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# External Engagement and Environmental Reporting Quality: Evidence from the Emerging Market

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**Abstract:- The importance of external engagement and the growing public concern over environmental reporting have prompted businesses all over the world to look for measures to lessen their negative environmental effects. This is accomplished by providing stakeholders with high-quality environmental information. In developed economies, the role of the Global Reporting Initiative in establishing environmental reporting performance indicators have received a great deal of attention. However, developing economies have less research on the subject. The purpose of this study, therefore, was to determine how media exposure, environmental assurance statements, and stakeholder power related to firm external engagement attributes affected the quality of environmental reporting in Nigeria. From the secondary data, the annual reports and websites of listed companies for the years 2017 through 2021 were used. The study adopted the panel least squares method to analyse the data gathered from the annual reports and corporate websites of the listed companies in Nigeria. According to study results, there is a strong positive relationship between media exposure, stakeholder power, and quality of environmental reporting. In addition, anegligiblepositive link between environmental assurance statementsand the quality of environmental reporting exists. The study concludes that by following international best practices for environmental reporting and providing stakeholders with adequate information, businesses can increase external participation and close the reporting gap.**

***Keywords:-*** *Media exposure, Environmental assurance, Stakeholder power, Environmental reporting quality*

## I. INTRODUCTION

The unfavourable environmental impact of economic activity on the earth's surface has become a topic of attention to the general public in the international community during the past few decades (Angela &Handoyo, 2021). This worry is brought on by the danger posed by the unfavourable environmental effects of economic growth. Companies all around the world have been looking for solutions to lessen their harmful effects on the environment through the dissemination of high-quality environmental information (Moalla*et al.*, 2020). This has greatly increased studies on corporate environmental reporting (Rezaee*et al.*, 2020). As a result, corporate organisations have been put under intense pressure by stakeholders to engage in environmental responsibility, which includes the disclosure environmental related issues in annual reports and corporate websites (Uwuigbe*et al.*, 2017; Owolabi&Solarin, 2020; Ibrahim &Kurfi, 2021; Solanke*et al.*, 2021).

Consequently, environmental reporting is, therefore, a noteworthyconceptapplied by firms and is affected by a number of issues such as media exposure, environmental assurance statement and stakeholder power(Fan *et al.*, 2020; Al-Shear *et al.*, 2022). These factors arecontended by researchers as playing a part in determining environmental reporting quality (Garcial-Sanchez &Noguera-Gamez, 2017; Stubbs & Higgins, 2018).However,many advancednationssuch as the United States of America, Canada and Australia have revealed agreater concern in reacting to the factors that determine environmental reporting quality (Krivačić, 2017; Wang & Zhang, 2019; Moalla*et al.*, 2020). Nevertheless, in Africa, regardless of having Nigeria as one of the countries with environmentally sensitive industries; coupled with the increasing level of industrialisation, not much has been done in the area of firm external engagement attributes of environmental reporting quality (Erin *et al.*, 2021).

Despite the demonstrable capacity to advance the quality of environmental report by firms, environmental reporting in Nigeria has been found to be at a low level (Owolabi&Solarin, 2020; Ibrahim &Kurfi, 2021). As a result, the primary causes of weak environmental reporting quality have been linked to firm external engagement attributes (Giordano *et al.*, 2018). Hence, media attention has been challenged with the credibility of environmental report (Lillis *et al.*, 2020). More so, the assurance of environmental report has not been universally accepted as stakeholders requireappropriate and precise information for making economic decisions(Elaigwu*et al.*, 2022).

Furthermore, organisations have found it difficult to put together an effective environmental report without identifying the information needs of their stakeholders (Uwuigbe*et al.*, 2017; Belluccet *al.*, 2019). Therefore, firm external engagement involves efforts made by organisation to engage its stakeholders in its activities by identifying their information needs and concerns and the willingness to respond to those concerns (Angela &Handoyo, 2021).

