*sustainability*

MDPI

*Article*

# Assessing the Role of Board Structure on the Nexus between Green Innovations, Green Taxation, and Cosmetic Accounting Practice in Nigeria

**Hussaini Bala [1], Abdulaziz S. Al Naim [2,*], Armaya'u Alhaji Sani [1] and Abdulrahman Alomair [2]**

[1] Department of Accounting, Banking and Finance, Tishk International University, Erbil, Iraq; hussaini.bala@tiu.edu.iq (H.B.); armayau.sani@tiu.edu.iq (A.A.S.)
[2] Accounting Department, Business School, King Faisal University, Al-Ahsa 31982, Saudi Arabia; aamalomair@kfu.edu.sa
* Correspondence: asaudalnaim@kfu.edu.sa

**Abstract:** Nigeria is a foremost oil producer in Africa, and thus faces substantial environmental issues like pollution and climate change. Therefore, since green taxation and green innovation emphasize inventing new technologies, mitigating environmental damage, and stimulating sustainability, understanding and encouraging green taxation and green innovation might aid in reducing these environmental challenges and protect natural resources. This study therefore explored the influence of board structure on the link between green taxation, green innovation, and cosmetic accounting practices of firms. This study adopted auxiliary data from the World Bank, OECD, and Nigerian corporations' annual reports. The analysis included 792 firm-year observations from 2014 to 2021. A logistic regression analysis was performed. This study documented that firms costume their income to avoid paying environmental taxes or to generate a more constructive image of their green practices. Similarly, it was found that green innovations attract firms to engage in cosmetic accounting practice in Nigeria. However, firms' effective board mechanisms have been found to prevent the likelihood of cosmetic accounting practices. Finally, it was established that green taxes and green innovations could prevent firms from engaging in cosmetic accounting practices in companies with effective board mechanisms. This study is the first to explore the influence of governance structure on the nexus between green taxation and cosmetic accounting practices of firms. The findings of this study provide valuable information to regulatory authorities, policymakers, and companies seeking to promote sustainable growth and green protection.

**Keywords:** green taxation; green innovation; income smoothing; board of directors; earnings management



**Citation:** Bala, H.; Al Naim, A.S.; Sani, A.A.; Alomair, A. Assessing the Role of Board Structure on the Nexus between Green Innovations, Green Taxation, and Cosmetic Accounting Practice in Nigeria. *Sustainability* **2024**, *16*, 6919. https://doi.org/10.3390/su16166919

Academic Editor: Hyunchul Ahn

Received: 20 June 2024
Revised: 6 August 2024
Accepted: 9 August 2024
Published: 12 August 2024



## 1. Introduction

Cosmetic accounting involves manipulating or perverting financial numbers to generate a constructive image without significant changes in the actual practices of a company's financial statements. It has been argued that tax inducements play a vital role in a company's earnings management practice [1]. Firms may engage in cosmetic accounting practices in response to tax incentives or to reduce tax obligations. This might include strategies such as fluctuating accounting methods that time revenue and expenses or reforming corporate operations to improve tax benefits. Tax describes an unequivocal agreement between the government and the proprietors; thus, this nexus might stimulate cosmetic accounting practices [2]. This is because the financial reporting decision could influence the tax liabilities of companies contingent on the degree of alignment between reported earnings for the financial report proposal versus earnings for tax report purposes. Ref. [2] argued that the nexus between company taxes and their reported earnings is strong in developed nations. This requires the need to explore the nexus between corporate taxes and their reported profits in developing economies such as Nigeria. This is because the

Nigerian government initiative to raise government revenue through an active corporate tax system is often compromised by the competitive policy of tax avoidance implemented by firms [3,4]. Therefore, firms are largely in a competitive environment, which makes them more incentivized to avoid taxes in order to increase their earnings and have more resources to compete with the market environment.

Similarly, prior studies have shown that the legal and institutional framework of a nation has a greater influence on the characteristics of reported earnings [5]. Therefore, the institutional, political, and economic environments of developing nations are distinct, and therefore, the incentives for and outcomes of tax-induced earnings management (EM) can be very different from those of advance economies. However, a large amount of empirical evidence demonstrates that the implementation of environmental protection laws effectively stimulates firms to practice income-decreasing EM, with a stronger impact on large companies and businesses in developed countries [6].

Green taxation, popularly known as environmental tax, as a constituent of ecological protection laws, might play a vital role in captivating firm EM practices. This is because firms facing green taxes might be tempted to engage in cosmetic accounting practices to lessen the financial implication of green tax obligations. This might include altering their financial reports to indicate a more favorable financial condition or deferring financial transactions to lessen tax obligations. On the contrary, green tax policy can also stimulate firms to improve their green performance and apply friendly ecological practices rather than engage in cosmetic accounting practices. Consequently, some firms might opt to invest in renewable energy technologies to cut their tax obligations while also endorsing green protection [7]. Previous studies have argued that corporate governance devices have sturdy influence on company cosmetic accounting practice [8–11]. They argue that a robust corporate governance mechanism decreases the likelihood of firms' engagement in cosmetic accounting practices. In the same way, it has been argued that the autonomous board oversight function can reduce agency issues that increase, such as cosmetic practice and minimizing tax expenses to protect the profits of firms so that managers will receive bonuses [12,13]. Consequently, it is likely that a robust corporate governance mechanism can effectively contribute to reducing cosmetic accounting practice that firms engage in to circumvent paying green taxes.

