

# Effect of Sustainability Reporting on Financial Performance of Listed Non-financial Companies in Nigeria

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## ABSTRACT

In recent years, financial reporting has proven not to be sufficient to convey adequate information needed to determine the performance of a business enterprise. Organizations exist in an environment and the activities of these organizations have a way of affecting the environment negatively and all of these must be accounted for. This study, therefore, examined the effect of sustainability reporting on financial performance of listed non-financial firms in Nigeria. The study sought to determine the effect of economic sustainability reporting, social sustainability reporting, and governance sustainability reporting on financial performance of 82 listed non-financial firms in Nigeria for the period 2012 to 2021. Multiple regression with an aid of STATA 16 application software was used for the analysis. The study came to the conclusions as a result of data interpretation and discussion: the study concluded that economic sustainability reporting (ECSR) and social sustainability reporting (SSR) has a positive significant effect on financial performance. The study recommend that management of non-financial firms should increase their reporting economic sustainability reporting and social sustainability reporting as this will create value and increase its financial. The study is the focus solely on listed non-financial firms in Nigeria, therefore, the results may not capture the full range of effects that sustainability reporting can have on financial performance. Furthermore, exploring the potential mediating or moderating variables that could influence the relationship between sustainability reporting and financial performance could provide deeper insights into the mechanisms at play.

**Keywords:** Sustainability Reporting, Economic, Social and Governance Reporting, Firm performance, and Firm Size

## INTRODUCTION

Sustainability reporting is linked to an earlier idea of accounting for human resource and social audits in the 1970s and triple bottom line reporting and environmental reporting in the 1990s, corporate social responsibility reporting and various versions of the Global Reporting Initiative guidelines on reporting (Simnet *et al*, 2009). In Nigeria, the industry that gives great concern for the effect of their activities on the environment is the oil and gas industry which is responsible for the exploration of crude oil from the swamplands of the Niger Delta. Asaolu *et al*. (2011) affirmed that the multinationals corporations in the oil and gas industry have been consistently accused of lacking transparency, insensitivity to stakeholders' concern, environmental degradation and have continually been targets of community unrest and public criticisms. Nigeria is however classified in the corporate sustainability reporting quadrant tagged "starting behind" (Asaolu *et al*., 2011). As a matter of fact, Nigeria has no mandatory environmental or social reporting requirement for public companies, though there have been significant efforts like the Nigerian Stock Exchange (NSE) sustainability disclosure guideline 2016.

In recent years, financial reporting has proven not to be sufficient to convey adequate information needed to

determine the performance of a business enterprise. This is even more substantiated by the collapse of corporate giant (Enron) which created concerns about corporate transparency. To address this concern, the notion that companies should report information about sustainability performance was evolve (Hunaini & Basuki, 2020). Usenko and Zenkina (2016) argued that financial performance cannot be properly ascertained without an assessment of the company's impact in economic, environmental, and social terms, and disclosures of positive and negative social and environmental externalities. Organizations exist in an environment and the activities of these organizations have a way of affecting the environment negatively and all of these must be accounted for. These negative environmental impacts include greenhouse gas emissions, pollution, waste disposal, environmental degradation which usually affect the environment where such companies operate.

There are organizations which operations do not pose a direct environmental danger dealing with such organizations with other firms could expose them to risk; for instance, financial institutions such as commercial banks, mortgage houses, insurance companies and their relationships with diverse clients in oil and gas, agriculture and manufacturing sectors are exposed to risk arising from the companies whose operations they choose to finance. Negative environmental impacts such as pollution, greenhouse gas emissions, spillage arising from operations of oil and gas companies could expose their finance providers to risks which in turn could lead to loss of investments (Nwobu, 2017).

Every business operates with direct interaction with its environment. The activities of businesses hence impact the environment and society through this interaction. Industrialization is associated with economic, social, and environmental hazards ranging from environmental degradation, air and water pollution which has dramatically increased deforestation and loss of habitats for aquatic and terrestrial animals (Utile, 2016). Traditionally, a corporation's main objective is to grow, survive and maximize value for its owner. To meet these objectives, they prepare conventional financial reports to investors, potential investors, shareholders, and other stakeholders which shows only their financial performance, but this reports usually do not reflect the effect of the operations of the corporation on the environment. Therefore, conventional financial reporting has been criticized for not representing multiple dimensions of a corporation's value. Also, the increasing need for non-financial disclosures and the growth of global ecological awareness and the movement for sustainable economic growth are bringing the attention of firms towards making its operations sustainable and ecological sensitivity.

Sustainability reporting is one of the tools of corporate transparency that encapsulates a company's financial and non-financial performance. Romero (2016) asserted that sustainability reports have become a tool to provide information on intangible resources to stakeholders. Sustainability reporting measures and discloses corporate performance in environmental, social, and economic terms.

Sustainability reporting is synonymous with Environmental, Social and Governance (ESG) reporting which some capital markets have made mandatory for companies that are listed on them. Also, any issue that affects business stakeholders including employees, community, government, shareholders, finance providers, amongst others is what sustainability reporting is concerned with. These issues include environmental protection, environmental liabilities, renewable and recycled materials used, energy consumption, defined benefit plan obligations, structure and composition of the board, competencies of members of highest governing body, tenure on governance body, conflicts of interest, among others. Environmental protection policies are within the purview of sustainability disclosures. It is particularly useful because investors and other business stakeholders can have a holistic view of a company's performance (Asuquo, 2012). Some of these issues highlighted can reduce profits while demonstrating a company's responsibility to the stakeholders and its use of resources and commitment of the governance body to transparency.

The growing nature of sustainability reporting in recent years in some countries of the world has led to

increased use of Global Reporting Initiative, United Nations Global Compact, Carbon Disclosure Project, by companies (Nwobu, 2017). As earlier pointed out, financial institutions have been considered as less environmentally sensitive based on their business operations. However, the services of their clients such as companies and individuals operating in the oil sector, manufacturing sector and agricultural sector, amongst others could be prone to sustainability risks. The Global Reporting Initiative (2013) recognizes the need for financial institutions to be accountable for their social, economic, and environmental impacts and has put in place the financial services sector disclosures. In financial institutions sector, there are sustainability reporting guidelines such as Global Reporting Initiative sustainability reporting guidelines and financial services sector supplement targeted at improving the quality of what companies report and the ways in which companies include economic, environmental, and social indicators in their corporate reports.

