FIRM PERFORMANCE ATTRIBUTES AND SOCIAL SUSTAINABILITY REPORTING: A CASE OF LISTED NON-FINANCIAL COMPANIES IN NIGERIA

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ABSTRACT
Stakeholders all over the world are concerned about the environmental damage that corporations are engaged in and how it affects their lives. Social sustainability reporting in Nigerian as affected by firm performance attributes was investigated. To understudy the effect, ex-post facto research design, non-probability (purposive) sampling technique, and Panel regression estimation was employed with reliance on annual report (secondary data) of listed 112 non-financial companies from 2012-2021 out of which 82 firms were selected. Also, hausman test (random effect) was conducted using of E-views. The findings of the study shows that firm size has positive significant effect on social disclosure index while firm age has positive negligible effect on social disclosure index of non-financial companies in Nigeria. According to the findings, the social sustainability reporting of listed non-financial companies in Nigeria is significantly influenced by firm performance attributes. Therefore, the study recommends that non-financial companies' management should increase the size of their firms in relation to the total assets due to the positive multiplier effect it has on the company's social sustainability reporting.


1. INTRODUCTION
Sustainability reporting can be regarded as a new trend in corporate reporting which integrates financial (economic) and non-financial (environmental and social) performance of the company into one report (Andreas et al., 2012). It is a method of corporate self-regulation that is incorporated into business models to serve both the social and environmental aspects of business (Carp et al., 2019). According to Hahn and Kuhnen (2013), the primary motivation behind corporate sustainability reporting is to support the continued existence of businesses and legitimise their operations. Companies share sustainability information to show that they care about society and keep good relationships with key stakeholders. In this context, businesses must consider the social effects of their actions while achieving an economic performance that ensures an adequate return on investment. It is therefore expedient that businesses integrate both social and initiatives with the company's vision and goal as well as with the business strategy.

A voluntary organization's activity known as sustainability reporting (SR) aims to assess an
organization's current state in terms of its economic, environmental, and social dimensions and to communicate an organization's efforts and sustainable progress to its stakeholders. According to Braam and Peeter (2018), sustainability reporting can be used to evaluate a company's sustainability performance over time, compare it to that of other organizations, and demonstrate how the organisation influences and is influenced by expectations regarding sustainable development. The social impact of firms are redefining the meaning of business value because financial results and impact on its own cannot communicate to stakeholders companies social and environmental impact, however, they do communicate and signal the culpability that financial results of firms represent, which is an important component of companies’ limpidity. Therefore, in order to enhance the value of sustainability reports, external influence and pressures, internal processes and organizational settings such as showing real commitment beyond regulatory compliance have roles to play in the transmogrification or change process (Nwobu, 2017). Kurniawan (2011) argues that sustainability reporting is essential because it provides stakeholders with concrete information about an organization's sustainability efforts. A sustainability framework was created in 2011 by the International Federation of Accountants (IFAC), allowing businesses to incorporate sustainability concerns into their reporting, processes, and business models.

In an emerging economy like Nigeria, businesses view SR as a time-consuming, laborious task that necessitated gathering data, creating content and obtaining approval from the highest levels of companies (Buba & Kumarul, 2017). In the light of this, the Financial Reporting Council of Nigeria (FRCN) has raised concern over the non-existence of sustainability reporting in most sectors of the economy. Additionally, the Institute of Chartered Accountants of Nigeria in its 52nd Annual Accountants’ Conference in Abuja recommends the practice of sustainability to drive economic growth and Development. It also urges Nigeria's public sector organizations to follow the private sector's lead and include sustainability-related activities in their annual reports, arguing that this inclusion is essential given that the sustainability goals focus on resolving issues like poverty, financial circuits and inclusion, access to clean water, inequality, and climate change, among other issues, that developing nations face. Moreover, the Chief Executive Officer, FRCN pointed out that Nigeria had always complied with international norms, particularly in the areas of corporate governance, financial reporting, and auditing. However, businesses must mainstream their cooperative efforts in stakeholder involvement and Environmental, Social, and Governance (ESG) disclosures. Furthermore, the organization's longevity depends on the quality of its relationship with the various levels of inside and outside stakeholders. The ability to communicate effectively with key stakeholders is essential to the organisation's long-term success and expansion. Effective sustainability reporting will provide the organization with the benefit of coordinating and maximizing the value of the stakeholder, anticipating the action of the stakeholder and maximizing operational efficiency. Besides, firms are expected to properly disclose these consequences in a pertinent sustainability report that provides a thorough explanation of their approach to stakeholder involvement in relation to social sustainability reporting. Sustainability reporting is affected by firm attributes due to it systematic and unique nature across firms and they consist of firms resources and capability (Selvam et al., 2017; Oluwatayo et al., 2019). Companies’ management usually decides on how much of these attributes to disclose and what to disclose, which ultimately influences sustainability reporting disclosure.
According to Jensen & Meckling’s 1976 legitimacy and agency theories, firm size has an effect on ownership structure, which in turn affects firm performance and longevity. In a similar vein, businesses that have been in business for a longer period of time may have acquired a greater degree of legitimacy, as well as more goodwill and involvement in societal responsibility, than businesses that have just been established. According to Andersson & Folkare (2015), older businesses typically disclose more information than new ones.