However, with the growing need for qualitative environmental reporting, several research in developed and other developing nations have looked into whether firm external engagement attributes have a substantial impact on the quality of environmental reporting. Yet, the results are uneven and conflicting (Baalouch, 2019; Wenbing*et al*., 2019; Moalla*et al*., 2020). Additionally, rather than using the Global Reporting Initiative's (GRI) international best practices for reporting environmental performance, most earlier studies employed their own self-developed environmental reporting metrics (Erin *et al.*, 2021). However, previous research in Nigeria has not yet concentrated on several specific factors (such as stakeholder power, media exposure, and environmental assurance statements) influencing environmental reporting quality that are important in industrialized and other developing nations (Manning *et al.*, 2018; Boiral& Heras-Saizarbitoria, 2020; Husman*et al.*, 2023).As a result, there is a gap brought about by poor environmental reporting quality.

In light of these issues, the study primarily examined whether business external engagement had an impact on environmental reporting quality. The study limited its firm external engagement attributes to stakeholder power, environmental assurance statements, and media exposure in order to meet this goal. In addition, the unweighted disclosure index was used to measure the quality of environmental reporting.

## II. ITERATURE REVIEW AND FORMULATION OF HYPOTHESES

### *A. Firm external engagement and environmental reporting quality*

Identification,documentation process,and prioritisation of stakeholders' environmental expectations are fundamental to corporate environmental reporting procedure (Vitolla*et al.*, 2019). Thus, the collation of actual corporate environmental information without recognizing its stakeholders' information desires and outlooks will be challenging and more difficult for thecorporateorganization toascertain (Davila*et al*., 2018). Apparently, from a stakeholder standpoint, any resultant environmental reportmight not bedecisive andall-inclusive (Kujala*et al.*, 2022). It is in this context of corporate environmental reporting process that firm external engagement comes into light.Acebo*et al.* (2021) described firm's external engagement asthe efforts made by an organisation to involve its stakeholders in its activities by identifying its information needs and concerns, and the willingness to respond to those concerns. To acquireprecise information regarding the anticipations of stakeholders, firmstend to advance strategies so as to involvethe stakeholders and understand their expectations and concerns.

Thus, firm external engagement such as media exposure, environmental assurance statement and stakeholder power are factors influencing environmental reporting quality (Baalouch*et al.*, 2019; Moalla*et al.*, 2020). Therefore, the media that serves as a home of information have a significant role in impelling the judgments of stakeholders in situations where the credibility of environmental report or information provided is challenged (Anis&Marwa, 2022). Giordano *et al*. (2018) averred that if externally audited and verified, the comprehensiveness, integrity and reliability of corporate environmental reports would be heightened. Accountancy firms and consultancy assurance provider have traditionally conducted this process (Elaigwu*et al.*, 2022). Also, numerous organizations require external affirmation for their ecological reports to meet the necessities of environmentalindex (Ferrero-Ferrero *et al.*, 2018). External affirmation has a few benefits: it expands the stakeholder's trust in the organization; it additionally expects to take out or possibly decrease organizations' distortions on their ecological credentials, and it gives room for comparison between reports from various industries.

Furthermore, environmental disclosure will be a mere public relations process if the processes fail to involve stakeholders via concentrated ownership (stakeholder power) (Baalourch*et al.*, 2019). Marco *et al.* (2019) defined ownership concentration as the volume of sharesmaintained by individual shareholders and blockstockholders. In accountability terms, this demands stakeholders to participate in the governance process (Al-Shear *et al.*, 2022). In essence, organisations are likely to involve stakeholders in the financial reporting process through concentrated ownership (Bellucci*et al.*, 2019).

The Global Reporting Initiative (GRI) guidelines state contributing to stakeholder engagement remains as one of the main primary objective of environmental reporting (GRI, 2017). Thus, stakeholders' engagement becomes more visible when environmental information disclosedportrays their environmental performance(Al-Shear *et al.*, 2022). This association enhances the quality of environmental reporting and provides an avenue for good corporate relationship between stakeholders' expectations and company's behaviour.

