

## The Stability of Listed Manufacturing Firms: How Relevant is the Practice of Green Accounting?

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### Abstract

The ability of management to meet the interests of stakeholders is measured by a company's stability. Unfortunately, there has been an increase in corporate failures, which has been ascribed to management's failure to disclose green practices. Current reporting standards, on the other hand, have placed a lower priority on the disclosure of green activities within their environment, which has had an impact on the overall health of businesses. There have been a few studies on the impact of green accounting on performance, but none on company stability. As a result, the impact of green accounting methods on the stability of listed manufacturing enterprises in Nigeria was investigated in this study. Ex-post facto research design was adopted and data was gotten from the published financial statements of listed firms. population was the 56 listed manufacturing firms and 37 was purposively chosen based on the fact that they had published green reports consistently for eleven years (2010-2020). Data were analyzed using the multiple regression at 0.05 level of significance. Findings revealed that there is a significant effect of green accounting practices on EPR ( $Adj.R^2 = 0.029$ ,  $F(5, 401) = 191.410$ ,  $p < 0.05$ ) and firm size significantly moderated the effect of GAP on EPR ( $Adj.R^2 = 0.350$ ,  $F(6, 400) = 470.410$ ,  $p < 0.05$ ). Based on the findings, the study concluded that GAP has a significant effect on the stability of firms and the study recommended that firms should adopt global practices on green accounting disclosure and that standard setting bodies should ensure strict compliance with the guidelines so as to ensure a stable business.

**Keywords:** *Employee productivity ratio; firm size; green accounting practices; green restoration; stability*

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### 1. Introduction

As a result of the failure of numerous organizations in recent years, firm stability has become a challenge in the corporate sector. According to Sue-Lynn (2021), efficient resource usage indicates that businesses will create more sales and earn more money, resulting in stable health and equally, Osamor and Adebajo opined that a strong and stable organization is one with a high-competitive advantage. Employee productivity demonstrates that a company is stable and that its management has maximized the company's resources to their greatest potential as evidenced by their revenue to the number of employees. Furthermore, (Adeleye) 2022, on the other hand, believes that various elements, such as the environment in which the organization functions, have jeopardized firm stability, making it nearly impossible for management to make decisions and achieve their set objectives. The environment in which a corporation operates is critical to its long-term stability (Uwaloma et al., 2018), and as a result, numerous efforts have been made to ensure firm stability, such as the disclosure of green accounting practices. Several measures to aid the practice of accounting have equally been put in place as part of the effort geared toward ensuring healthy businesses, such as the introduction of sustainability reports and, more recently, an updated version of the Global Reporting Initiative (GRI, 2021), which is widely used and is the most acceptable measure of sustainability. The purpose of the GRI is to strengthen organizations' commitment to ensuring that disclosures are consistent and that economic, social and environmental concerns are captured in the reports despite constraints (Willis, Campagnoni & Gee, 2015). The first G1 standards were produced in 2000, followed by G2 in 2002, G3 in 2006, G3.1 in 2011, and G4 in 2016 and, more recently, 2021. G4 contains two sets of standards: general standards and topic-specific standards, both of which include the management approach to reporting, environmental, social, and economic components. Green accounting practices are classified as accounting on safety-related practices (SRP), waste management practices (WMP), environmental protection practices (EPP), pollution prevention practices (PPP), and green restoration practices (GRP) as summarized by the Global Reporting Initiative (GRI4). GRI defines disclosure on safety practices as "disclosure on water hygiene efforts and health and safety"; disclosure on waste management as "disclosure on waste and effluents

reduction, avoidance, and reparation"; disclosure on environmental protection as "disclosure on environmental impact, product and services, biodiversity"; and disclosure on pollution prevention practices as "disclosure on emissions and initiatives on the prevention of carbon pollution and disclosure on green restoration practices as "disclosure on compliance with environmental restoration, remediation and preservation policies.

### *1.1 Statement of the Problem*

Corporate collapse despite recent audits, widespread corruption affecting virtually every citizen in Nigeria, ongoing fraudulent activities, negative creative accounting and many other issues have plagued businesses in recent years limiting their ability to positively impact their immediate environment (Owolabi & Adeleye, 2020). A company's health is determined by its ability to utilize scarce resources while also creating value as well as its ability to remain stable and sustainable through time while maximizing the shareholder's wealth. Burhan and Rahmanti (2012) opined that value is created when a firm is able to make enough profit while also meeting the needs of all stakeholders. Previous studies have been conducted on green accounting practices and their impact on a variety of performance proxies have been undertaken on a global scale in the past. However, the studies revealed a lack of consistent evidence. There have also been reports of negative, positive, and neutral relationships, so there are no obvious incentives for businesses to value environmental reporting. While studies like Ezeagba, John-Akamelu, and Umeoduagu (2017), Yahya (2018), Sanusi and Sanusi (2019), Menike (2020), Olowokere, Adeniran, and Onifade (2021), and Al-Naser, Riyadh, and Albalaki (2021) reported a positive and significant effect, Nor, Bahari, Adnan, Kamal and Ali (2016), Nobanee and Ellili (2018) and Akor and Okey (2021) showed no significant effect while Omodero and Ihendinihu, (2016) reported a negative impact. These mixed findings are a reflection of the fact that there is no uniform conclusion on the subject matter, which serves as a basis for this study to be undertaken. Therefore, the study intends to examine the effect of green accounting practice on employee productivity ratio of listed manufacturing firms in Nigeria.

### *1.2 Objectives of the Study*

1. Examine the effect of Green Accounting Practice on the Employee Productivity ratio of companies listed on the Nigerian Stock Exchange;
2. Investigate the moderating effect of Firm Size on the effect of Green Accounting Practice on Employee Productivity ratio.