The non-financial firms according to Eneh and Amakor (2019) are regarded as environmentally sensitive companies and their activities affect the environment either positively or negatively (Ihimekpen, 2021). These companies have since attached a greater prominence to their social and environmental impact and they engage in establishing good partnership with local communities than they were used to in the past. This shift is being facilitated by the remarkable growth and development in corporate codes of conduct, the communities and environmental pressure, and the need for effective sustainability reporting disclosure among several other drivers. The reporting of only the positive (or negative) developments in financial indicators are not sufficient for investors or stakeholders because according to the CFA Institute (2018), profits no longer reliable in reflecting increase in corporate value and are thus an inadequate driver of investment analysis. The social impact of industrialization in the 18th and 19th century brought great riches to most of the entrepreneurs who helped set it in motion. However, millions of workers who crowded into the new factories suffered poverty and harsh living conditions. These human rights issues in the business world caused companies to be more sensitive on social and ecofriendly matters (Drolet et al., 2021). Additionally, the sustainable development concept developed by the United Nations also requires information and reports on employees’ rights and social responsibility among other things (Haanaes, 2016; Drolet et al., 2021). Furthermore, the 16th edition of the Global Risk Report indicated that 58% of respondents forecast that social risk will become a critical threat to the world (Global Risk Report, 2021). Ironically, while efforts to increase the impact on social and environmental sustainability appear to be growing, there seems to be a lack of connection between day-to-day business operations and the overarching goal of those sustainability activities. It is therefore imperative to ascertain how firm age and firm size drives the disclosure of Social Sustainability Reporting (SSR); given that firm size and firm age are critical performance indicators in relation to firm performance and sustainability reporting (Abdulsalam & Babangida, 2012; Sonjaya & Yenni, 2021).

A number of studies have been carried out in the area of firm attributes and sustainability reporting. However, the novelty of this work stems from the gap in literature which is attributed to the fact that only few studies have been investigated in relation to Firm Performance Attribute (FPA) and Social Sustainability Reporting (SSR). Also, these studies were carried out in advanced economies where different legal regimes operate and institutional culture differs from Nigeria. This shows that their findings cannot be generalized across nations and may not easily be adaptable to Nigeria. Again, based on the literature reviewed so far, no study in Nigeria isolated the social indicator of the triple bottom line and ESG reporting. The study of Abdulsalam and Babangida (2012) as well as Dibia and Onwuchekwa (2015) were done in Nigeria Oil and Gas sector. Also, Lucia and Rosinta (2018) considered only manufacturing companies listed in Indonesia Stock Exchange, and the study of Usman (2020) was anchored on legitimacy theory. Furthermore, Ohidoa, et al. (2016) used industry type, leverage and firm size to investigate the determinants of environmental
disclosure in Nigeria leaving out firm age. Also, a detailed examination of the Nigeria study revealed that none cover all the listed non-financial companies which makes this study unique compared to the previous literatures. This study is laced with stakeholders’ theory which makes it different from the studies of Usman (2020) and Jeroh (2020).

In the light of these, it is imperative to ascertain how firm age and firm size drive the disclosure of social sustainability reporting. This study is motivated by the need to build on the few empirical studies in Nigeria and also to provide a current investigation on firm performance attributes vis-à-vis social sustainability reporting by isolating the GRI social indicator index from an emerging nation like Nigeria. For this reason, the following hypotheses were tested:

HO1: Firm size has no significant effect on social disclosure index of listed non-financial companies in Nigeria.

HO2: Firm age has no significant effect on social disclosure index of listed non-financial companies in Nigeria.

2. LITERATURE REVIEW
2.1 Conceptual Framework
2.1.1 Firm Performance Attributes
Ali and Isa (2018) defined firm attributes as the distinctive characteristics that distinguish one company from another. It is possible to identify the characteristics of the company based on the pertinent information provided on the financial statements for a specific accounting period (Stainer, 2006). Corporate governance and business performance are two examples of these characteristics (Shehu, 2012; 2013 by Shehu and Ahmad; Abdul-Hakim and others, 2017; characteristics of the company based on the pertinent information provided on the financial statements for a specific accounting period (Stainer, 2006). Corporate governance and business performance are two examples of these characteristics (Shehu, 2012; 2013 by Shehu and Ahmad; Abdul-Hakim and others, 2017; Mao-Chang, 2017). Corporate governance performance, profitability performance, growth performance, size performance, age performance, market value performance, customer satisfaction, employee satisfaction, environmental audit performance, and company social performance were also categorised as attributes of firm performance. According to Selvam et al., these attributes cannot be used interchangeably because they represent distinct aspects of firm performance and distinct demands from firm stakeholders that must be managed independently, 2016). As a result, the distinguishing characteristics that enable a company to effectively utilise its resources to produce operational and financial outcomes are its performance attributes. The performance attributes categorised by Shehu (2012) and Selvam et al. were used in this study. Abdul-Hakim et al. (2016, 2017). The firm's age, profitability, and size are examples of these characteristics. However, the study's objective will be used to discuss firm age and size.