Corporate sustainability reporting involves firms publicly reporting about their environmental, social, and governance measures and their ability to deal with the related risks of these factors (Bartlett, 2012). This type of reporting, which was virtually non-existent thirty years ago, has become a major factor in a company's public reports because internal and external stakeholders are increasingly demanding this information. While maximizing shareholder value continues to be an overriding concern, companies will not be able to do that over the long term if they do not meet other key stakeholder interests (Ballou *et al.*, 2006). However, companies may be unsure how the market will react to their corporate sustainability reporting. If the initiatives are favourable, this may theoretically boost firm value or stock price. On the other hand, some firms may be hesitant to release information because of a possible negative reaction to the firm by the market (Bartlett, 2012).

Prior studies in Nigeria evaluated corporate social responsibility and environmental disclosure on firm performance in Nigeria linking sustainability performance with financial performance the results of which are often non-conclusive (Uwalomwa *et al.*, 2018). The link between social and financial performance can be explained in four categories: (a) unilateral causality-social performance causes financial performance, (b) unilateral causality-financial performance causes social performance, (c) bilateral causality-social performance causes financial performance and financial performance causes social performance and (d) no causal relationship (Ching *et al.*, 2017). Gambetta *et al.* (2016) in the European context found that high quality sustainability disclosures were associated with low profits and low-quality sustainability information was related to absence of external assurance. According to Ramdhony (2015), banks in Mauritius with greater visibility disclosed more social information. There were more disclosures on human resources than on any other social indicator. The findings of Ramdhony (2015) agrees with Andrikpoulos *et al.* (2014) where social responsibility disclosures were more in larger companies (those with greater visibility) in Euronext stock exchange. Also, Andrikpoulos *et al.* (2014) found that corporate sustainability reporting and disclosures were more in companies with greater financial leverage. This study attempts to take a unilateral approach to examine link between sustainability reporting and financial performance of a company. To address the question of whether or not sustainability reporting affects financial performance of a company, the following hypothesis stated in their null form has been developed.

**H<sub>01</sub>:** Economic sustainability reporting has no significant impact on Return on Assets of listed non-financial Companies in Nigeria.

**H<sub>02</sub>:** Social sustainability reporting has no significant effect on ROA of listed non-financial Companies in Nigeria.

**H<sub>03</sub>:** Governance sustainability reporting has no significant effect on ROA of listed non-financial Companies in Nigeria.

The study provides decision makers and investors alike with information as to the need to incorporate sustainability reporting and the effect of such decision on financial performance of non-financial Companies

in Nigeria. The result from this study adds to the existing body of literature in management's financial decision-making process.

## LITERATURE REVIEW

### Conceptual Framework

When it comes to sustainability and ESG strategies, organizations have advanced from using compostable straws to embedding sustainability into their business practices, processes, product development, operations, and strategy. Many organizations are rejigging their business models, re-organizing corporate structures, and spending substantial time, money, and resources to embed sustainability into core strategies. As a result of this investment, many have come to see environmental, social, and governance reporting, not as a regulatory burden, but as a tool to attract investors and financing. Of course, companies want to do good and be ethical and responsible. But they also want to shine in the eyes of public, stand above the competition, and attract investors and financing. Reporting ESG performance in ESG reports is a way to make this happen.

### Sustainability Reporting

Corporate sustainability reports are publicly released documents detailing the environmental, social, and governance performance of a company. Sustainability reporting began in the late 1980s and has quickly become an important focus for companies from a wide range of industries (Global Reporting Initiative, 2012). From a financial performance perspective, corporations engage in sustainability to reduce costs for the future and help manage change, thus becoming a more sustainable and profitable business in the future. Additionally, it may be a requirement to release certain environmental information to satisfy local or federal laws regarding emissions or a similar matter. Companies most likely have other reasons to release these reports, such as building superior reputations and meeting informational needs of stakeholders, who are classified as anyone who is impacted by the company's actions.

A sustainability report is a form of the report carried out by a company to disclose or communicate to all stakeholders regarding the performance of environmental, social, and good governance in an accountable manner. Disclosure of Sustainability Reporting in Nigeria is still voluntary. However, some companies especially those in the oil and gas industry are adopting the publication of sustainability reporting (Nwobu, 2017).

The importance of sustainable development in industrial and service institutions and as a means of sustainability reporting has increased significantly over the last two decades. Nowadays, with reduced barriers to trade and international financial flows and a growing evolution in customers' desires and preferences, reporting on investment has become a priority for companies in various sectors to enhance corporate reputation and gain the legitimacy needed to operate (Al- Wattar *et al*, 2019). In making financial decisions on the financial market, investors should measure the value of shares, such as stocks, used as the basis for financial decisions (Mohd *et al*, 2018). The market value of the stock, the price decided between the buyer and the seller, represents the appraisal of the shares by the investors who negotiate the shares (Chandrapala, 2011). Stock prices could fluctuate due to price factors (Safa, 2018). The performance and outlook of the firm are significant factors affecting share prices. Data on the success and future of the business is expressed in the annual reports provided for reasons of economic decision taking.

According to Wensen *et al*, (2016), sustainability reporting measures and discloses corporate performance in environmental, social, and economic terms. Sustainability reporting which is expressed in Environmental, Social and Governance (ESG) reporting has been made mandatory by some capital markets for companies that are listed on them. Issues that affect business stakeholders including employees, community,

government, shareholders, finance providers, amongst others are captured in sustainability reporting. These issues include environmental protection, environmental liabilities, renewable and recycled materials used, energy consumption, defined benefit plan obligations, structure and composition of the board, competencies of members of highest governing body, tenure on governance body, conflicts of interest, among others. Some of these issues can reduce profits while demonstrating a company's responsibility to the stakeholders and its use of resources and commitment of the governance body to transparency.

The growing nature of sustainability reporting in recent years in some countries of the world such as Spain, United States, United Kingdom, South Africa has led to increased use of standards and guidelines such as Account Ability, Global Reporting Initiative, United Nations Global Compact, Carbon Disclosure Project, by companies. In financial institutions sector, there are sustainability reporting guidelines such as Global Reporting Initiative sustainability reporting guidelines and financial services sector supplement. To improve the quality of what companies' report, there is also a need to examine the ways in which companies include economic, environmental, and social indicators in their corporate reports.