### *1.3 Research Questions*

1. How does Green Accounting Practice affect the Employee Productivity of companies listed on the Nigerian Stock Exchange?
2. How does Firm Size moderate the effect of Green Accounting Practice on Employee Productivity of Firms listed on the Nigerian Stock Exchange?

### *1.4 Hypotheses of the Study*

- H<sub>01</sub> Green Accounting Practices has no significant effect on Employee Productivity Ratio of companies listed on the Nigerian Stock Exchange.
- H<sub>02</sub> Firm Size does not significantly moderate the effect of Green Accounting Practice on Employee Productivity Ratio of companies listed on the Nigerian Stock Exchange.

## **2. Literature Review**

### *2.1 Conceptual review*

#### *2.1.1 Employee Productivity Ratio as a measure of Stability*

Employee turnover is a problem that affects many countries around the world, not only Nigeria. Employee turnover has become a major worry for enterprises, especially in recent years, as a result of the fierce worldwide competition, harming the stability and overall health of firms (Al-Suraihi, Samikon, Al-Suraihi & Ibrahim, 2021). Employee issues

have long been a major concern for organizational management, as employees are regarded as one of the most crucial components of a stable business. In their study, Mohammad and Jahangir (2014) concluded that various factors can influence employee turnover, one of which is the firm's environment and this is in line with the conclusions of Ilmi, Habibah, Qi, Gheda and Liza (2019). Employee productivity, according to Elliot (2009), is essentially related to the performance of employees in a company in order to ensure corporate stability. Herti, et al (2011) define productivity as "the level of an individual's work achievement after exerting effort." They believe that productivity is a personal trait. Certain environmental elements, on the other hand, will have a substantial impact on staff productivity and, as a result, business stability. These include, but are not limited to, pollution control and waste management, with good and negative consequences.

### *2.1.2 Green Accounting Practices*

Green accounting, also known as environmental accounting, is a set of procedures aimed at achieving long-term development, preserving a positive relationship with the community, and pursuing effective and efficient environmental conservation efforts. During the last decade, interest in green practices has grown, and more and more environmental activities are now being discussed under this domain, and people all over the world are becoming more aware of green accounting methods. Green accounting has been examined from a variety of perspectives, including disclosure procedures (Adegbie, Ogidan, Siyanbola & Adebayo, 2020), costs incurred (Owolabi & Solarin, 2020), and the environmental accounting checklist. According to GRI (2013), there are four important environmental dimensions: energy, water, emissions, and materials, all of which should be considered in order to ensure that the amount of waste produced does not exceed the environment's current and future capacity. As a result, for the purposes of this study, green accounting will be measured through the disclosure of safety-related procedures, waste management methods, environmental protection practices, pollution prevention practices, and green restoration practices.

### *2.2 Theoretical Framework*

Richard E. Freeman is widely credited with developing the stakeholder paradigm in 1984. The inadequacies of the shareholders' theory, which primarily focused the maximization of shareholders' wealth, led to the development of this theory. According to Freeman (1984), a stakeholder in a company is an individual, a corporation, the community, and possibly the government who is influenced by the company's existence and can influence the company's business health. Companies' green accounting initiatives are undertaken to assist stakeholders such as customers, employees, the community, local schools, and so on, based on this criterion. By fulfilling these agreements, the company improves its reputation among stakeholders, which will lead to increased patronage and increased stability. Stakeholders' theory, according to Jeffrey, Edward, and Mônica (2015), is superior than shareholders' theory in that it explicitly asserts that without stakeholders, firms would cease to exist because enterprises are founded to suit the demands of stakeholders. Stakeholder theory divides stakeholders into two categories: primary and secondary stakeholders. The major stakeholders are those who would help the company survive if it didn't exist. Consumers, suppliers, employees, shareholders, and local communities are among them. Furthermore, secondary stakeholders are those who influence or are influenced by the firm but are not involved in transactions with it and are not necessary for its survival. It's possible that they're both competitors and the government. One of the fundamental claims of this theory is that a company's stability is inextricably linked to its managers' ability to satisfy its primary stakeholders (Ogiriki & Adigwe, 2019). Stakeholder theory is important in a variety of study areas, including green accounting. It has, however, been subjected to considerable criticism. To begin with, the author's stakeholder description is quite broad, making actual application challenging and not appropriate to all businesses (Berman & Johnson-Cramer, 2016). Furthermore, the stakeholders' thesis overlooked the fact that not all stakeholders share the same goals. For example, the goals of internal stakeholders differ from those of external stakeholders. That is, the company's owners would be primarily concerned with profit, whereas the community would be more concerned with benefits such as scholarships, excellent roads, and so on. As a result, their goals are at odds with one another. This theory is relevant to the research since it states that achieving stakeholders' objectives has a favorable impact on organizational stability. The hypothesis asserts a link between a company's green accounting operations and its stability, claiming that if a corporation strives to report on its green activities, it would eventually achieve stability. The beneficiaries of the company's green accounting

practices are also outlined in the stakeholder theory, which explains that stakeholders are not limited to the company's shareholders/owners, but also include those who influence or are influenced by the company's ability to remain stable.