2.1.2 Firm Size
The majority of businesses wish to expand their operations in order to raise revenue, profits, the number of employees, or the size of their facility. The term "firm size" refers to a company's appropriate rate and scope of expansion (Pervan & Visic, 2012). Companies may need to increase their manufacturing capacity, market share, or even geographical presence in order to survive in the face of fierce competition and rapid change (Dogan, 2013). According to Tushar (2022), the size of an average business varies from country to country. He also said that the workforce,
managerial skills, and other resources in the community where the business is located may also affect the size of the business. They went on to say that a business will probably outgrow the area where it operates, especially if it is located in a remote or isolated location. According to agency theory, the way a company's ownership structure changes affects its lifespan and ability to achieve its goals (Camison-Zornoza et al., 2020). The natural logarithm of a company's total assets is used to determine the impact of a company's total assets on sustainability reporting (Vuong et al., 2017).

2.1.3. Firm Age
The number of years since the company was founded is known as its "firm age" (Shumway, 2001). According to legitimacy theory, a company's ability to conduct business in a community is contingent on the community's acceptance of the company. Businesses can, of course, both have an effect on society and be influenced by it. According to Deegan (2002), the theory of legitimacy is therefore regarded as a crucial resource for an organization's survival. This suggests that older businesses with a longer social history may have acquired a greater degree of legitimacy and a greater sense of societal responsibility through participation and goodwill than more recently established businesses. Haykir and Celik's (2018) research, as well as Ghafoorifard et al.'s (2014), reported that listed companies' listing status was significantly influenced by the level of disclosure. In addition, previous studies support the significant connection that exists between the age of businesses and the dissemination and disclosure of information. It is anticipated that a company's age on the stock exchange may influence the disclosure of social information, as the preceding example indicates. Company listing age at the NGX will be taken into account in this investigation.

2.1.4. Social Sustainability Reporting
The process of creating prosperous and long-lasting communities, educating individuals about the requirements they have for their homes and workplaces, and encouraging well-being are all components of social sustainability (World Bank, 2021). The capacity of business communities to satisfy the requirements of their current members and develop procedures and frameworks that assist future generations in maintaining the vitality of their community. According to Adebowale (2002), active interaction between communities and businesses contributes to the development of communities that are healthy and sustainable for future generations. From a business perspective, understanding the impact that the activities of companies have on people is necessary for social sustainability. Social sustainability reporting, or SSR for short, is the third sustainability pillar. A company's capacity to perform is determined by the interaction of the three aspects—people, profit, and the environment. Empowerment, human rights, fair labour practices, health, safety, equity, work-life balance, community engagement, and other issues are all aspects of social sustainability. Despite their difficulty in determining and measuring, social impact and sustainability issues are easier to identify. The total, or actual, disclosure made by businesses is divided by the expected disclosure of the GRI G4 social disclosure indicators to calculate social sustainability reporting.

2.1.5 Social Disclosure Index
The synthesis and translation of mathematical concepts make up indices, which can be measured either individually or collectively. An ordinal scale rather than a dichotomized scale must be used to reflect the various levels of information quality if an index is to represent the level of disclosure or transparency associated with a particular issue (Coy & Dixon, 2004). According to Pereira
The normal scale enables researchers to classify elements in a population, establish logical relationships between various properties, and ascertain whether an element possesses more or fewer characteristics. The Social Disclosure Index (SDI), which was developed on the basis of the Global Reporting Initiatives (GRI) framework, is used to measure Social Sustainability Reporting (SSR) activities. In particular, the use of the standard scale to represent the disclosure level is useful because it attempts to classify the quality of the information. According to Killic & Kuzey (2018), the GRI index is the most widely used framework for determining various dimensions of sustainability reporting activities. The sixteen social sustainability indicators are the SDI's GRI classification. The sustainability score as a whole is made up of these indicators. A company will receive a score of one if it discloses an item in its annual report; otherwise, it will receive a score of zero.

2.1.6. Firm Solvency
A company's solvency is its capacity to pay its long-term debts and other financial obligations on time. Solvency, which demonstrates a company's capacity to manage operations into the foreseeable future, is one indicator of a company's financial health (Hayes, 2020). Ratios can be used by investors to evaluate a company's solvency. Lenders, potential investors, suppliers, and anyone else who wants to do business with a particular company can greatly benefit from the metric. In most cases, it checks the entity's financial stability by comparing its profitability to its obligations. As a result, a solvency ratio that is either high or very high is preferable because it is a sign of a company's financial stability. A low ratio, on the other hand, reveals future financial challenges. Although liquidity and solvency are distinct concepts, it is often prudent to examine them simultaneously, particularly when a company is insolvent (Hayes, 2020). An organisation can become indebted despite its ability to generate normal income and maintain consistent levels of working capital. Companies are subjected to a solvency and liquidity test in accordance with Section 4 of the Companies Act of 2008. The term "solvency" refers to a company whose fairly valued assets equal or exceed its liabilities. According to Brigham & Houston (2012), "liquidity" refers to a company's capacity to pay its debts as they become due in the normal course of business for a period of one year. It is possible to assert that management would disclose information regarding activities that fulfil social responsibilities based on the aforementioned premises. The solvency ratio, which is the average of net income and all liabilities (short-term and long-term), was used in this study to determine a company's solvency.