### *B. Theoretical framework*

The stakeholder-agency theory provides a leverages for this research as a rudimentarymotivation to lessen the reporting lacuna by meeting investors'and shareholders prospects concerning environmental reporting. The theorybasically embraces a wider viewpoint than agency theory and stakeholder theory (Andreas *et al*., 2015). This theory has widened the principal-agent view to developing stakeholder-agency theory. In addition, the realignment of the conflict of interest between management and stakeholder interests has been captured in the stakeholder-agency theory. Consequently, dealingwith these crisis demands the use of environmental reports, by administrators to link with stakeholders and to gain their backing (Ekundayo& Josiah, 2020). Information priorities of stakeholders vary based on their ability to assess such information. Hence, disclosure policy on environmental information need may help to build trust with the shareholders and other stakeholders. As a result, the combination of stakeholder theory and agency theory enables management and other stakeholders to be more engaged in the environmental behaviour of businesses (Zhang *et al.*, 2018).

Conclusively, stakeholder-agency theory provides effective use of voluntary disclosure policy on environmental information to build trust with the shareholders and other stakeholders (Andreas *et al*., 2015). Erin *et al.* (2021) asserted that the legitimacy theory only gives a limited amount of environmental information, making it insufficient to comprehensively explain environmental disclosure. Similar to this, agency theory is viewed as a cause of poor corporate governance (Mohammad *et al*., 2016), as managers may hide information about the adverse environment (Moses, 2021). Moreover, stakeholder theory assumes power differentials between managers and stakeholders and is seen to be powerful over the company's resources (Owolabi&Solarin, 2020). Hence, stakeholder-agency theory is employed as it provides a helpful framework for evaluating firm external engagement attributes and the environmental reporting quality of quoted firms in Nigeria.

### *C. Previous research on firm external engagement and environmental reporting quality Media exposure and environmental reporting quality*

Various studies demonstrate that more elevated levels of media publicity to ecological mattersintensify public interest and hence,policyprogramme,which firms respondviaadvanced environmental reporting (Lillis *et al*., 2020; Husman*et al.*, 2023; Cao *et al*., 2017). Subsequently, a positive association is anticipatedamongst environmental media exposure and ecologicalreporting.

The investigation by Chenge and Liu(2018), Fan *et al.* (2020) and Anis and Marwa (2022)demonstrated a significant positive connectionamongst media coverage and environmental disclosure quality in the Canadian, Chinese and Indonesian listed companies for 2005, 2008-2009 and 2012-2013 respectively using multiple regressions. The investigations conducted in the UK by Wenbing*et al.* (2019) and Lillis *et al.* (2020) did not, however, uncover a meaningful connection. The majority of the aforementioned earlier research looked on media exposure utilizing environmental news (journal articles) that were published for a particular company in a certain year. The following hypothesis is examined in light of the impact of media exposure on environmental disclosure quality:

*H1*: There is no significant correlation between media exposureand environmental reporting of quoted firms in Nigeria

### *D. Environmental Assurance Statement and Environmental Reporting Quality*

Moalla*et al.* (2020) averred that the capability, reliability and credibility of the sustainability report can be improved through an effective and efficient CSR assurance statement. In addition, they were of the opinion that firms with a superior desire to increase user assurance will be more concernedabout having their environmental, social and governance reports assured. With regard to company's external engagement attributes, they opined that firms situated in stakeholder-oriented economies are expected to requestmore reassurance of CSR disclosures than firmssituated in theshareholder-directedstructures. Similarly, Baalouche*et al.* (2019) in a related study opined that firms can advancethe reliability, integrity and credibility of their reports by assuring their CSR reports, thus reflecting the full discharge of accountability and the associationamongst CSR reporting and CSR assurance.

The study by Al-shear *et al.*(2022) revealed an insignificant positive associationamongst environmental assurance statement and reporting quality in the annual reportsof German firms. Also, using ordinary least square regression, Moalla*et al.* (2020) and Elaigwu*et al.* (2022) found a strong positive link between the environmental assurance statement and the quality of reporting in the yearly reports.

However, Giordano *et al.* (2018) found a poor correlation between environmental assurance statements and reporting quality. While studies by Braam*et al.* (2016) and Boiraland Heras-Saizarbitoria (2020) on the correlation between environmental assurance statements and quality of reporting in the yearly reports demonstrated that external assurance increases users' confidence and credibility of reports and secures the trust of their stakeholders.As a result, one indicator of the quality of environmental disclosure is the existence of the environmental assurance statement. As a result, the following claim is looked at:

*H2*: Environmental assurance statements of listed firms in Nigeria and environmental reporting quality do not significantly correlate with one another.