### *2.3 Empirical Literature Review*

#### *2.3.1 Green Accounting Practices and Business Stability*

In their study on employee turnover: causes, importance, and retention strategies, Al-suraihi, Samikon, Al-suraihi, and Ibrahim (2021) discovered that the productivity of employees and their reasons for leaving or wanting to leave could be as a result of the work environment, job stress, motivation, wages and rewards, and so on. Furthermore, low staff productivity can have a detrimental impact on long-term sustainability, thus businesses must seek for ways to boost worker productivity and implement strategies to do so. Green strategies could improve job happiness, engage employees, and boost productivity. Adeyemi and Asaolu (2014) conducted a study on bank stability as assessed by ROA and liquidity among Nigerian banks, which provided relevant data through content analysis of the banks' post-consolidated statements. The sample size was 13 out of the 21 listed banks in Nigeria, and the study was conducted over a five-year period between 2005 and 2009. The findings of the regression reveal that disclosure has a favorable and significant impact on bank stability. The study suggests that obligatory disclosure rules are ineffective and should be reinforced, as well as a monitoring process and swift enforcement of sanctions on violators. By this, it will be easier to discover an unstable bank and give better meaning to reporting prescription. Dechezlepretre and Sato (2017) looked at how environmental regulations affect corporate competitiveness. Employment, productivity, innovation, trade, and industry location were all used to assess a company's competitiveness. The investigation was exploratory in character and took place in Europe. Environmental rules can have a statistically significant detrimental impact on commerce, employment, productivity, and plant placement, according to the study's findings. However, further research reveals that these effects are minor in comparison to overall production patterns. Asset turnover is one of the indicators of stability, and Onuora and Egbunike (2016) investigated how environmental information disclosure influences it. On 22 consumer products businesses, the study used a descriptive research design. Environmental disclosure has a significant impact on total asset turnover, according to the findings, and it is recommended that there be a well-defined environmental disclosure theme, more government efforts to encourage environmentally friendly activities, and a standard-setting body to improve both financial and non-financial environmental disclosure of Nigerian companies.

#### *2.3.2 Green Accounting Practices, Firm size and Employee Productivity Ratio*

Employee productivity is critical for every company since it demonstrates their capacity to maintain consistency throughout time. On this basis, it's crucial to look at how the size of a company influences the impact of green accounting methods on employee productivity in publicly traded companies. In the past, studies such as Herda, Taylor, and Winterbottam (2012)'s exploratory research on the largest firms in the United States revealed that the larger the firm, the larger the board of independent members, the greater the likelihood of a sustainable report and the higher the likelihood of a higher quality report. In addition, Nawaiseh (2015) examined the impact of firm size on financial performance from the perspective of employees among Jordanian industrial public share-holding enterprises in his article. The entire assets of a firm were used to determine its size, and the research tried to see if this had an effect on financial performance. The findings showed that the size of the organization had a favorable and significant impact on the employee dimension of corporate social responsibility disclosure. Based on these findings, the purpose of this study is to contribute to the empirical literature on the moderating effect of firm size on the effect of green accounting practices on business health as measured by staff productivity ratio, which is a sign of a stable business.

## 2.4 Conceptual Framework

INDEPENDENT VARIABLE

DEPENDENT VARIABLE

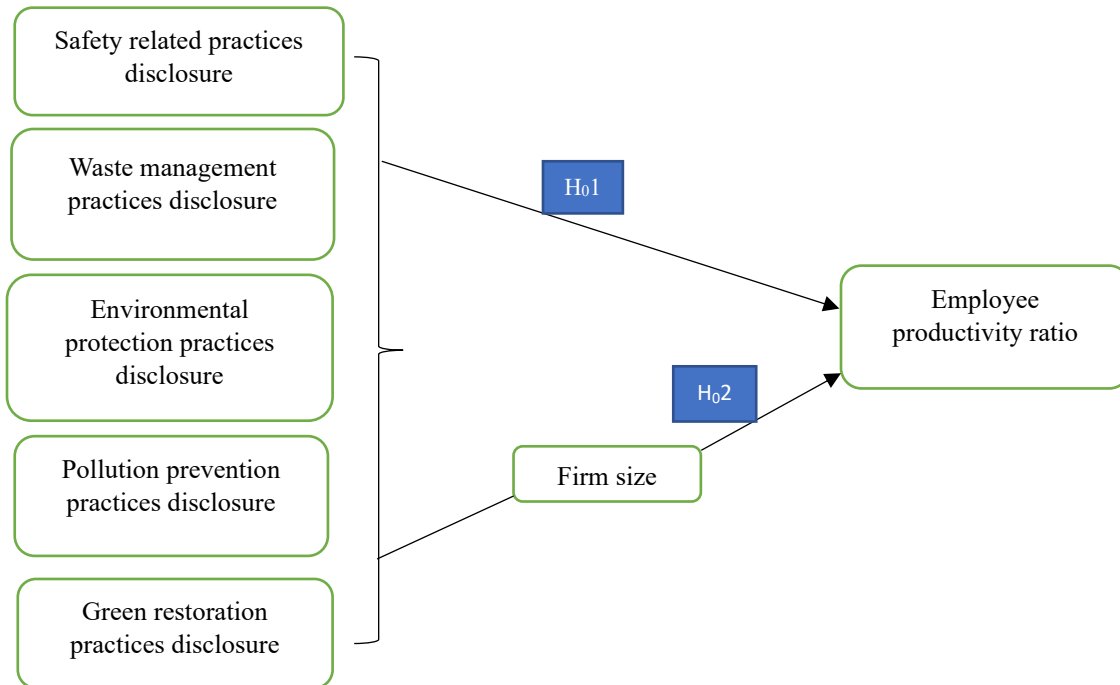
**GREEN ACCOUNTING PRACTICES****BUSINESS STABILITY**

Fig 1: Researcher's Conceptual Model

## 3.0 Methodology

Research design to be used for the study is ex-post facto. The population consists of all the 56 manufacturing firms listed on the Nigerian Stock Exchange as at 31 December 2020. A sample size of 37 will be purposively chosen from the population based on firms that have consistently published green reports in their financial statements for eleven consecutive years. Data will be extracted from the annual audited reports for the period of eleven years (11) between 2010-2020 to make a total of 407 observations. Furthermore, data will be analyzed using descriptive and inferential statistics (multiple regression) and the level of significance will be 0.05.