2.2. Empirical Review
Fadilah and others (2022) looked at how sustainability reporting and earnings management are affected by firm size and age. Utilizing the purposive sampling method and multiplier linear regression, 14 businesses were selected for the study's sample. The study's population consists of all 70 mining companies listed in India between 2015 and 2019. According to the SPSS version 25 result, firm size and age have a positive impact on sustainability reporting, earnings management has a positive impact from the SR economic dimension, and earnings management has a negative impact from the SR environmental dimension. However, earnings management is unaffected by the social dimension of SR. Management should increase the size of the company and mandate sustainability disclosure, according to the study. The study's time period is not particularly recent, so the findings may not apply to Nigeria. Additionally, it is thought that the
statistical tool used, SPSS, is not all-encompassing.

Khafid and others (2020) used quantitative research and multiple regression to examine the factors that influence sustainability report disclosures by Indonesian (LQ45) companies from 2015 to 2017. Profitability, leverage, and company expansion had no effect on the sustainability report's disclosure, as demonstrated by the sample size of 17 businesses. On the other hand, the sustainability report's disclosure was negatively impacted by company size. Next, the relationship between profitability and leverage on the disclosure of the sustainability report was successfully moderated by corporate governance. Thus; It is concluded that profitability and leverage had a moderating effect on sustainability report disclosure, and that company size had a negative impact on sustainability report disclosure. Additionally, the study found that sustainability report disclosure is still inadequate, with only 32% of disclosures on average. The researcher's main recommendation is that businesses should pay attention to corporate governance practices in order to satisfy stakeholders' information requirements through sustainability reports. Due to the vastly different environment and nature of the businesses' activities in Nigeria, the findings of the study may not be the same if carried out there. Additionally, the period of three years may not yield a reliable result.

From 2004 to 2015, Kiliç and Kuzey (2018) looked at the factors that influenced sustainability reporting in Turkey. According to the findings of the panel logistic regression method and the binary coding technique, a growing number of businesses produce separate sustainability reports—from one report in 2004 to 27 reports in 2015. However, there are still a significant number of businesses that did not produce their own sustainability plan. The Global Reporting Initiative (GRI) was also found to be the most widely used sustainability reporting framework, according to the findings. Stand-alone sustainability reporting is significantly influenced by factors such as listing on the Corporate Governance Index (CGI), having a sustainability committee, industry, company size, and profitability, whereas leverage is not. In order to encourage non-financial assurance practice, the study suggests that regulatory bodies and policymakers address the absence of clearly defined standards and mandatory requirements for the assurance of sustainability reports. The findings can only be applied to Turkey.

Ozigi and co. (2017) looked at how much corporate sustainability disclosure affects employees in Malaysia and its determinants. Using a panel, two-step system, generalized method of moment, panel data for 253 randomly selected businesses from all Bursa sectors were sampled over a six-year period from 2010 to 2015. The findings indicate that employees in Malaysia are not sufficiently informed about corporate sustainability. Employee disclosure is strongly influenced by the size and age of the company, according to the findings; With employee disclosure, multiple directorships appear to be of little significance. The data show that countries with mandatory disclosure have higher disclosure rates than those with optional disclosure, indicating the need for government involvement to improve disclosure. Voluntary disclosure appears insufficient to achieve the intended goal, according to the study. As a result, the study recommends that disclosure be required. The study found a correlation between employee engagement and corporate sustainability disclosure levels and determinants, but this one will investigate how those determinants influence sustainability disclosure in Nigeria.