### *E. Stakeholder power and environmental reporting quality*

Research investigating the associationamid stakeholder power and firms'environmental reporting are few, but consistent. Garcia-Sanchez and Noguara-Gamez (2017)and Manning*et al*. (2018) study revealed a negative relationship amid stakeholder power and the environmental disclosure quality. The studies on the associationamid stakeholder power and environmental disclosure quality showed mixed results. The investigations by Rudyanto and Siregar (2018) and Vitolla*et al.* (2019) on the relationship between stakeholder power and environmental information disclosure in the annual reports of Chinese and Pakistani listed firms showed considerable positive outcomes.

More so, a significant negative relationship was found in the studies carried out by Garcia-Sanchez and Noguara-Gamez (2017), Ferrero-Ferrero *et al.*(2018) and Stubbs and Higgins (2018). An insignificant positive relationship was found in the studies by Bellucci*et al.* (2019), where the connection amongst stakeholder power and environmental information disclosure was examined in 100 Chinese listed firms using OLS longitudinal panel regression.Thus, the following hypothesis is suggested by these findings:

*H3*: Stakeholder power and the quality of environmental reporting by listed firms in Nigeria are not significantly correlated.

## III. MATERIALS AND METHODS

The annual reports and corporate websites of listed firms in Nigeria were used as a secondary source of data for this study. This is due to the fact that annual reports and the company website are the most dependable, consistent, audited and frequent means of communicating with stakeholders (Uwuigbe*et al.*, 2017). 180 enterprises listed on the Nigerian Exchange Group as of December 31, 2021, and divided into seven sectors make up the population of this study.

The number of selected quoted firms in Nigeria considered as the sample size for this study was 108. This was determined using a Yamane's formula made popular by Adam (2020), as well as by excluding companies that had no complete records of the data necessary for determining sample size. The decision to employ the quoted companies' results arose from their detrimental effects on the environment in terms of pollution and the depletion of natural resources (Uyagu*et al.*, 2017). Also, Nigerian quoted firms are the focus due to the availability of information, and mandatory reporting requirements (Solanke*et al.*, 2021).Secondary data were used through the annual reports and corporate websites of listed companies in Nigeria (Erin *et al.*, 2021) for the period of 2017–2021.

The disclosure index (CDI) was utilized to measure the quality of environmental reporting in order to meet the study's goal. The sustainability disclosure standards published by the Global Reporting Initiative (Appendix 1) served as the foundation for the disclosure index that was utilized for the various companies. Hence, the ratio of an organization's actual reporting score to the maximum likely disclosure is utilized to calculate the disclosure index (Mohamed &Faouzi, 2014). An unweighted disclosure index approach was utilized to calculate the disclosure level. This strategy works best when all index items are given equal weight and are thought to be equally essential to the average user (Abasi*et al.*, 2022).This strategy eliminates all subjectivity and prejudice (Nurhayati*et al.*, 2015, Olubukola*et al.*, 2016). Also, a dichotomous approach was used to arithmetically index the environmental information.

As a result, a corporation receives a score of (1) for a reportable item from the annual report and a score of (0) for nondisclosure. The percentage of a company's overall disclosure against the maximum number of items that can be revealed by the firm is used to calculate the aggregate voluntary disclosure index. The disclosure index can, therefore, be expressed as a percentage.Disclosure index, according to Mohamed and Faouzi (2014) could be mathematically shown as follows:

$$\mathrm{ERQ} = \frac{Number\ of\ items\ disclosed}{\text{Total reported items}}$$

Moreover, panel least squares regression was used in a multivariate regression study to determine the association between firm external engagement characteristics and environmental reporting quality (Aviral& Mihai, 2015; Guenster&Koegst, 2015).