## 4.0 Findings and Discussion

### 4.1 Descriptive statistics

Table 1. Descriptive statistics of the variables

| Variable | Mean  | Std. Dev. | Min. | Max.   |
|----------|-------|-----------|------|--------|
| EPR      | 40.91 | 40.16     | 0    | 425.01 |
| SRPD     | 0.57  | 0.22      | 0    | 1      |
| WMPD     | 0.18  | 0.38      | 0    | 1      |
| EPPD     | 0.05  | 0.16      | 0    | 1      |
| PPPD     | 0.09  | 0.28      | 0    | 1      |
| GRPD     | 0.05  | 0.22      | 0    | 1      |
| FS       | 7.18  | 0.91      | 5.23 | 9.31   |

**Source: Researcher's Computation (2022)**

**Source: Data Analysis, 2022.** Where **EPR** is Employee Productivity Ratio, **SRPD** is Safety Related Practices Disclosure, **WMPD** is Waste Management Practices Disclosure, **EPPD** is Environmental Protection Practices Disclosure, **PPPD** is Pollution Prevention Practices Disclosure, **GRPD** is Green Restoration Practices Disclosure.

#### 4.1.1 Interpretation

The minimum and maximum values of EPR score of sampled manufacturing firms were within 0 and 425.01, with a mean of 40.91 and a standard deviation of 40.16 according to the descriptive table above. The standard deviation of 40.16 which is not far from the mean indicates that the staff productivity ratio among manufacturing firms listed on the Nigerian Stock Exchange is highly dispersed. This could be due to a rise in EPR over the course of the research. Furthermore, the mean score reveals that during the course of the study, the average EPR score was 40.91 indicating the average value of the EPR level. The fluctuations were 40.16 which was slightly below the mean value of 40.91. On the other hand, the mean value of SRPD is 0.57, with lowest and maximum values of 0 and 1, respectively, and a standard deviation of 0.22. The standard deviation score indicates a low variation from the series mean on average. The mean score of 0.57, on the other hand, shows a modest level of disclosure of safety-related behaviors as examined in this study. The typical manufacturing firm reported 57 percent of the relevant safety disclosure elements in their financial statements, according to the mean score. In addition, the range of 0 to 1 indicates the level of disclosure, which ranges from no disclosure (0) to a high level of disclosure (1). The mean of WMPD was 0.18, with 0 and 1 as the minimum and highest values, respectively. The standard deviation (0.38) indicates that the series mean is widely dispersed. The mean value for EPPD is 0.05, with 0 and 1 as the minimum and maximum values, respectively. The standard deviation (0.16) indicates that the series mean is widely dispersed. PPPD has a mean value of 0.09 and a minimum and maximum value of 0 and 1, respectively. It has a considerable dispersion from the series mean, with a standard deviation of 0.28. Finally, the GRPD mean value is 0.05, with 0 and 1 being the minimum and maximum values.

#### 4.2 Test of Hypotheses

##### Objective One

To examine the effect of Green Accounting Practice on the Employee Productivity ratio of companies listed on the Nigerian Stock Exchange

##### Research Question one

How does Green Accounting Practice affect the Employee Productivity of companies listed on the Nigerian Stock Exchange?

### Hypothesis one

H<sub>01</sub> Green Accounting Practices has no significant effect on Employee Productivity Ratio of companies listed on the Nigerian Stock Exchange.

Table 2. Test of hypotheses one

| Dependent Variable: (EPR) |                                                    | Model one<br>Fixed effects GLS regression with Driscoll Kray Standard errors |        |       |
|---------------------------|----------------------------------------------------|------------------------------------------------------------------------------|--------|-------|
| Variable                  | Coeff.                                             | Std. Err                                                                     | T-Stat | Prob  |
| Constant                  | 33.14                                              | 5.70                                                                         | 5.93   | 0.000 |
| SRPD                      | 10.14                                              | 7.86                                                                         | 1.29   | 0.226 |
| WMPD                      | 11.31                                              | 3.22                                                                         | 3.51   | 0.006 |
| EPPD                      | -5.46                                              | 9.46                                                                         | -0.58  | 0.577 |
| PPPD                      | -17.91                                             | 5.33                                                                         | -3.36  | 0.007 |
| GRPD                      | 21.57                                              | 5.70                                                                         | 5.93   | 0.000 |
| R <sup>2</sup> Overall    | 0.0286                                             |                                                                              |        |       |
| F-Stat/Wald Stat (Prob)   | F <sub>(5, 10)</sub> = 191.41 (0.00)               |                                                                              |        |       |
| Hausman Test              | chi <sup>2</sup> <sub>(5)</sub> = 20.05 (0.00)     |                                                                              |        |       |
| Testparm Test/LM Test     | F <sub>(10, 353)</sub> = 6.28 (0.00)               |                                                                              |        |       |
| Heteroskedasticity Test   | chi <sup>2</sup> <sub>(37)</sub> = 24800.88 (0.00) |                                                                              |        |       |
| Serial Correlation Test   | F <sub>(1, 36)</sub> = 0.748 (0.39)                |                                                                              |        |       |
| Cross-Sect. Dep. Test     | 8.923 (0.00)                                       |                                                                              |        |       |

Source: Researcher's Computation (2022)

Model One

$$EPR_{it} = \beta_0 + \beta_1 SRPD_{it} + \beta_2 WMPD_{it} + \beta_3 EPPD_{it} + \beta_4 PPPD_{it} + \beta_5 GRPD_{it} + \epsilon_{it} \dots \text{Model 1}$$

$$EPR_{it} = 33.14 + 10.14SRPD_{it} + 11.31 WMPD_{it} - 5.46EPPD_{it} - 17.91 PPPD_{it} + 21.57GRPD_{it} + \epsilon_{it} \dots \text{Model 1}$$