Ahmad (2017) looked at how firm characteristics affected the sustainability disclosure of Nigerian listed breweries from 2012 to 2016. The data were analyzed using the multiple regression
technique. As proxies, profitability, firm size, leverage, and board size were used to evaluate the company's characteristics. While sustainability disclosure was measured through the use of contents analysis. Leverage had no significant impact on sustainability disclosure, according to the study. The study said that breweries should share more information about the environment because it makes them more money. The study only looked at breweries, and the number of years chosen for the study was only six, so it may not apply to non-financial businesses as well. Kansal and others 2014) used corporate size and a variety of corporate characteristics to investigate the factors that influence sustainability disclosures on 100 samples of top Indian companies. Using content analysis and multiple regression, the study found that disclosure is generally low. The results showed that corporate size has a correlation with sustainability disclosures and is a significant factor in Indian companies' sustainability disclosures. However, it is noteworthy that, in addition to the fact that the study was carried out in an Asian nation; The situation in Nigeria may not be applicable to the finding. Ogwe (2014) investigated the factors that influence voluntary disclosure in the annual reports of Nairobi securities exchange-listed businesses. Firm age, size, profitability, leverage, type of external auditor, ownership status, and voluntary disclosure are the dependent variables that were used as the explanatory variables. Using a sample of 31 companies that were listed on the Nairobi Securities Exchange in 2012, the descriptive research design of the study was used. 47 disclosure items are included in the data for the dependent variables in order to measure disclosure. A robust standard error multivariate ordinary least square model was used in the study to test the effect of the six (6) independent variables on the overall voluntary disclosure and to determine which of the independent variables explains the differences in voluntary disclosure among the companies under investigation. Firm age had no significant correlation with voluntary disclosure, while ownership, the type of external auditor, firm leverage, profitability, and size were all found to be significant in the study. The study suggests that businesses concentrate their annual report audits on higher-ranking auditors. The auditor kind is used to send a message to the market. Because the study's time period was relatively brief, stepwise regression would have been the most effective method, and aggregate would have been more effective for determining the extent of voluntary disclosure. Using both qualitative and quantitative methods, Arshad and Vakhidulla (2011) investigated the factors that influence sustainability reporting in the Swedish context: impact of media exposure and company/industry characteristics on CSR disclosure practices. The study uses a deductive method, which means it starts with a review of the literature and previous empirical studies as a foundation for making up hypotheses. Next, it uses data from the Stockholm stock exchange website and published annual reports of some Swedish companies. Firm size was found to be a significant factor in explaining the differences in sustainability reporting among Swedish companies in the analysis based on scores rated using the Folksam corporate responsibility index for sustainability disclosure and regression. There was no recommendation in the study. Additionally, the study's findings cannot be relied upon due to the fact that they only covered one year (2011) and the sample selection method is unclear. If more years were taken into consideration and a more effective sampling strategy was used, the outcome would have been more reliable.

2.3 Theoretical Framework
2.3.1. Legitimacy Theory
Organizational legitimacy, as defined by Dowling and Preffer (1975) as a condition or status that
exists when an entity's value system is congruent with the value of which the entity is a part, is the basis for legitimacy theory. Dobbs and Staden (2011) say that businesses look for "legitimacy" from key stakeholders by making sure their values are in line with the values of the society where they do business. Vourvachis (2008) used legitimacy theory to look at British Airways and Singapore Airlines' corporate voluntary disclosures in light of major social accidents like the "Concorde crash north of Paris in the year 2000 and the Singapore Airlines accident." Companies' voluntary social disclosures, particularly regarding health and safety, increased in response to the events. Companies increase their disclosure as a response to this attention. Companies will need to show why they should continue to exist on the basis of this theory. Disclosures are made public in this way to build or maintain corporate legitimacy.

2.3.2. Stakeholder Theory

Edward Freeman proposed the stakeholder's theory in 1984 in his first work, "assessing the role of actors in the firm's environment." His work suggested that other internal and external actors influenced firm behavior in addition to shareholders, as the economic model suggests. According to Susan (1999), the theory is an attempt to explain the firm's behavior in relation to its external environment. Stakeholders are all the various individuals and groups that have an impact on or are affected by a company's actions. According to stakeholder theory, businesses have a social responsibility that requires them to take into account the needs of all parties whose interests they serve. This gives managers more responsibility for ensuring that no stakeholder is dissatisfied, either now or in the future. The proponent of this theory suggested that businesses ought to take into account multiple groups of stakeholders in addition to the community when making decisions and acting. Companies must cautiously respond in a variety of ways to these distinct stakeholders' information needs.

According to this theory, managers can develop socially responsible behavior by paying attention to the interests of all business stakeholders, and a socially responsible organization is one in which managers' responsibilities to stakeholders play a significant role in decision-making (Clarkson, 1995). The connection between corporate governance, financial performance, and sustainability performance has been studied using stakeholder theory (Donaldson & Preston, 1995). According to stakeholder theory, it is a necessary cost for businesses to meet the needs of multiple stakeholders. This can be done in a number of different ways, from minimising costs to improving society. Ruf and co. 2001), claim that businesses can reduce the transaction costs associated with contracts and monitoring between them and their stakeholders by meeting the needs of those stakeholders or by demonstrating a willingness to work with them. A strategic investment can also be seen in meeting the needs of stakeholders. From a resource-based point of view, businesses can gain a competitive advantage by having resources in their operations that stakeholders value as valuable, replicable, and difficult to replace.

The stakeholders' theory serves as the foundation for this investigation because it provides an explanation of the connection that exists between the company and the various stakeholders that its operations affect. Furthermore, the Global Reporting Initiative's (GRI) definition of sustainability reporting from 2011 demonstrates that the goal of sustainability reporting is to provide information to the company's various stakeholders. As a result, stakeholders' expectations and engagement must be taken into account by businesses. Furthermore, Gray et al. According to Corporate Social Responsibility (CSR), there is an unwritten social contract between a company
and its various stakeholders, and without quality stakeholder engagement, corporate performance primarily focuses on the needs of these stakeholders; Quality sustainability disclosure is impossible (Accountability Principle, 2011).