### **Economic, Social and Governance (ESG) Reporting**

Economic, social and governance (ESG) reporting is the disclosure of environmental, social, and corporate governance data. As with all disclosures, its purpose is to shed light on a company's ESG activities while improving investor transparency and inspiring other organizations to do the same. Reporting is an effective way to demonstrate that an organization is meeting goals and that ESG projects are genuine and not just greenwashing, empty promises, or lip service. Since ESG reports summarize the qualitative and quantitative benefits of a company's ESG activities, investors can screen investments, align investments to their values, and avoid companies with the risk of environmental damage, social missteps, or corruption (Fabrizio & Grazia, 2022).

ESG and sustainability are sometimes used interchangeably, but there are some notable differences. Sustainability refers to a company's relationship to the environment, whereas ESG extends that relationship to social responsibility and corruption. ESG is an external investment framework, or a form of metrics, that helps companies communicate their initiatives and investors assess the company's performance and risk. On the other hand, sustainability is seen as an internal framework that guides the organization's capital investments. In other words, sustainability is the motivation, ESG is the reported outcome. ESG is a reporting framework that is more relevant to publicly traded companies looking to attract and inform investors or any other business looking to attract financing. ESG aspires to be a set of disclosure standards that companies complete to communicate sustainability initiatives. Stakeholders, like investors, use ESG reports to screen their investments. While a universal standard does not yet exist, ESG reporting does exist in the form of regional reporting frameworks, voluntary standards, and national legislation that vary significantly. Oftentimes, organizations will include ESG reporting into their annual reports to demonstrate how sustainable the business is.

GRI (2012), ESG reports include qualitative and quantitative information pertaining to its three key topics; Environmental – what is an organization doing to be a steward of the environment? The environmental umbrella covers: how a company is combatting climate change, what a company is doing to reduce carbon emissions, how the company is preserving biodiversity, improving air and water quality, combatting deforestation, or responsibly managing its waste, how the company is responsibly using resources and its supply chain, what the company is doing to reduce its emissions?

Social – what is an organization doing to improve lives? The social umbrella covers how a company nurtures its people and workplace, Gender, BIPOC, and LGBTQ+ inclusivity initiatives, the company's employee engagement, data protection and privacy, community involvement, human rights, and labour



standards.

Governance – what is an organization doing to stay ahead of corruption and ensure its investments remain sustainable in the future? The governance umbrella covers: a company’s internal controls, policies, principles, and procedures governing leadership, board composition, executive compensation, audit committee structure, shareholder rights, bribery, lobbying, political contributions, and whistle-blower programs.

As ESG has become a priority for investors and companies alike, ESG scoring aspires to grade organizations on its ESG efforts. Like a credit score or a bond rating, an ESG score denotes a company’s ability to meet its ESG commitments, its performance, and its risk exposure. Assigned by third-party providers, ESG scores are calculated based on a set of ESG metrics. Each of these agency uses a different set of criteria to score organizations.

Currently, the EU has the most sophisticated set of ESG regulations, which were developed to help the EU increase sustainable investing and to further the EU Green deal, which is the EU’s promise to combat climate change and environmental degradation by eliminating net emissions of greenhouse gases by 2050, decoupling economic growth from resource use, and leaving no person or place behind. To meet their climate objectives, the EU currently has the most established framework around ESG regulations. The strategy hinges firstly on re-imagining of incentives for financial markets and corporate governance. These are primarily covered by the Sustainable Finance Agenda and the Sustainable Corporate Governance Initiative. Secondly, the transparency into the ESG impacts, good and bad, of an organization’s activities and their sustainability initiatives.

Currently, companies have a long leash when it comes to ESG disclosure. In many cases they are free to present ESG information in a way they consider to be most useful.

Global Reporting Initiative (GRI) is a framework that helps companies disclose both the positive and negative impact their business has on the environment, the economy, and society. GRI’s focus is on helping companies communicate their ESG impacts and how they manage these impacts. GRI is the most referenced ESG framework among all industries, receiving 83% of total references to ESG frameworks.

The Sustainability Accounting Standards Board (SASB) are a set of standards that help companies collect and share ESG data that affect the firm’s business decisions and explain the financial impact of sustainability. It’s worth noting that the GRI and SASB joined forces in 2020 and have since published a guide to how organizations can use the two standards together. GRI is known for its high-level scope, while SASB gives companies industry-specific guidelines using a financial lens.

The Task Force on Climate-related Financial Disclosures (TCFD) is a framework that provides principles-based recommendations for managing and reporting focused primarily on climate risks. It focuses most on financial risk disclosures associated with climate to aid banks, shareholders and investors scrutinize an organization’s ESG efforts.

Carbon Disclosure Project (CDP) is an international non-profit focused on creating standards that companies can use to disclosure information pertaining to GHG emissions, water use, and forestry. This set of standards has helped companies as well as city, state and regional government organizations disclose decarbonization and environmental protection efforts.

Streamlined Energy and Carbon Reporting (SECR) is a framework created by the UK Government that guides organizations on how to report on their carbon emissions and energy usage on an annual basis. The goal of the framework is to streamline existing carbon reporting frameworks for greater transparency and

comparability, while making it easier for companies to monitor and reduce their carbon emissions. The Workforce Disclosure Initiative (WDI) is an investor collective that formed to help companies communicate labour practices to stakeholders. It aims to improve transparency and accountability on workforce issues by providing companies with a framework for disclosing comprehensive and comparable workforce data.

In ESG reporting, it is recommended that recognized frameworks be used.