### Interpretation

The regression equations One was estimated using the probability of T-test and the sign and values of the coefficients of each of the measures of green accounting indicating the significance of the effect, the direction and the magnitude of the effect. The equation one of the study examined the effect of green accounting, measured as Safety Related Practices Disclosure (SRPD), Waste Management Practices Disclosure (WMPD), Environmental Protection Practices Disclosure (EPPD), Pollution Prevention Practices Disclosure (PPPD), and Green Restoration Practices Disclosure (GRPD) on employee productivity (EPR). The probability of the t-test revealed that the explanatory variables behave in same manner. SRPD having probability of 0.226; likewise, EPPD with probability of 0.577 exerted insignificant effect on employee productivity. Contrarily, WMPD having probability of 0.006; PPPD with probability of 0.007 and GRPD with probability of 0.000 significantly affect employee productivity. According to the coefficients of the explanatory variables, SRPD has a positive effect on EPR before the inclusion of business size (10.14), which suggests that the more SRPD disclosed, the better the ERP. With a coefficient of 11.31, an increase in the volume of WMPD reported would result in an increase in ERP of 11.31 for thousands of people. Similarly, a coefficient of 21.57 indicates that GRPD has a positive effect on ERP, implying that an increase in the amount of GRPD disclosed would result in a 21.57 rise in ERP. EPPD and PPPD, on the other hand, had a negative impact on ERP, with PPPD coefficients of -17.91 implying that an increase in PPPD disclosure would result in thousands of decreases in ERP by 17.91, and EPPD coefficients of -5.46 implying that an increase in EPPD disclosure would result in thousands of decreases in ERP by 5.46.

### Decision

With an F-Stat of 191.41 and five independent variables in Model One; a probability of F-Stat of 0.00, or 0%, which is less than the 5% significant level set, this study rejected the null hypothesis which says that "Green Accounting Practices has no significant effect on Employee Productivity Ratio of companies listed on the Nigerian Stock



Exchange” while the alternate hypothesis which states that “Green Accounting Practices has significant effect on Employee Productivity Ratio of companies listed on the Nigerian Stock Exchange” was accepted.

## Objective Two

To access the moderating effect of Firm Size on the effect of Green Accounting Practice on Employee Productivity ratio.

## Research Question Two

How does Firm Size moderate the effect of Green Accounting Practice on Employee Productivity of Firms listed on the Nigerian Stock Exchange?

## Research Hypotheses Two

H<sub>02</sub> Firm Size does not significantly moderate the effect of Green Accounting Practice on Employee Productivity Ratio of companies listed on the Nigerian Stock Exchange.

Table 3. Test of hypotheses two

| Dependent variable: (EPR) |                                                 | Model two<br>Random effects GLS regression with Driscoll Kraay Standard errors |        |       |
|---------------------------|-------------------------------------------------|--------------------------------------------------------------------------------|--------|-------|
| Variable                  | Coeff.                                          | Std. Err                                                                       | T-Stat | Prob  |
| Constant                  | -157.87                                         | 26.40                                                                          | -5.98  | 0.000 |
| SRPD                      | 8.06                                            | 14.49                                                                          | 0.56   | 0.590 |
| WMPD                      | 10.09                                           | 3.25                                                                           | 3.11   | 0.011 |
| EPPD                      | -14.32                                          | 15.42                                                                          | -0.93  | 0.375 |
| PPPD                      | -18.93                                          | 7.64                                                                           | -2.48  | 0.033 |
| GRPD                      | 21.57                                           | 7.54                                                                           | 2.86   | 0.017 |
| FS                        | 26.98                                           | 3.99                                                                           | 6.76   | 0.000 |
| R <sup>2</sup> Overall    | 0.3499                                          |                                                                                |        |       |
| F-Stat/Wald Stat (Prob)   | chi <sup>2</sup> <sub>(6)</sub> = 470.41 (0.00) |                                                                                |        |       |
| Hausman Test              | chi <sup>2</sup> <sub>(6)</sub> = 7.05 (0.32)   |                                                                                |        |       |
| Testparm Test/LM Test     | chi <sup>2</sup> <sub>(1)</sub> = 204.5 (0.00)  |                                                                                |        |       |
| Heteroskedasticity Test   | chi <sup>2</sup> <sub>(1)</sub> = 21.28 (0.00)  |                                                                                |        |       |
| Serial Correlation Test   | F <sub>(1, 36)</sub> = 0.851 (0.36)             |                                                                                |        |       |
| Cross-Sect. Dep. Test     | 6.374 (0.00)                                    |                                                                                |        |       |

Source: Researcher's Computation (2022)

Model Two

$$EPR_{it} = \beta_0 + \beta_1 SRPD_{it} + \beta_2 WMPD_{it} + \beta_3 EPPD_{it} + \beta_4 PPPD_{it} + \beta_5 GRPD_{it} + \beta_6 FS_{it} + \epsilon_{it} \dots \text{Model 2}$$

$$EPR_{it} = -157.87 + 8.06 SRPD_{it} + 10.09 WMPD_{it} - 14.32 EPPD_{it} - 18.93 PPPD_{it} + 21.57 GRPD_{it} + 26.98 FS_{it} + \epsilon_{it} \dots \text{Model 2}$$