3. METHODOLOGY
To assess the impact of firm performance attributes on social sustainability reporting by Nigerian listed non-financial companies, the study used ex-post facto research designs. Because it is an after-the-fact design that explains the relationship between the variables after they have occurred, the design is thought to be suitable for the study. The study's population consists of all 112 Nigerian Exchange Group businesses from 2012 to 2021, while the sample size is 82 businesses. The panel regression method was utilized in order to establish a connection between FPA and SDI. Employment, labor/management relations, occupational health and safety, training and education, diversity and equal opportunity, non-discrimination, freedom of association and collective bargaining, child labor, human rights assessment, local communities, supplier social assessment, public policy, customer privacy, and social economic compliance are the sixteen (16) GRI social sustainability indicators used in the study to measure the SDI. The sustainability score as a whole is made up of the indicators. Muhammad et al.’s model is used to empirically test the hypotheses (2017), and the following diagram illustrates the functional relationship between the variables:

\[ SDI_t = \beta_0 + \beta_1 FS_{it} + \beta_2 FA_{it} + \beta_3 FSZ_{it} + \epsilon_{it} \]

Where:

- SDI = Social Disclosure Index
- FS = Firm Size
- FA = Firm Age
- FSZ = Firm Solvency
- i = firm
- t = year
- \( \epsilon \) = Error Margin
- \( \beta_0 \) = Intercept
- \( \beta_1 \) to \( \beta_8 \) = Regression Coefficients

A priori Expectation
The a priori expectation of this study is that firm size and firm age will have a significant positive effect on the social disclosure index.

Table 3.2 Variable Definition and Measurement

<table>
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<th>Variable</th>
<th>Variable Measurement</th>
<th>Source</th>
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http://ijbmer.org/
Social Disclosure Index: GRI G4 social disclosure criteria for scoring thus, where any of the criteria is disclosed by a company, a score of 1 is assigned and a score of 0 if otherwise. Therefore, the average of the aggregate disclosure is obtained by dividing the Actual social disclosure by the expected social disclosure.

**INDEPENDENT VARIABLES**

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<tbody>
<tr>
<td>Firm size</td>
<td>Logarithms of total assets</td>
<td>Dai and Dong (2010); Bhattacharyya (2014); Ndukwe and John (2015)</td>
</tr>
<tr>
<td>Firm Age</td>
<td>Company listing age at the NGX</td>
<td>Alkaeli and Rashid (2015); Ozigi, <em>et al.</em> (2017)</td>
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**CONTROL VARIABLE**

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<tr>
<td>Firm solvency</td>
<td>Net income to short and long-term debt</td>
</tr>
<tr>
<td></td>
<td>Zhang (2013), Abdul <em>et al.</em> (2017)</td>
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Source: Author’s Compilation (2022)

4. RESULTS AND DISCUSSION

**Table 4.1: Descriptive Statistics Result**

<table>
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<tr>
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<th>SDI</th>
<th>FS</th>
<th>FA</th>
<th>FSZ</th>
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<tbody>
<tr>
<td>Mean</td>
<td>0.312984</td>
<td>0.674422</td>
<td>34.40488</td>
<td>9.939915</td>
</tr>
<tr>
<td>Median</td>
<td>0.352941</td>
<td>0.098714</td>
<td>33.00000</td>
<td>9.935463</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.764706</td>
<td>90.66343</td>
<td>86.00000</td>
<td>11.78970</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000000</td>
<td>-21.13674</td>
<td>2.000000</td>
<td>6.675830</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.152778</td>
<td>4.164235</td>
<td>19.35983</td>
<td>0.773477</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.085204</td>
<td>12.41618</td>
<td>0.291243</td>
<td>-0.086767</td>
</tr>
</tbody>
</table>
The descriptive statistics of firm size, firm age, the social disclosure index, and firm solvency as a control variable for listed non-financial companies in Nigeria from 2012 to 2021 are presented in Table 4.1. The social disclosure index (SDI), which is a measure of social sustainability reporting, has a mean of 0.312984, a standard deviation of 0.15277, a minimum of 0.00000, and a maximum of 0.764706, as shown in the table. Given that there is a slight slit in the range between the minimum and maximum; This suggests that the reporting on social sustainability is stable because the standard deviation shows that the data are slightly different from the mean. The other metric of firm size and age has a mean of 0.674422 and a standard deviation of 4.16423, 19.3598, respectively, as well as a minimum and maximum of -21.13674, 2.00000, 90.66343, and 86.00000. As the standard deviation is large in comparison to the average and the range between the minimum and maximum values is high, this indicates that the company's age and size experienced marginal increases during the study period. Because the standard deviation is large in comparison to the average (mean) and the range between the minimum and maximum values is high, this indicates that the company's age and size experienced marginal increases during the study period. As a control variable, firm solvency also has a mean of 9.93991 and a minimum and maximum of 6.675830 and 11.78970, respectively.