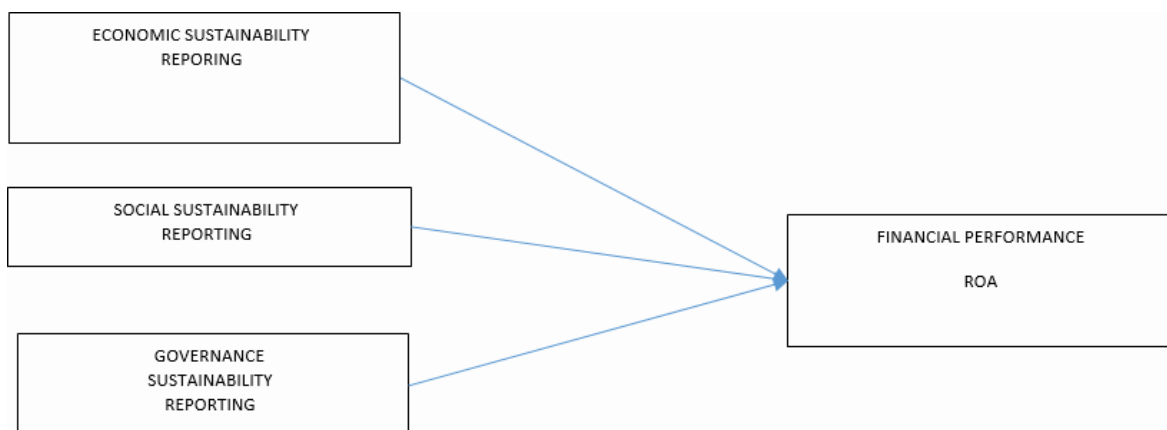
## Financial Performance

Basically, firm performance can be viewed as a part of business development of firm. Mishra & Suar (2010) studied whether corporate sustainability reporting influence firm performance and the result shows positive relationship exists between them. This indicates that when corporate sustainability reporting is applied automatically it will affect firm performance. In general, when companies' social and environmental issues were in control and well managed, firm performance and value will increase. All the findings on the previous research show that sustainability reporting has improved financial performance. However, still there are lacks theories or texture to support the relationship.

One way to measure firm performance is by looking at their financial performance. Financial performance measures are the best way to analyse firm performance. Griffin and Mohan (1997) found that there were 80 types of financial performance indicators used in studies of corporate sustainability reporting and firm performance. Return on assets (ROA), return on equity (ROE), earning per share (EPS), return on sales are most used financial performance measures. Berman et al., (1999) claimed that ROA is the reliable measure of financial performance. It is because ROA is not influenced by the changes in the firm's leverage. Mishra and Suar (2010) mentioned that ROA is positively correlated to stock price. So, when the ROA is high it will create high value to the shareholders. ROA indicates profitability of a company to its total asset. In addition, ROE used to measure company's income that has been returned as shareholder equity.

Jones et al. (2007) studied the sustainability reporting in Australian firms. They used annual reports, and sustainability reports from companies' websites to collect the data. Data from these reports were then compared with financial performance measurements like cash flow, financial ratios, and profitability. The findings shows that the there is a positive relationship between sustainability and companies financial measures. Lins et al (2016) did research on the value of corporate social responsibility during the financial crisis mainly on the social capital, trust, and firm performance. They examined the effect of corporate social responsibility on firm performance through five different categories such as community, diversity, employment, environment, and human rights. The result shows a positive relationship between corporate social responsibility and firm performance. Besides, Montabon et al., (2007) in their research have concluded that environmental management practices have a positive relationship with firm performance.

## Conceptual Model



## Empirical review

Alhassan *et al*, (2021) examined how sustainability reporting affects the performance of listed industrial goods companies in Nigeria. For a period of ten years, from 2011 to 2020. The study used time-series and cross-sectional analysis of selected listed industrial goods companies on the Nigerian Stock Exchange. Ex-Post Facto research was used in the study. Data were gathered from secondary sources such as fact books and financial statements of the companies in Nigeria. Using E-View 9.0 statistical software, the data were statistically analyzed using Pearson correlation coefficient and multiple regression analysis. The findings of the study demonstrated that, at a 5% level of significance, sustainability reporting (as measured by economic, environmental, and social performance indices) has a positive significant effect on return on assets, return on equity and earnings per share. The study proposes, among other things, that a standardized Sustainability Index be adopted, since this will assist to put pressure on firms to pay greater attention to their environment and take sustainable development issues more seriously.

Haidar & Sohail (2021) examined whether Sustainability Reporting (SR) contributes to the financial performance indicators of Saudi listed firms. The study's data are imperilled to regression analysis using the econometric model in computing the Tobin's Q value as proposed under the section on study variables. It also examined the value significance of SR on financial performance among the listed firms in Tadawul by determining whether Tobin's Q is statistically significant by specific firm's attributes, including firm size, leverage, and EPS. The outcomes indicate that Tobin's Q is statistically significantly influenced by leverage, EPS and firm size. Additionally, the study validates that no correlation occurs between the SR practices of the listed firms in Tadawul and the corporate financial performance.

Atanda *et al* (2021) examined the effect of sustainability disclosure on firm value, drawing data from ten randomly selected listed deposit money banks, covering the period 2014-2018. The study employed qualitative content analysis, using the information obtained from audited reports and accounts, to measure overall sustainability disclosure index and its three dimensions (environmental, social, and economic) and use descriptive tools and ordinary least square fixed-effects regression for analysis. The result of testing found a consistent and strong evidence that banks with high overall sustainability and environmental sustainability disclosure tend to have low firm value. However, social sustainability disclosure exerts a more pronounced positive impact while the insignificant effect of economic sustainability disclosure suggests that its increase will not enhance firm value. These results indicate that overall sustainability and environmental sustainability disclosures were detrimental, rather than beneficial, to firm value. It was concluded that sustainability reporting of deposit money banks in Nigeria does not enhance firm value, it only legitimizes their operations. The study therefore recommended quantitative disclosure of environmental and economic sustainability activities of the banks as well as their contributions to productive sectors and stakeholders' economic circumstances.

Giron *et al* (2020) investigated the factors that influence the adoption of new sustainability reporting practices and external assurance. Also, the study examined the relationship between the reporting activity and firms' economic performance. The study combined data from the Global Reporting Initiative's (GRI) Sustainability Disclosure Database and the Orbis database, from Bureau van Dijk. More specifically, the study uses two logit models and one regression model based on a sample of 366 large Asian and African companies which have addressed the SDGs in their sustainability reports published in 2017. The results reveal that operating in the manufacturing sector and having a higher percentage of women directors in the company's management structure are positively related to the adoption of sustainability reporting and external assurance. Also, operating in the manufacturing sector leads to better firms' economic performance. Contrarily from previous studies, the age of the company's board of directors does not have influences on the use of sustainability reporting. The research contributes to the sustainability issues in the context of



emerging markets by explaining the driving factors behind it and its linkage with firms' performance.