## Interpretation

The second regression equation was calculated using the T-test probability and the sign and values of the coefficients of each of the green accounting measures, which indicate the significance, direction, and amount of the effect. The study's equation two looked at the impact of green accounting on employee productivity (EPR), as measured by Safety Related Practices Disclosure (SRPD), Waste Management Practices Disclosure (WMPD), Environmental Protection Practices Disclosure (EPPD), Pollution Prevention Practices Disclosure (PPPD), and Green Restoration Practices Disclosure (GRPD), with firm size as a moderating variable. The explanatory variables behave in the same way as in model one, according to the probability of the t-test. EPPD with odds of 0.375 exerted minimal influence, as did SRPD with probabilities of 0.590. On the other hand, WMPD having probabilities of 0.011; PPPD with probabilities of 0.033; and GRPD with probabilities of 0.017 significantly affect employee productivity. Firm size introduced in Model two



has probability value of 0.00 which implies that firm size has significant effect of employee productivity. According to the coefficients of the explanatory variables, SRPD has a positive effect on EPR after accounting for firm size (8.06), which suggests that the more SRPD is revealed, the better the ERP becomes (8.06 in thousands). With coefficients of 10.09, an increase in the volume of WMPD reported would result in a 10.09 increase in ERP for thousands of people. Similarly, GRPD has a coefficient of 21.57, indicating that it has a positive effect on ERP and that an increase in the volume of GRPD reported will result in a 21.57 rise in ERP. EPPD and PPPD, on the other hand, had a negative impact on ERP, with PPPD having coefficients of -18.93, implying that a rise in PPPD disclosure would result in thousands of decrease by 18.93 while EPPD having coefficients of -14.32 indicate that an increase in the volume of EPPD disclosed would yield decrease in ERP by 14.32 in thousands. The coefficient of firm size being positive, 26.98 implies that larger firms are more productive than smaller ones as firm size increases, ERP would increase by 26.98 thousand. The coefficient of determination explains the sum of all explanatory variable measures on the dependent variable. Model one's R-Squared of 0.0286, which measures the size of the joint effect, indicates that joint variation in the explanatory variables would result in 2.86 percent changes in ERP, with the remaining 97.14 percent changes in ERP resulting from factors beyond the purview of model three. Furthermore, the F-statistics value of 191.41 with a probability value of 0.00 indicates that the combined effect of all five explanatory factors on ERP is substantial; this shows that green accounting methods have a considerable impact on the ERP of Nigerian listed manufacturing companies. The addition of FS increases the strength of the EPPD and PPPD effects and decreases the magnitude of the SRPD and WMPD effects, while the GRPD remains unchanged before and after the addition of firm size. ERP is also influenced by the size of the company. The main conclusion was that the influence of green accounting disclosures on stability is greatly moderated by firm size. This is reflected in the reported changes in total  $R^2$  before and after the moderating variable was included. The overall  $R^2$  was 0.0286 prior to the inclusion of FS in the model, but the after-effect resulted in an overall  $R^2$  of 0.3499, resulting in an increase of 0.3213, or an additional 32.13 percent increase in ERP variation due to the inclusion of FS into the model.

## Decision

Based on the value of the Wald-Stat of 470.41, and having five independent variables and firm size as control variable in the model two; with probability of Wald-Stat of 0.00, that is 0 percent, which is less than the 5 percent chosen significant level. Also, considering the changes in the overall R-squared due to the inclusion of firm size and firm age in the model as control variables, which has improved the predictive power of the model by 32.13%; this study rejected the null hypothesis which states that "Firm size does not significantly moderate the effect of Green Accounting Practices on Employee Productivity Ratio of companies listed on the Nigerian Stock Exchange" while the alternate hypothesis which states that "Firm size significantly moderate the effect of Green Accounting Practices on Employee Productivity Ratio of companies listed on the Nigerian Stock Exchange" was accepted.

## 4.3 Discussion of Findings

The objective of this study was to examine the effect of Green Accounting Practice on the Employee Productivity ratio of companies listed on the Nigerian Stock Exchange. The result of the empirical analysis revealed that green accounting practice as well as firm size explains the business health of manufacturing firms measured by employee productivity ratio (EPR). Specifically, the independent variables jointly explained employee productivity ratio. The results showed that all the explanatory variables significantly influenced EPR. The results of the study were in tandem with the results of Al-Suraihi, Al-Suraihi and Ibrahim (2021) which also reveal that Safety Related Practices Disclosures (SRPD), Waste Management Practices Disclosure (WMPD), Environmental Protection Practices Disclosures (EPPD), Pollution Prevention Practices Disclosures (PPPD) and Green Restoration Practices Disclosures (GRPD) exerted positively on Employee Productivity Ratio. Waste management, pollution avoidance, and green restoration techniques were discovered to have a favorable and significant impact on the business health of enterprises listed on the Nigerian Stock Exchange, as measured by employee productivity ratio. However, with an Adj  $R^2$  of 0.0286, F stat 191.41 ( $p=0.0000.05$ ), the positive effect was significant for employee productivity ratio. This confirms the a priori prediction. This result implies that with just a 1% improvement in green accounting practice, corporate health in terms of employee productivity ratio will increase by 28.6%, which is consistent with Adegbe, Ogidan, Siyanbola, and Adebayo's findings (2020). However, the research also found that disclosing safety-related measures and environmental-protection activities has a little impact on employee productivity. The minor impact could be attributed to ineffective control mechanisms in place to maintain industrial hygiene, health and safety, product and service quality, and efforts to prevent all types of dangers and the use of hazardous methods. Theoretically, these findings support stakeholder theory, which states that if a company strives to report on its green efforts, it would eventually reach optimal business health. The beneficiaries of the company's green accounting procedures are also