Correlation Analysis

Table 4.2: Correlation Matrix

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<thead>
<tr>
<th>Correlation Probability</th>
<th>SDI</th>
<th>FS</th>
<th>FA</th>
<th>FSZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDI</td>
<td>1.000000</td>
<td>-----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FS</td>
<td>0.080194</td>
<td>1.000000</td>
<td>0.0216</td>
<td>-----</td>
</tr>
<tr>
<td>FA</td>
<td>0.133812</td>
<td>0.027089</td>
<td>1.000000</td>
<td>0.0001</td>
</tr>
<tr>
<td></td>
<td>0.0001</td>
<td>0.4385</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: E-View 10 Output (2022)
The result from table 4.2 above shows that SDI is 8.02% positively associated with firm size. This signifies that the larger the size of the firm the higher the level of social disclosure by the companies. The correlation coefficient of 13.38 percent also indicates that there is a positive relationship between SDI and firm age. This implies that an increase in the age of firm will lead to an increase in social disclosure of the listed non-financial companies in Nigeria. Again, the table shows the correlation coefficient between firm solvency as a control variable and SDI of 19.8%. The positive correlation indicates that an increase in the solvency of firms will lead to an increase in social disclosure of listed non-financial companies in Nigeria.

The result presented above confirms that firm size 0.080194, firm age 0.13381 and firm solvency 0.197996 have a strong positive correlation with social disclosure index.

**Multicollinearity Test (VIF)**

The result of multicollinearity diagnostics test is presented in table 4.3 below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Variance</th>
<th>Uncentered VIF</th>
<th>Centered VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.004546</td>
<td>168.2929</td>
<td>NA</td>
</tr>
<tr>
<td>FS</td>
<td>1.58E-06</td>
<td>1.041112</td>
<td>1.014470</td>
</tr>
<tr>
<td>FA</td>
<td>7.33E-08</td>
<td>4.225229</td>
<td>1.015183</td>
</tr>
<tr>
<td>FSZ</td>
<td>4.65E-05</td>
<td>171.1641</td>
<td>1.028947</td>
</tr>
</tbody>
</table>

*Decision rule:* A centre VIF of less than 10 indicates that multi-collinearity is absent, whereas a centre VIF of greater than 10 indicates that multi-collinearity is present. Using variance inflation factors, the decision rules for multi-collinearity tests are as follows: less than ten centred VIFs indicate that multi-collinearity is not present, and more than ten centred VIFs indicate that multicollinearity is present. Because all independent variables (FS, FA, and FSZ) have a centred VIF of less than 10, it is clear from table 4.3 above that there is no multicollinearity between them.

**Heteroskedasticity Test**

<table>
<thead>
<tr>
<th>Panel Cross-section Heteroskedasticity LR Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null hypothesis: Residuals are homoscedastic</td>
</tr>
<tr>
<td>Equation: UNTITLED</td>
</tr>
<tr>
<td>Specification: SDI C FS FA FSZ</td>
</tr>
</tbody>
</table>

Source: E-View 10 Output (2022)
The panel cross-section heteroskedasticity regression test's findings are presented in Table 4.4. The following is the statement of the decision rule for the panel cross-section heteroskedasticity test:

*Decision Rule: At 5% level of Significance
H0: No conditional Heteroskedasticity (Residuals are homoskedastic)
H1: There is conditional Heteroskedasticity

The null hypothesis asserts that heteroskedasticity does not exist, whereas the alternate hypothesis asserts that heteroskedasticity does exist. The null hypothesis will be accepted if the P value is greater than the 5% level of significance; otherwise, the alternative hypothesis will be accepted. The alternative hypothesis, which asserts that there is conditional heteroskedasticity, is accepted due to the ratio value of 270.2991 and the probability value of 0.0000, which is less than 5%. However, the study posits that there is reason to reject the null hypothesis. As a result, the null hypothesis is rejected based on the diagnostic probability of 0.0000. There is conditional heteroskedasticity, which indicates that the residuals are homoskedastic and that the sample does not accurately reflect the population. In order to achieve residual homoskedasticity, the study's heteroscedasticity was eliminated by transforming the dependent variable into an independent variable using a logarithmic transformation.

**Fixed Effect Likelihood Ratio Test**
The test basically determines whether the regression and error terms are correlated. As a result, the following is the decision rule for specifying the fixed effect probability ratio: at a significance level of 5%

### Table 4.5: Fixed Effect Likelihood Ratio Table

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>6.825672</td>
<td>(81,735)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>459.923067</td>
<td>81</td>
<td>0.0000</td>
</tr>
</tbody>
</table>
Source: Output of E-View 10 (2022)
The statistic value of the chi-square is 459.92306, while the probability value is 0.0000, according to the results of the probability ratio test for the fixed effect. This indicates that the pool effect is more suitable for the group regression analysis and that there is sufficient evidence to reject the null hypothesis. Because the combined effect is likely to be associated with one or more regressors, the error component model (pooled effect) estimator is not appropriate. As a result, the regression analysis model of the fixed effect with the options of grouping effect analysis and fixed effect analysis provides the study's most accurate and effective estimates. Given the two options described above, the result indicates that the fixed-effect regression model is best suited for the sampled (tested) data because the probability value for the probability ratio test is less than 5%.