*A. Model information*

The following is an econometric model developed from the research of Lu and Abeysekera (2014) in order to fulfill the goal of establishing the relationship between dependent and independent variables:

$$ERQ = f([MED, ASS, SOWN]) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$$

The model can be explicitly illustrated in its functional form as:

$$ERQ = \beta_{0it} + \beta_1 MED_{it} + \beta_2 \mathrm{ASS}_{it} + \beta_3 SOWN_{it} + \mu_{it} \ldots\ldots\ldots\ldots.... Eq.(2)$$

Where:

*ERQ* = *Environmental Reporting Quality;*

*$\beta_0$* = *Regression line's intercept;*

*$\beta_{1\text{-}3}$* = *the regression line's coefficient, or its slope;*

*MED* = *Media Exposure (evaluated as the sum of environmental news issues published for aindividualcompany in aspecified year);*

*ASS* = *Environmental Assurance Report (evaluated as a dummy variable of '1' on the premise that the firmhas an assurance report for environmental report or otherwise zero); SOWN = Stakeholder Power (evaluated as a percentage of stocksheld by the major shareholders at the end of the year),μ= Error word for unaccounted additional factors that might have an impact on the model. 't' stands for the year or period, while "i" stands for the company.*

## IV. RESULTS AND DISCUSSION

According to the descriptive statistics for the sample companies provided in Table 1, the mean scores of the data demonstrated a high level of consistency as they fell between the minimum and maximum series. The standard deviation displays different degrees of dispersion.The range of skewness and kurtosis values for the overall environmental reporting quality and all reporting classes is between plus/minus 1.96 and 3, demonstrating the normal distribution of the data (Uttley, 2019). Similarly, the skewness and kurtosis statistics of firm external engagement attributes show normality with different results. Thus. The need for a robust analysis using panel data regression to test the hypotheses related to the entire data.

Table 1: Results of the variables' descriptive statistics

| | ERQ | MED | ASS | SOWN |
|---|---|---|---|---|
| Mean | 6.138889 | 1.122222 | 0.001435 | 59.00504 |
| Median | 5.000000 | 0.000000 | 0.000000 | 60.00000 |
| Maximum | 19.00000 | 13.00000 | 0.100000 | 100.0000 |
| Minimum | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Std. Dev. | 4.103165 | 1.972884 | 0.011311 | 25.59015 |
| Skewness | 1.105980 | 1.876749 | 1.599057 | -0.192670 |
| Kurtosis | 2.877846 | 2.28174 | 2.01564 | 2.463607 |
| | | | | |
| Jarque-Bera | 127.4261 | 3123.379 | 123345.6 | 9.814603 |
| Probability | 0.000000 | 0.000000 | 0.000000 | 0.007392 |
| | | | | |
| Sum | 3315.000 | 606.0000 | 0.775000 | 31862.72 |
| Sum Sq. Dev. | 9074.583 | 2097.933 | 0.068963 | 352967.4 |
| | | | | |
| Observations | 540 | 540 | 540 | 540 |

Source: Authors' calculation from E-view 9.5 (2017-2021)

Also, Table 2displays the outcomes of correlation matrix between the variables. The 95% confidence level shows that there is a significant association. This result demonstrates that there is a strong correlation between the qualities of the firm's external engagement and the environmental reporting quality. The Pearson correlation matrix indicates that correlation coefficients are less than 0.8, which is consistent with the threshold correlation fraction typically recommended by earlier studies. If the correlation coefficients are greater than 0.80, multicollinearity issues may be present (Shrestha, 2020). As a result, this result shows that the variables are not multicollinear.

Table 2: Matrix of correlation between the variables

| | ERQ | MED | ASS | SOWN |
|---|---|---|---|---|
| ERQ | 1.000000 | | | |
| MED | 0.361390 | 1.000000 | | |
| ASS | 0.103508 | 0.109681 | 1.000000 | |
| SOWN | 0.100573 | 0.023258 | 0.149012 | 1.000000 |

Source: Authors' calculation from E-view 9.5 (2017-2021)

### A. *Multicollinearity test*

To determine whether there is a perfect linear connection between the explanatory variables, a multicollinearity test is conducted. The computation of the variance inflation factor (VIF) and tolerance coefficient (1/VIF), as shown in Table 3, further confirms the existence of multicollinearity.

Table 3: Firm external engagement variance inflation factor (VIF)

| *Var.* | *VIF* | *Tolerance 1/VIF* |
|---|---|---|
| *Media Exposure* | 1.01 | 0.99 |
| *Environmental Assurance Statement* | 1.03 | 0.97 |
| *Stakeholder Power* | 1.02 | 0.98 |
| *Mean VIF* | 1.02 | |

Source: Authors' calculation from E-view 9.5 (2017-2021)

As the VIF is less than 10 and the tolerance coefficient is more than 0, the test for multicollinearity does not present a problem (Daoud, 2017). The result of the VIF and tolerance coefficients, therefore, suggests that the level of multicollinearity between the constructs is accepted, confirming that there is no problem with the correlation between the explanatory variables.