outlined in the stakeholder theory, which explains that stakeholders are not limited to the company's shareholders/owners, but also include those who are affected by the ability of the company to remain stable. This result backs with Osamor and Adebajo's (2020) Polycarp findings (2019). They found that safety-related measures had a beneficial impact on a company's financial performance. It does not, however, substantiate Ayeni's (2017) findings that safety-related practices have a detrimental impact on company performance. Furthermore, it was revealed that disclosing environmental protection and pollution prevention strategies has a little impact on the employee productivity ratio of companies listed on the Nigerian stock exchange. This means that a 1% increase in EPPD and PPPD would result in a 1% decrease in employee productivity at Nigerian stock exchange companies. Empirically, the result supported the conclusion of Iliemana (2020). The importance of environmental preservation actions validated the social contract theory's tenets. It reflects the expectation that businesses engage in some form of community service as a sign of good faith and gratitude for the society's hospitality. The social contract idea specifically argues that there is an agreement between companies and their host communities that must be fulfilled, regardless of whether the agreement was written or not, which is quite common between modern-day civilizations and the companies that reside there. This did not support Oyedokun, Egberioyinemi, and Tonademukaila's (2019) conclusions that environmental protection procedures had no substantial impact on the firm value of Nigerian industrial goods enterprises. The addition of firm size to the model to moderate the explanatory variables was also found to be significant because the coefficient of variables increased significantly, indicating that firm size played a significant moderating role in the improvement of the Employee Productivity Ratio of the sampled firms, which was also in line with Al-Suraihi, Al-Suraihi, and Ibrahim's results and findings (2021). This result corroborated Nguyen and Tran's (2019) and Idamoyibo's (2019) findings.

#### 4.4 Implication of Findings

**Management:** Green accounting methods have a considerable impact on the commercial health of manufacturing companies listed in Nigeria, according to the study's findings. These green accounting disclosure standards will aid all management in making informed decisions that will help them reduce their influence on the environment, increase the impact of their social activities, and improve their company's business health. Manufacturing company executives should be encouraged to re-think their safety, waste management, pollution prevention, and green restoration disclosure practices to include all of the global reporting initiative framework index for social and environmental accounting disclosure components, which will help them improve their long-term business health. Green accounting practice has a big impact on making accurate decisions on elements that might affect the health of a firm in either a positive or negative way, according to management of companies listed in Nigeria. As a result, they are better equipped to make educated decisions about how to preserve long-term and stable health, putting a premium on the company's overall well-being.

**Organizations:** Organizations should be encouraged to publish both financial and non-financial information in order to address the problem of information asymmetry, which could contribute to an improvement in the business health of Nigeria's listed manufacturing enterprises.

**Employees:** Employees should be encouraged to believe that they are vital contributors to the company's success, growth, and development. Information about management's attempts to improve employee welfare will inspire employees to contribute positively, efficiently, effectively, and productively to the firm's overall wellness, as evidenced by their stability, performance, and sustainability.

## 5.0 Conclusion and Recommendation

### 5.1 Conclusion

The study examined the effect of green accounting practices on the stability of listed manufacturing firms in Nigeria. The years under consideration for the study was 2010-2020 which is ten (11) years. Findings revealed that the disclosure of green accounting practices and the moderating effect of firm size significantly affects the stability of manufacturing firms. The effect of the independent variable on the dependent variables was also moderated by firm size. Hence, the disclosure of green information as it relates to safety, waste management, pollution prevention, environmental protection and green restoration are necessary information useful in the determination of a stable business. From the results of the findings and conclusions of this study, the following recommendations were made:

### 5.2 Recommendations

The study's empirical findings demonstrated that green accounting practices had a favorable impact on manufacturing business employee productivity. These companies' management should put more effort into adopting global best practices for environmental protection, pollution prevention, waste management, green restoration, and safety procedures, which will have a long-term impact on the stability of manufacturing companies. Firms should always provide complete information since it has an impact on the environment and the prevention or effective control of all types of waste in the environment in which they operate. Furthermore, accounting bodies should develop a framework to assist businesses in accounting for the social and environmental effect of their operations and ensure that the framework is strictly adhered to. Furthermore, the outcome of this study demonstrate that larger firms are more productive than smaller enterprises in terms of how firm size moderates the influence of green accounting practice on employee productivity ratio. Employee productivity increases as the size of the company grows, according to the findings. As a result, it is suggested that efforts be directed toward increasing the size of the firm in terms of its assets in order to enhance employee productivity and stable health.

### 5.3 Suggestions for further research

The study was limited to four of The Nigerian Stock Exchange's eleven sectors, and employee productivity ratio was the only measure for stability, therefore, other measures of stability should be considered. Future studies may look into other sectors of the economy that were not covered in this study to see how the practices of green accounting affect their ability to remain stable.

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### References

- Adegbe, F. F., Ogidan, A. A., Siyanbola, T. T. & Adebayo, A. S., 2020. Accounting practices and share value of food and beverages manufacturing companies quoted in Nigeria. *Journal of Critical Reviews*, 7(13), p. 2256-2264.
- Adeyemi & Asaolu, 2013. An empirical investigation of the financial reporting practices and banks' stability in Nigeria. *Kuwait Chapter of Arabian Journals of Business and Management Review*, 2(5), p. 157-180.
- Akor, O. P. & Okey, A. C., 2021. Sustainability accounting and financial performance of oil and gas companies in Nigeria. *International Journal of Innovative Finance and Economics Research*, 9(1), p. 182-197.
- Al-Naser, K. H., Riydh, H. A. & Albalaki, M. M., 2021. The impact of environmental and social cost disclosure on financial performance mediating by earnings management. *Journal of Cases on Information Technology*, 23(2), p. 50-65.
- Al-Suraihi, W. A.; Samikon, S. A.; Al-Suraihi & Ibrahim, 2021. Employee turnover: Causes, importance and retention strategies. *European Journal of Business and Management Research*, 6(3).
- Berman, S. L., & Johnson -Cramer, M. E., 2016. Stakeholder theory: Seeing the field through the forest. *Business and Society*, p. 1-8.
- Burhan, A. H. & Rahmanti, W., 2017. The impact of sustainability reporting on company performance. *J. Econ. Bus. Accountancy Ventura*, 1(5), p. 257-272.
- Dechezlepretre, A. & Sato, M., 2020. *Review of Environmental Economics and Policy*. The University of Chicago Press Journals.
- Elliot, J., 2019. *The meaning, benefits and process of business health check*. Australia: William Advisory Group.