Hausman Test
The test basically looked to see if the regressors and error terms were correlated. The following is the statement of the decision rule for the Hausman specification test at a 5% significance level:

Table 4.6: Hausman Test

<table>
<thead>
<tr>
<th>Correlated Random Effects - Hausman Test</th>
<th>Equation: Untitled</th>
<th>Test cross-section random effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Summary</td>
<td>Chi-Sq. Statistic</td>
<td>Chi-Sq. d.f. Prob.</td>
</tr>
<tr>
<td>Cross-section random</td>
<td>2.676696</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Output of E-View 10 (2022)
The Hausman test's result indicates a chi-square statistic value of 2.676696 and a probability value of 0.4442. This suggests that there is sufficient evidence to accept the null hypothesis, which states that the panel regression analysis's random effect is the most suitable. Since the random effects and the regressors are highly correlated, the error component model (fixed effect) estimator is not the best choice. As a result, the random effect cross-sectional model provides the study's most accurate and consistent estimation. Because the Hausman test statistics, as shown by the corresponding probability value, are greater than 5%, the result suggests that the random effect regression model is the most suitable for the sampled data.

Table 4.7: Panel Regression Result (Random Effect)

<table>
<thead>
<tr>
<th>Dependent Variable: SDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method: Panel EGLS (Cross-section random effects)</td>
</tr>
<tr>
<td>Date: 11/12/22  Time: 08:23</td>
</tr>
<tr>
<td>Sample: 2012 2021</td>
</tr>
<tr>
<td>Periods included: 10</td>
</tr>
<tr>
<td>Cross-sections included: 82</td>
</tr>
<tr>
<td>Total panel (unbalanced) observations: 819</td>
</tr>
<tr>
<td>Swamy and Arora estimator of component variances</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
</table>
Source: Output of E-View 10 (2022)

The coefficient of multiple determinations (R2) is 0.9066, as shown in table 4.7 above. The regression model indicates that the range of values between adjusted R2 and R2 is 91% and 90%, respectively, which is consistent with the panel nature of the data used in this study. This indicates that the variations in the independent variables (FS and FA) account for approximately 91% of the total variations of the social disclosure index (SDI), while the error term accounts for the remaining 9% of the model variation, indicating that the line of best fit is highly fitted. Table 4.7 shows that the panel regression results for the sampled non-financial companies show a positive relationship between firm size, firm age, and the social disclosure index, with P-values of 0.0441 and 0.2321, respectively. However, considering their respective probability values, the parameter estimate for firm size is statistically significant with a probability of 0.0441, or less than 5%, while the parameter estimate for firm age is statistically insignificant with a probability of 0.2321, or more than 5%. However, when the regressors (FS and FA) are taken together and compared to the regressed social disclosure index (SDI), the F-statistic has a value of 1975.543 and the probability of the F-statistic is 0.00000. This indicates that the overall regression is positive and statistically significant at 5%, as indicated by this result.

4.2 Discussion of Findings

This study investigated how social sustainability reporting and business performance factors influenced Nigerian listed non-financial enterprises. This study examines how business size and age impact the social disclosure index of Nigeria's listed non-financial enterprises. As a result, the conclusions of this study are based on hypotheses, models, and analyses.

First off, the assessment of firm size and social sustainability reporting (proxied using social disclosure index) of listed non-financial companies in Nigeria revealed a significant positive effect.
on listed non-financial companies in Nigeria. This result is consistent with the a priori expectation of this study, which states that firm size has a significant positive effect on SDI. Ozigi et al. (2017) findings are also consistent with those of this study, who provided evidence that a firm's sustainability was positively correlated with its size. But the findings of Ahmad (2017) do not agree with this study because a negative result was discovered by the study. Secondly, investigation on effect of firm age and social disclosure index has a positive but insignificant effect on listed non-financial companies in Nigeria. The findings of this investigation do not support the conclusions of Khafid et al. 2020), who established a negative relationship between a company's social sustainability and its age. This is not consistent with the study’s a priori expectation. The implication of firm size having a positive effect on SDI implies that an increase in firm size in relation to the firms’ total assets will result in an increase in the social sustainability reporting of listed non-financial companies in Nigeria. Firm age, on the other hand, has an insignificant effect and does not advance the social sustainability reporting of listed non-financial companies in Nigeria.

5. CONCLUSION AND RECOMMENDATIONS
The study examines the social sustainability reporting and performance characteristics of Nigeria's listed non-financial companies from 2012 to 2021. The findings indicate a significant impact on Nigeria's non-financial listed company social disclosure index. SDI is positively impacted by company size; however, firm age revealed an insignificant effect. As a result, the study comes to the conclusion that social sustainability reporting by listed non-financial companies in Nigeria is significantly influenced by firm performance attributes.

Based on the findings of this study, the management of listed non-financial companies in Nigeria receives the following recommendations:

i. Management of non-financial companies should increase firm size in relation to their total assets due to the positive multiplier effect it has on the social sustainability reporting of the firm.

ii. Corporate managers of non-financial companies in Nigeria should not base their social sustainability reporting on firm age due to its insignificant effect on the organization.

REFERENCES


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