Table 4: Result of a panel least squares regression between firm external engagement and environmental reporting quality of quoted companies in Nigeria

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| MED | 0.735635 | 0.083731 | 8.785681 | 0.0000 |
| ASS | 18.90236 | 14.76501 | 1.280213 | 0.2010 |
| SOWN | 0.013562 | 0.006489 | 2.090058 | 0.0371 |
| C | 4.485993 | 0.423617 | 10.58973 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.741727 | Mean dependent var | 6.138889 |
| Adjusted R-squared | 0.636923 | S.D. dependent var | 4.103165 |
| S.E. of regression | 3.811919 | Akaike info criterion | 5.521523 |
| Sum squared resid | 7788.471 | Schwarz criterion | 5.553312 |
| Log likelihood | -1486.811 | Hannan-Quinn criter. | 5.533955 |
| F-statistic | 29.50327 | Durbin-Watson stat | 2.104350 |
| Prob(F-statistic) | 0.000000 | | |

Source: Authors' calculation from E-view 9.5 (2017-2021)

The results of the regression model used to test the three hypotheses are shown in Table (4). The regression analysis findings for hypothesis one (H1) reveals a strong positive correlation between media exposure and the quality of environmental reporting. The findings show that the estimated T-statistic value (8.786) and P-value (0.000) illustrates this clearly at a 5% level of significance. As a result, the alternate hypothesis is accepted and the null hypothesis (H1) is rejected. This suggests that businesses responded to increased public pressure by providing stakeholders with higher-quality environmental information.This finding is in line with research from Chenge and Liu (2018), Fan *et al.* (2020), and Anis and Marwa (2022), which found a significant positive relationship between media exposure and the quality of environmental reporting in Canadian, Chinese, and Indonesian listed companies for the years 2005, 2008–2009, and 2012–2013, respectively. However, there was no correlation between the investigations conducted in the UK by Wenbing*et al.* (2019) and Lillis *et al.* (2020).

The extent of environmental reporting quality, however, has a negligible positive link, according to the environmental assurance statement. According to the results, the estimated T-value statistics (1.280) and P-value (0.201) are not statistically significant at the 5% level. As a result, the alternate hypothesis is rejected and the null hypothesis (H2) is accepted. This suggests that the quality of environmental reporting and environmental assurance statements have a negligible but favourable link. This also suggests that the absence of an assurance statement increases the standard of environmental reporting. The findings of Giordano *et al.* (2018) and Al-shear *et al.* (2022) investigations, which indicated a negligible correlation between environmental assurance statement and quality of disclosure, are consistent with this outcome.The investigations, however, are at odds with those by Moalla*et al.* (2020) and Elaigwu*et al.* (2022), which discovered a strong positive connection. In a similar vein, research by Braam*et al.* (2016) and Boiral and Heras-Saizarbitoria (2020) on the relationship between environmental assurance statement and quality of disclosure in annual reports demonstrated that external assurance increases users' confidence and credibility in the report while securing the trust of their stakeholders.

However, there is a strong positive correlation between stakeholder power and the level of environmental disclosure quality. The results demonstrate that, at a 5% level of significance, the calculated t-statistic value (2.090) and P-value (0.037) shows this. As a result, in terms of stakeholder power, the null hypothesis (H3) is disproved and the alternate hypothesis is accepted.This suggests that the largest shareholder businesses push management to communicate environmental information to satisfy the interests of many stakeholders. The findings are consistent with research by Rudyanto and Siregar (2018) and Vitolla*et al.* (2019) on the relationship between stakeholder power and environmental information reporting, where strong positive associations were discovered. When Bellucci*et al.* (2019) looked at the relationship between stakeholder power and environmental information disclosure in 100 Chinese listed enterprises, they discovered an insignificantly positive relationship. The investigations by Garcia-Sanchez and Noguara-Gamez (2017), Ferrero-Ferrero *et al.* (2018), and Stubbs and Higgins (2018) all discovered a negative correlation between stakeholder power and environmental disclosure quality.

