seen to be significant across all measures of performance during the period under consideration.

Conclusion

This study evaluates the effect of corporate sustainability reporting on performance of non-financial firms listed on the Nigerian stock exchange for the period between 2010 and 2019. In this study, we employed three accounting performance measures (Return on Capital Employed, Gross Profit after Tax and Earnings before Interest and Tax) as dependent variables. Specifically, we observed from the results that corporate social responsibility reporting impacted negatively on return on capital employed and gross profit after tax margin. This implies that, the cost of carrying out social responsibility out-weights its benefits. However, the

result obtained from the effect of corporate environmental sustainability reporting on earnings before interest and tax is seen to be positive and significant. This finding indicates a boost of investors' confidence and stakeholders' benefits. By extension, we note here that the results obtained from the effect of corporate environmental reporting on earnings before interest and tax supports the agency theory which posit that the problem of information asymmetry will significantly reduce when appropriate policies on environmental sustainability is put in place.

The feud between managers and owners will reduce. Furthermore, corporate economic sustainability is seen to positively impact on two performance measures (Return on Capital Employed & Earnings before Interest and Tax which indicate that the main objective of businesses which is to maximize and increase their market value on a long-term basis is achieved. We can fairly say here that due to such outcome obtained in this study, investors, customers/stakeholders of these selected firms employed in this study well appreciate and trust the goods and services rendered by the management which ultimately results in larger income (Ioannou & Serafeim 2017).

Recommendations

The recommendations in this study are drawn specifically on the issues where corporate sustainability measures met with prior expectations. In this study, the researchers find that the proxy of corporate environmental reporting has a positive significant effect on the dependent variable of earnings before interest and tax. This result is commendable as it provides shareholders with the opportunity to benefit from their investment. Furthermore, we find out that reporting policies on social responsibility have a negative feedback on firm performance during the period under consideration. To this effect and due to the need to tackle this negative outcome, we recommend some few basic things as the way forward;

1. Policies that will sustain reporting on environmental issues (such as mandatory disclosure on environmental matters) should be encouraged because this has shown to be beneficial to the health and survival of the firms.
2. Managers should be genuine and open in their motives and purposes, together with pursuing social responsibility objectives since this will minimize the risk of incurring losses. Moreover, managers should try to satisfy specific needs of customers since this will go a long way to increase the likelihood that policies on corporate social responsibility engagement will get approval, and accordingly minimize corporate losses. Furthermore, constantly trying to align the company goals and stakeholder goals will also increase the chances of CSR activities actually creating profit (in terms of earnings before interest and tax), for all parties involved.
3. We find that corporate economic sustainability reporting is profitable for business corporations therefore, managers should focus on policies that increases economic reporting if they aim to improve both performance indicators of return on capital employed and as well as earnings before interest and tax.

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