Husnaini & Basuki (2020) empirically tested whether the ASEAN Corporate Governance Scorecard (ACGS) has a positive effect on Sustainability Reporting (SR) and whether the ACGS and Sustainability Reporting (SR) have a positive effect on Firm Value (FV). The study was conducted in five ASEAN countries – Indonesia, Malaysia, Singapore, Philippines, and Thailand from 2014 – 2017. The research sample was collected from companies with the ACGS data and obtained with the help of 359 company observations. Hypothesis testing was performed using the Ordinary Least Square (OLS). The results of the study do not support all hypotheses. The ACGS has no effect on sustainability reporting. The ACGS has a significant negative effect on firm value, while sustainability reporting has a negative and insignificant effect on firm value. The ACGS and sustainability reporting are not good news for investors. This research's limitation is that companies rarely disclose the final value of the ACGS in their annual reports, so this research uses content analysis. The weakness of content analysis is the researchers' subjectivity so that the point of view between researchers is different. Besides, sustainability reporting for several ASEAN countries is voluntary, so not all companies can be sampled, which ultimately affects interpretation.

Nguyen (2020) explored the association between sustainability reporting and firm value to gain an awareness of the value relevance of sustainability disclosures. The study concentrated on large listed German firms as research objects to reduce the influence of firm size, legislation, and geographic differences. Moreover, instead of observing diverse sustainability reporting guidelines in one research, this paper focused on the current most popular guidance, the Global Reporting Initiative (GRI). This is to achieve a relevant comparability among the firms' sustainability reporting. The research applied Multiple Regression to test the above relationship by involving 485 observations from 97 large listed German firms within the research period from 2013 to 2017. Along with the main model, a robustness test was performed to explore the connection in the context of a four-month period after the year-end deadline to issue sustainability reports in accordance with German Law. The findings indicate a significant negative relation between firm value and a firm's GRI adherent level of sustainability reporting.

Kayat & Akbulut (2019) examined sustainability reporting and its relationship with firm performance with focus on whether such reporting practices improve the firm value while enhancing its profitability and the financial leverage impact on sustainability reporting in the automotive industry. The paper's design is based on panel data logistic regression analysis of 155 automotive firms from 20 different countries, between 2010-2018 years. Financial data such as Tobin's Q ratio of the public companies as well as firm size, financial leverage ratio and return on assets was used to measure the firm performance using GRI's reports on GRI Sustainability Disclosure Database. The study found similar results with some prior literature explaining that sustainability reporting has a significant positive relation between firm size and negative relation with financial leverage. The study provides understandings on the relation of firm performance, firm size, financial leverage, and sustainability reporting. The findings of study indicate a positive significant relationship between firm size and SR, and a negative significant relationship between financial leverage and sustainability reporting in the automotive industry.

Swarnapali (2018) investigated whether corporate sustainability disclosure has a potential impact on the market value in a developing country. The data was collected from 220 companies listed in the Colombo Stock Exchange (CSE) in Sri Lanka over a period of four years. Regression analysis was executed on the panel data to achieve the study objective. The results revealed a positive relationship between sustainability reporting (SR) and firm market value, accepting the value-enhancing theory. The finding suggests that investors pay a premium in the capital markets for firms that perform in an environmentally and socially responsible manner, compared to firms do not perform in a similar manner. The study contributes significantly to the extant literature by broadening the geographical context, which generally has been

excluded from corporate disclosure studies.

## **Theoretical framework**

Researchers of sustainability reporting and firm value majorly employ the legitimacy theory and value enhancing theory. However, this study will focus on legitimacy theory and stakeholders' theory as a basis for exploring the effect of Sustainability Reporting on financial performance of a firm.

### **Legitimacy Theory of Sustainability Reporting**

Legitimacy theory premise on the concept of organizational legitimacy, which was defined by Dowling & Pfeffer (1975) as a condition or status, which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to the entity's legitimacy. The theory also posits that organizations continually seek to ensure that they operate within the bounds and norms of their respective societies (Atanda *et al*, 2021). Adopting legitimacy theory perspective, a company would voluntarily report on activities if management perceived that those activities were expected by the communities in which it operates (Deegan, 2002; Cormier & Gordon, 2001). The theory relies on the notion that there is a 'social contract' between a company and the society (Deegan, 2002). It further provides information that legitimizes company's behaviour with the aim to influence stakeholders and the public about their perspectives of the business in relation to its value (Atanda *et al*, 2021). Organizations therefore seek to ensure that they operate within the bounds and norms of the society and employ several legitimating strategies, to extend, maintain or defend their legitimacy (Tilling, 2004).

Deegan (2009) again affirmed that organizations use legitimacy theory as a communication tool for legitimizing their activities by offering information that affects the society and stakeholders' perception about the organization. This was substantiated in Boesso and Kummar (2007) that organizations seek to close the arising legitimacy gap by providing nonfinancial information based on the annual reports to enhance the organizations' reputation, improve popularity among stakeholders and satisfy the society's needs.

### **Stakeholder's Theory of Sustainability Reporting**

Some researchers in sustainability reporting have averred that stakeholder theory is based on a firm's obligation to all stakeholders by explicitly informing about its activities to users of the firm's nonfinancial and financial/economic information (Smith *et al*, 2011). According to Mainardes *et al*, (2011), managerial branch ideology of stakeholder theory appears far superior to the ethical branch. The managerial ideology of stakeholder theory claims that the firm's management adopts Sustainability reporting and disclosure practice as a tool to attract stakeholders' approval and their support through resources. The use of stakeholder theory is justified by Donaldson and Preston (1995), Deegan (2000), Gray *et al*. (1996) and Mitchell *et al*. (1997), who concluded that stakeholder theory is superior to legitimacy theory because of the theory's descriptive accuracy, normative validity, and instrumental power.