## V. CONCLUSION

The main focus of this study is on the relationship between firm external engagement and environmental reporting quality in the annual reports and corporate websites of selected listed firms in Nigeria. Additionally, it examines how the media's coverage, environmental assurance statements, and stakeholder power affect the quality of environmental reporting. Testing environmental reporting quality and firm external engagement features in the study involves evaluating three hypotheses. The outcomes show a strong correlation between media coverage, stakeholder power, and the quality of environmental reporting. Environmental assurance statements appear to be insignificantly correlated but positive with the quality of environmental reporting.

According to the study, adherence to international best practices for environmental reporting and providing stakeholders with sufficient information, can boost business external engagement and close the reporting gap. As a result, the study recommends that, in order to increase consumer confidence, quoted firms in Nigeria should be encouraged to incorporate the principle of independent assurance of environmental information into their annual reports.

Nonetheless, given the limitations of this study, it is important to evaluate the conclusions with care because they offer a chance for further investigation in this field of study. The analysis is, therefore, restricted to data from the Nigeria Exchange Group market throughout a five-year observation period. The report also excluded unquoted companies from the analysis, which left them out of the Nigerian economy. Moreover, only three variables related to business external participation are included in this study. Other variables not covered by the study, such as cultural significance and environmental regulations, may be examined in subsequent accounting studies. In addition, future research could last up to ten years, depending on the available data.

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## APPENDIX 1

**Thirty environmental check list tools**

| | | |
|---|---|---|
| **Materials**<br>1. Materials used in terms of volume or weight.<br>2. The percentage of raw materials that were used that were recycled. | **Energy**<br>3. Using direct energy as the primary source of energy.<br>4. The main factor is indirect energy use.<br><br>5. Energy saved through efficiency improvements and conservation.<br>6. Efforts to offer goods and services made from renewable or energy-efficient sources, as well as decreases in energy use as a result of these efforts.<br>7. Efforts to cut back on indirect energy use and their results. | **Water**<br>8. The overall amount of water used.<br>9. Water withdrawals have a considerable impact on water sources.<br>10. The proportion and overall amount of water that has been recycled and utilised. |
| **Biodiversity**<br>11. The location and extent of land owned, leased, or managed within or next to protected areas, as well as regions outside of protected areas with significant biodiversity.<br>12. A discussion of substantial effects on biodiversity both inside and outside of high-value protected areas.<br>13. Habitat protection or restoration.<br>14. Future plans, ongoing projects, and mitigation techniques for impacts on biodiversity.<br>15. The number of species, ranked by the threat of extinction, that have habitats in regions where activities have an impact and are included on the IUCN Red List and national conservation lists. | **Waste, Emissions, and Effluents**<br>16. Total weighted emissions of greenhouse gases, both direct and indirect.<br>17. Additional relevant weighted indirect greenhouse gas emissions.<br>18. Efforts to cut carbon dioxide emissions and their results.<br>19. The weighted average of ozone-depleting chemical emissions.<br>20. The types and amounts of important air emissions, including SOx and NOx, among others.<br>21. Total water outflow, broken down by region and quality.<br>22. The total weight of trash, divided down by type and disposal method.<br>23. Totals for big spills in terms of volume and number.<br>24. The volume of waste moved that is classified as hazardous under Basel Convention Annex I, II, III, and VIII, as well as the proportion of such waste that has been transported globally.<br>25. Specifying the size, protected status, and biodiversity value of the water bodies and associated ecosystems that are adversely affected by runoff and water discharges from the reporting organization. | **Services and Goods**<br>26. Efforts to lessen the environmental damage that goods and services produce as well as the degree of impact reduction.<br>27. A breakdown of the recycling rates for sales goods and packaging materials by category. |
| **Compliance**<br>28. The overall amount of substantial fines and the total number of non-financial penalties for environmental law and regulation infractions. | **Transport**<br>29. The environment is significantly impacted by the transportation of people as well as other items and resources needed for business operations. | **Environmental Expenditure**<br>30. The total amount invested and spent on environmental protection. |

**GRI (2017)**