- Ezeagba, C., E., John-Akamelu, C., E., & Umeoduagu, C., 2017. Environmental disclosure and financial performance. *International Journal of Academic Research in Business and Social Sciences*, 7(9), p. 162-174.
- Freeman, F. R., 1984. *Strategic Management, A stakeholder's approach*. Massachusetts: Pitman Publishing.
- GRI. 2019. *Global reporting initiative*. Retrieved from <https://www.gri.org>
- Herda, D. N., Taylor, M. E., & Winterbotham, G., 2012. The Effect of Board Independence on the Sustainability Reporting Practices of Large US Firms\ *Issues in Social and Environmental Accounting*, 6(2), p. 178-197.
- Idamoyibo, H. R., 2021. Evaluation of environmental accounting, financial reporting and profitability of oil and gas firms in Nigeria. *Danubius Journals*
- Iliemana, R., 2020. Environmental accounting practice and corporate performance: study of listed oil and gas companies in Nigeria. *European Journal of Business and Management*, 12(22).
- Ilmi, S., Habibah, H., Xue Q, M. & Gheda, M. & Liza, M. 2019. *Employee turnover of quantity surveying firms in Malaysia*. IOP Conf. Ser. Mater. Sci. Eng 636 (1)
- Jeffrey, S. H., Edward, F. R. & Mônica, C. S., 2015. Stakeholder theory as an ethical approach to effective management: Applying the theory to multiple contexts. *Review of Business Management*. 17(55), p. 858-869.
- Menike, L. M., 2020. Impact of Environmental Disclosure on Firm Performance: An Empirical Analysis of Food, Beverage and Tobacco Sector Companies Listed in Colombo Stock Exchange, Sri Lanka. *International Journal of Academic Research in Business and Social Sciences*. 10(10), p. 518-536.
- Mohammad, I. & Jahangir, A., 2014. Factors influencing intention to quit or stay in jobs: An empirical study on selected sectors in Bangladesh. *Stamford Journal of Business Studies*, 6(1), p. 142-164.
- Nawaiseh, M. E., 2015. Do Firm Size and Financial Performance Affect Corporate Social Responsibility Disclosure: Employees' and Environmental Dimensions? *American Journal of Applied Sciences*, 12(12), p. 967.
- Nguyen, L & Tran, M., 2019. Disclosure levels of environmental accounting information and financial performance: The case of Vietnam. *Management Science Letters*. 9(4), p. 557-570.
- Nobanee, H. & Ellili, N., 2018. Impact of economic, environmental, and social sustainability reporting on financial performance of UAE banks. *Eurasian Business Review*, 5 (2), p. 203- 215.
- Nor, N.M., Bahari, N.A., Adnan, N.A., Kamal, S. Q., & Ali, I. M., 2016. The effects of environmental disclosure on financial performance in Malaysia. *A Proceeding of Economic and finance*. 35, p. 117-126.
- Ogiriki T. & Adigwe P. D., 2019. Theoretical perceptions of corporate social responsibility: A critical review. *European Journal of Accounting, Auditing and Finance Research*, 7(10), p. 48-58.
- Olowookere, J. K., Taiwo, A. A. & Onifade, A. O., 2021. Environmental accounting disclosure practices and financial performance of listed cement companies in Nigeria. *Gusau Journal of Accounting and Finance*, 2(2), p. 1-12.
- Omodero & Ihendinihu, 2016. The impact of environmental and corporate social responsibility accounting on organizational financial performance: evidence from selected listed firms in Nigeria stock exchange. *Journal of Emerging Trends in Economics and Management Sciences*, 7, p. 291-306.
- Oraka, A. O. & Egbunike, F. C., 2016. Appraisal of environmental accounting information in the financial statements of consumer goods manufacturing companies in Nigeria, *NG-Journal of Social Development*, 5(5), p. 6-28
- Osamor, I. P. & Adebajo, A. M., 2020. Financial stability and firm's performance: A study of selected oil and gas firms in Nigeria. *Business Administration and Business Economics*, 16 (2)

- Owolabi, S. A. & Adeleye, G. O., 2020. Professional ethics and quality of financial report of Nigerian deposit money banks. *International Journal of Science and Research*, 9(7), p. 532-537.
- Owolabi, S. A & Solarin, S. A., 2020. Environmental Accounting and Corporate Reporting Quality of Nigerian Manufacturing Companies. *International Journal of Science and Research*, 9(9), p. 1382-1388
- Oyedokun, G. E., Egberioyinemi, E. & Tonademukaila, A., 2019. Environmental accounting disclosure and firm value of industrial goods companies in Nigeria. *Journal of Economics and Finance*, 10(1), p. 7-27.
- Polycarp, S. U., 2019. Environmental accounting and financial performance of oil and gas companies in Nigeria. *Research Journal of Finance and Accounting*, 10(10), p. 192-202.
- Sanusi, K. A. & Sanusi, O. O., 2019. Environmental sustainability reporting practices in Nigeria: are clouds darker or fairer in the manufacturing industry? *International Journal of Social Sciences and Humanity Studies*, 11(2), p. 1-22.
- Uwalomwa, U., Obarakpo, T., Olubukola, R. U., Ozordi, E., Osariemen, A., Gbenedio, A. E., & Oluwagbemiga, S. T., 2018. Sustainability Reporting and Firm Performance: A Bi-directional Approach. *Academy of Strategic Management Journal*, 17(3), p. 1-16.
- Willis, A., Campagnoni, P., & Gee, W., 2015. An evolving corporate reporting landscape; a briefing on sustainability reporting, integrated reporting and environmental, social and governance reporting. *Saisi le*, 19.
- Yahya, O. A., 2018. Environmental Reporting Practices and Financial Performance of Listed Environmentally-Sensitive Firms in Nigeria. *A Journal of the Environmental and Social Sciences*, 24(2), p. 403-412.