Stakeholder theory explains how the operation of companies affects the benefits of both the firms and other stakeholders. Consequently, a firm's actions and decision making should be based on the needs of all stakeholders. When the interests of these groups are considered, the improvement of risk estimation is facilitated, which then creates firm value for both investors and other stakeholders (Martinez-Ferrero & Frias Aceituno, 2013). As the guidelines are set up now, sustainability reporting requires a firm to release not only economic, environmental, social, and governance information but also the risks involved and solutions to deal with these risks (Ballou *et al*, 2006). As a result, sustainability reporting makes a critical

contribution to both a firm's internal and external bodies. Moreover, a company can attain long-term support from its stakeholders when a board of directors adopts social responsibility practices, which can positively influence a firm's long-term value.

## METHODOLOGY

This study adopts descriptive statistics to describe basic features of the data used. Data for the study covers disclosures of 82 non-financial Companies listed on the Nigeria Stock Exchange. For sustainability reporting and financial performance of companies, all information should such as is publicly available, of which majorly are the annual reports and sustainability reports or equivalents if applicable. The study focuses on sustainability reporting which encapsulates disclosure of non-financial information, including aspects such as governance, economic, social, and environmental. Hence, information disclosed by companies up to 31 December 2021 are considered.

Multiple Regression is applied to test the hypothesized relationship between one dependent variable and more than one independent variable. All variables in the tested model are numerical therefore, multiple regression is an appropriate method. Along with the main model, the robustness test is performed to investigate the relationship between sustainability reporting and financial performance.

The equation of Multiple Regression model is formulated as follows:

### MODEL 1

$$ROA_{it} = \beta_0 + \beta_1 ECSR_{it} + \beta_2 SSR_{it} + \beta_3 GSR_{it} + FSZ + \epsilon_{it} \dots \dots \dots (i)$$

Where,

ROA: Return on Assets

ECSR: Economic Sustainability Reporting/Disclosure.

SSR: Social Sustainability Reporting/Disclosure.

GSR: Governance Sustainability Reporting/Disclosure

FSZ: Firm Size

$\beta$ : Interception of the equations;

$\epsilon$ : The error term.

The independent variables are quantified using a ratings system based on performance indicators chosen from previous research' Global Reporting Initiative (GRI) guidelines (Burhan & Rahmanti, 2012). The number of indicators that are reported (occurrence) and the level of disclosure are used to compute the economic, environmental, and social disclosure index (quantitative and qualitative). The researcher allocated 1 if a firm reported any indicator, that is, the appearance of an indicator in the firm's annual report, or 0 if the firm did not reveal any signal. If the level of the indicator given is quantitative, the researcher assigned 3, and if the level of the indicator disclosed is qualitative, the researcher assigned. The dependent variable in the study is financial performance proxied ROA and is measured as a ratio of net profit (after interest, taxes and preference dividend) to Shareholders' Assets

## RESULTS AND DISCUSSION

The results of analysis are reported and discussed in this section. Table 1 reports the results of descriptive analysis.

Table 1 Descriptive Statistics

Variable	N	Mean	SD	Min	Max
roa	820	0.0818	0.4648	-1.8	8.1
ecsr	820	0.564	0.1906	0.25	1
ssr	820	0.3123	0.1521	0	0.76
gsr	820	0.5035	0.1635	0.13	0.93
fsz	820	9.9398	0.7733	6.68	11.79

Source: STATA 16 Output Results based on study data

Table 1 presents the descriptive statistics for the variables of the study. For the period covered by the study, non-financial firms in Nigeria have a mean roa value of 0.0818 and a std. dev. 0.4648, with a minimum value of -1.8 and a maximum value of 8.1. The average proportion of ecsr is 0.5640 with a std. dev. of 0.1906, and a minimum value of 0.25 and a maximum value of 1. The mean value of ssr is 0.3123 and a std. dev. 0.1521, with a minimum value of 0 and a maximum value of 0.76. The average value of gsr is .5035 with a std. dev of .0.1635, with a minimum value of .0.13 and a maximum value of 0.93. Finally, the average firm size is 9.9398 with a std. dev. of 0.7733, with a minimum value of 6.68 and a maximum value of 11.79.

The results of correlation test is presented in table 2 below

Table 2 Correlation results

	roa	ecsr	ssr	gsr	fsz
roa	1.0000				
ecsr	0.0011	1.0000			
ssr	0.974		1.0000		
gsr	-0.0755*	0.4309*	0.0000	1.0000	
fsz	-0.0307	0.0000			1.0000
	0.7587	0.6385*	0.6196*		
	-0.0454	0.2616*	0.2010*	0.2318*	
	0.1936	0.0000	0.0000	0.0000	

Source: STATA 16 Output Results based on study data

Table 2 indicates that roa has an insignificant positive relationship with ecsr with coefficient of .0011 and p-value of .09740). Similarly, ssr with a coefficient of -0.0755 and p-value of .00307 show significant negative relationship with roa, and gsr with a coefficient of -0.0107 and a p-value of .0000 show significant negative relationship with roa. Furthermore, fsz shows insignificant negative association with roa. A further examination of Table 4 indicates that ssr has significant positive relationship with ecsr (coef. = 0.4309, p-

value = .0000). Similarly, gsr has a significant positive effect with ecsr (coef. = .6385, p-value = .000) and ssr with a coefficient of 0.6196 and p-value of .0000 show significant positive relationship with gsr and ecsr, ssr and gsr with a with a coefficient of 0.2616, 0.2010 and 0.2318 and p-values of 0.000, 0.000 and 0.000 **respectively** shows significant positive association with fsz

Table 3 below presents the results of the multicollinearity test which was conducted to determine the relationship between the independent to ascertain whether there is high multicollinearity between one explanatory variable and another explanatory variable(s)

Table 3 VIF and Tolerance Level Results

Variable	VIF	1/VIF
gsr	2.24	0.4466
ecsr	1.69	0.5903
ssr	1.63	0.614
Mean VIF	1.85	

Source: STATA 16 Output Results based on study data

Table 3 shows the VIF and tolerance value of the independent variables, in each case, VIF is less than 10 and tolerance level is less than 1 respectively, showing that there was absence of Multicollinearity among the independent variables. The mean VIF of 1.85 also attests to the fact that there is no problem of Multicollinearity among the variables.

Table 4 below presents the result of spam test which was used to determine between Pooled OLS regression and fixed effect regression which is most appropriate. The null hypothesis of the test is that Pooled OLS Model is most appropriate, while the alternative hypothesis is that fixed effect model is most appropriate. The decision rule is to accept the null hypothesis if the P value is greater than 5% (0.05), otherwise accept the alternative hypothesis if the P value is less than 5% (0.05).

Table 4 Results of spam test

	Chibar <sup>2</sup>	Prob.> chi <sup>2</sup>
F test	6.49	0.0000

Source: STATA 16 Output Results based on study data

The results in table 4 above shows an F value of 6.49 with a corresponding P value of 0.000 which is less than 5% (0.05) therefore the study reject the null hypothesis and accept the alternative hypothesis and conclude that fixed effect regression is most appropriate.

Table 5 presents the results of Breusch and Pagan LM test which was conducted to determine between the pooled OLS regression and Random effect regression which is most appropriate. The null hypothesis of this test is that Pooled OLS is most appropriate while the alternative hypothesis is that random effect regression is most appropriate. The decision rule is to accept the null hypothesis if the PV is greater than 0.05 %, otherwise accept the alternative hypothesis if the P value is less than 5% (0.05).

Table 5 Breusch and Pagan Lagrangian multiplier test for random effects results

Chibar2(01)	401.92
Prob>Chibar2	0.0000

Source: STATA 16 Output Results based on study data



The results in table 5 above shows a chi2 value of 401.92 with a corresponding probability value of 0.0000. This implies that the null hypothesis is rejected, and the study conclude that random effect model is most appropriate.

Table 6 below shows the results of Hausman test which was conducted to determine between random effect regression and fixed effect regression which is most appropriate. The null hypothesis of the test is that random effect Model is most appropriate, while the alternative hypothesis is that fixed effect model is most appropriate. The decision rule is to accept the null hypothesis if the P value is greater than 5% (0.05), otherwise accept the alternative hypothesis if the P value is less than 5% (0.05).

Table 6 Hausman test

Chibar <sup>2</sup>	Prob.> chi <sup>2</sup>
30.21	0.0000

Source: STATA 16 Output Results based on study data

The result of the Hausman test in table 6 above with chi2 value of 30.21 and corresponding probability values of 0.0000 which is less than 5% (0.05). This implies that the fixed effect regression model is most appropriate for the study.

Table 7 Fixed effect regression model

Fixed-effects(within)regression	Number of obs = 820
Group variable: id	Number of groups = 82
R-sq: within = 0.0342	Obs per group: min = 10
between = 0.0021	avg = 10.0
overall = 0.0006	max = 10
	F(4,734)= 6.49
corr(u_i, Xb)= -0.4772	Prob > F = 0.0000

roa	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ecsr	.2112664	.112728	1.87	0.061	-.0100413	.4325741
ssr	.3709374	.1401597	2.65	0.008	.0957757	.646099
gsr	-.3498058	.1488662	-2.35	0.019	-.64206	-.0575515
fsz	-.2294251	.0539558	-4.25	0.000	-.3353512	-.1234989
_cons	2.303329	.537577	4.28	0.000	1.247957	3.3587
sigma_u	.34938962					
sigma_e	.36993616					
rho	.47145968	(fraction of variance due to u_i)				
F test that all u_i=0: F (81, 734) = 6.74 Prob > F = 0.0000						

The results of normality distribution test are reported in Table 8.

Table 8 Results of tests for Normality

Variable	Obs	W	V	z	Prob > z
roa	820	0.3654	334.084	14.274	0.00000
ecsr	820	0.9861	7.286	4.878	0.00000
ssr	820	0.9772	11.956	6.094	0.00000
gsr	820	0.9946	2.828	2.553	0.00533
fsz	820	0.9927	3.832	3.300	0.00048

Source: STATA 16 Output Results based on study data

As shown in Table 8, the p-values of the variables of interest under the test of normality are significant, indicating that the variables are not normally distributed. As a consequence, the imtest was used to test for heteroskedasticity instead of the usual hottest

Table 9 Cameron & Trivedi's decomposition of IM-test results

Source	chi2	df	p
Heteroskedasticity	7.82	9	0.5524
Skewness	4.37	3	0.2245
Kurtosis	1.33	1	0.2484
Total	13.52	13	0.4086

Source: STATA 16 Output Results based on study data

The results in Table 9 indicate that roa has no heteroskedasticity problem. Thus, model roa requires no use of robust standard errors instead normal standard errors were used for its regression.

Table 9 below presents the results of Wooldridge test for autocorrelation in panel data which was conducted to determine whether there is serial correlation. The null hypothesis of this test is that there is no serial correlation while the alternative hypothesis is that there is serial correlation. The decision rule is to accept the null hypothesis if the PV is greater than 0.05 %, otherwise accept the alternative hypothesis if the P value is less than 5% (0.05).

Table 9 Wooldridge test for autocorrelation in panel data

F(1, 81)	1.1791.179	1.179
Prob>F		0.2807

Source: STATA 16 Output Results based on study data

The results in table 6 above shows f value of 1.179 with a corresponding probability value of 0.280. This implies that the null hypothesis is accepted, and the study conclude that there is no first order serial correlation.

Table 10 below present the results of the fixed effect regression which was used to explain the effect of sustainability reporting on financial performance.

Table 10 Regression Results

Variable	Coef.	p-value
ecsr	0.2112	0.061
Ssr	0.3709	0.008
gsr	-0.3498	0.019
_cons	2.303309	0.000
F Statistics	6.74	
R2		0.4623
Prob > F		0.000

Source: STATA 16 Output Results based on study data

The F statistics of 6.74 and a corresponding Prob.>F of 0.0000 indicated that the model is fit to explain the relationship expressed in the study. The nature and extent of the relationship between the dependent variable and each of the independent variables of the study in terms of coefficients, z- values, and p- values are explained further:

Ho<sub>1</sub>; Economic sustainability has no significant effect on return on asset of listed non-financial companies in Nigeria.

Economic sustainability (ECSR) of the sampled listed non-financial companies during the study period has a positive relationship with return on asset as explained by the coefficient of -0.2112. This means that for every unit increase in Economic sustainability (ECSR), return on asset decrease by 0.2112 unit. The results also revealed that Economic sustainability (ECSR) of the sampled firms has a significant effect on financial performance of listed non-financial companies in Nigeria. This was shown by a P-value of 0.061 which is statistically significant at 5%. As a result, the study was rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that ECSR has a positive significant effect on return on asset of quoted non-financial firms in Nigeria. The results are similar to those of Alhassan et al (2021) who also found that ECSR has a significant effect on financial performance. The results were in direct opposition to those of Atanda et al (2021), and Ngugen (2020) who discovered that ECSR has a negative significant effect on performance.

Ho<sub>2</sub>. Social sustainability reporting has no significant effect on return on asset of listed non-financial companies in Nigeria.

Social sustainability (SSR) of the sampled listed non-financial companies during the study period has a positive relationship with return on asset as explained by the coefficient of 0.3709. This means that for every unit increase in social sustainability reporting (SSR), return on asset increase by 0.3709 unit. The results also revealed that social sustainability reporting (SSR) of the sampled firms has a significant effect on financial performance of listed non-financial companies in Nigeria. This was shown by a P-value of 0.008 which is statistically significant at 5%. As a result, the stud rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that SSR has a positive significant effect on return on asset of quoted non-financial firms in Nigeria. The results are similar to those of Alhassan et al (2021) who also found that social sustainability reporting has a significant positive effect on financial performance. The results were in direct opposition to those of Husnaini and Basuki (2020), Ngugen (2020), and Kayar and Okbulut (2019) who discovered that social sustainability reporting has a significant negative effect on financial performance.

Ho<sub>3</sub>: Governance sustainability reporting has no significant effect on return on asset of listed non-financial companies in Nigeria.

Governance sustainability reporting (GSR) of the sampled listed non-financial companies during the study period has a negative relationship with return on asset as explained by the coefficient of -0.3498. This means that for every unit increase in Governance sustainability reporting (GSR), return on asset decrease by 0.3498 unit. The results also revealed that Governance sustainability reporting (GSR) of the sampled firms has a significant effect on financial performance of listed non-financial companies in Nigeria. This was shown by a P-value of 0.0019 which is statistically significant at 5%. As a result, the study rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that Governance sustainability reporting (GSR) has a significant effect on return on asset of quoted non-financial firms in Nigeria. The results are similar to those of Husnaini and Basuki (2020), Ngugen (2020), and Kayar and Okbulut (2019) who also found that Governance sustainability reporting (GSR) has a significant negative effect on financial performance. The results were in direct opposition to those of Alhassan et al (2021) who discovered that Governance sustainability reporting (GSR) has a significant positive effect on financial performance.

### Discussion of Findings

This study examined the effect of sustainability reporting on financial performance of listed non-financial firms in Nigeria. Specifically, this study sought to determine the effect of economic sustainability reporting, social sustainability reporting, and governance sustainability reporting on financial performance of listed non-financial firms in Nigeria. Therefore, the findings of this study are based on formulated hypotheses, models and analysis carried out. The apriori expectations was that both economic, social and governance sustainability reporting should have a positive and significant effect on financial performance.

The study found out that at the level of significance of 5% (0.05) Economic sustainability (ECSR) of the sampled firms has a significant effect on financial performance of listed non-financial companies in Nigeria. This was shown by a P-value of 0.061 which is statistically significant at 5%. As a result, the study was rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that ECSR has a positive significant effect on return on asset of quoted non-financial firms in Nigeria. The results are similar to those of Alhassan et al (2021) who also found that ECSR has a significant effect on financial performance. The results were in direct opposition to those of Atanda et al (2021), and Ngugen (2020) who discovered that ECSR has a negative significant effect on performance.

The inconsistency in the findings was as a result of the difference in the measurement of economic sustainability reporting. The findings are in line with the apriori expectations. The implication of the above findings is that a unit increase in ECSR will lead to 0.2112 units increase in financial performance.

The study also found that social sustainability reporting (SSR) of the sampled firms has a significant positive effect on financial performance of listed non-financial companies in Nigeria. This was shown by a P-value of 0.008 which is statistically significant at 5%. As a result, the stud rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that SSR has a positive significant effect on return on asset of quoted non-financial firms in Nigeria. The results are similar to those of Alhassan et al (2021) who also found that social sustainability reporting has a significant positive effect on financial performance. The results were in direct opposition to those of Husnaini and Basuki (2020), Ngugen (2020), and Kayar and Okbulut (2019) who discovered that social sustainability reporting has a significant negative effect on financial performance. The inconsistency in the findings was as a result of the difference in the measurement of social sustainability reporting. The findings is in line with the apriori expectations. The implication of the above findings is that a unit increase in SSR will lead to 0.3709 units increase in financial

performance.

Finally, the study also found that Governance sustainability reporting (GSR) of the sampled firms has a significant effect on financial performance of listed non-financial companies in Nigeria. This was shown by a P-value of 0.0019 which is statistically significant at 5%. As a result, the study rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that Governance sustainability reporting (GSR) has a significant effect on return on asset of quoted non-financial firms in Nigeria. The results are similar to those of Husnaini and Basuki (2020), Ngugen (2020), and Kayar and Okbulut (2019) who also found that Governance sustainability reporting (GSR) has a significant negative effect on financial performance. The results were in direct opposition to those of Alhassan et al (2021) who discovered that Governance sustainability reporting (GSR) has a significant positive effect on financial performance. The inconsistency in the findings was because of the difference in the measurement of governance sustainability reporting. The findings is not in line with the apriori expectations. The implication of the above findings is that a unit increase in GSR will lead to 0.3498 units decrease in financial performance.

## CONCLUSION AND RECOMMENDATION

The study came to the following conclusions as a result of data interpretation and discussion:

Specifically, the study concluded that economic sustainability reporting (ECSR) and **social sustainability reporting (SSR) has a positive significant effect on financial performance**. This depicts that progressive increase in reporting of economic sustainability reporting (ECSR) and **social sustainability reporting (SSR)** brings about an increase in financial performance of non-financial companies in Nigeria. Based on the findings of this study, the following recommendations were made:

1. That management of non-financial firms should increase their reporting economic sustainability reporting and **social sustainability reporting** as this will create value and increase its financial performance.
2. The study also recommend that there should be standardized Sustainability reporting Index to be adopted in measuring different components of sustainability, since this will assist to put pressure on firms to pay greater attention to sustainability issues

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