Furthermore, Nigeria is a foremost oil producer in Africa and thus faces substantial environmental issues like pollution and climate change. Therefore, since green innovation emphasizes inventing new technologies, mitigating environmental damage, and stimulating sustainability, understanding and encouraging green innovation might aid in reducing these environmental challenges and protect natural resources. Moreover, Nigeria is a party to universal agreements like the Paris Agreement, which requires countries to limit carbon emissions and reduce climate change. Consequently, examining green policies is pivotal for Nigeria to meet its international obligations and contribute to the global struggle to fight climate change.

Therefore, prior studies have argued that increasing green innovation is an essential support to attaining a sustainable development agenda and achieving the objective of "double carbon" [14,15]. Green innovation may include green goods and other technological inventions [15]. Therefore, it is expected that green innovation can enhance transparency in the financial report. This will provide stakeholders or investors with better information about firm environmental performance, which will in return promote the reliability of financial reports.

Board structure can play an essential role in influencing the firm's strategy to green taxation, green innovation, and cosmetic accounting practice. Thus, an effective board with dissimilar perceptions, autonomous directors, and effective oversight functions is more probable to stimulate green innovation and financial reporting quality. In view of the above argument, this study explores the influence of corporate board structure on the link between green taxation, green innovation, and cosmetic accounting practices of firms.

Therefore, it was expected that understanding the nexus between green taxation, green innovation, and cosmetic accounting behaviors of firms could be important due to the following reasons: Exploring the nexus between green taxation, green innovation, and cosmetic accounting behaviors of firms can provide a better understanding of how financial incentives can promote sustainable practices by firms or how financial incentives might likely lead to unethical practices by firms. Similarly, this study can also assist policymakers and investors in understanding how the nexus of green taxation, green innovation, and EM practices of firms can influence the compliance of firms with tax law and policies, green performance, and the preservation of the transparency of financial reports. Finally, to the best of the researchers' information, this study is the first to explore the influence board structure on the nexus between green taxation, green innovation, and firms' cosmetic accounting practices. However, prior studies often investigated how diverse features of board structure such as board independence, board multiplicity, and board expertise affect firms' environmental policies, for instance, in terms of board structure and firms ecological performance [16], board diversity and ecological strategies [17], and the moderating effect of autonomous directors on the nexus between firms' ecological disclosure and board diversity [18]. Therefore, this study explores the role of board structure on the nexus between green innovation, green taxation, and cosmetic accounting practice in Nigeria, as there is an absence of comprehensive study in this area, especially in the context of developing countries like Nigeria. Therefore, this study intends to offer insights into how board structure can promote or deter the adoption of green taxation, green innovation, and decent accounting practices.

This study documented that firms costume their income to avoid payment of environmental taxes (which include energy taxes and transport taxes) or to generate a more constructive image of their green practices. Similarly, it was found that green innovations attract firms to engage in cosmetic accounting practice in Nigeria. It was also found that firms that have effective corporate board mechanisms, including board expertise, board autonomy, board gender diversity, audit committee (AC) expertise, and AC autonomy, have effective supervisory instruments that can prevent the likelihood of cosmetic accounting practice. Finally, it was established that green taxes and green innovation could prevent firms from engaging in cosmetic accounting practices in companies that have effective corporate board mechanisms.

## 2. Review of the Literature

### *2.1. Green Taxation and Cosmetic Accounting*

Agency theory focuses on the contractual nexus between one party (the agent) and another party (the principal) [10,19–22]. Taxation indicates an unequivocal agreement between the government and proprietors. Therefore, when there is disagreement between agents (the proprietors) and the government (the principal), it may affect the quality of reported earnings. Thus, agents might engage in EM to realize their interests. One of the most important reasons why firms engage in EM is tax-motivated [4]. According to [2], the nexus between agents (the proprietors) and the government (the principal) could induce cosmetic accounting practices from two perspectives: On the one hand, the financial reporting decision might influence the tax liabilities of companies dependent on the extent of alignment between reported earnings for financial reporting proposes versus earnings for tax reporting purposes. It is argued that the nexus between the taxes of companies and their reported earnings is strong in developed nations. However, prior studies have shown that the legal and institutional framework of a nation has greater influence on the characteristics of reported earnings [5]. Therefore, the institutional, political, and economic environments of developing nations are different, and therefore the incentives for and outcomes of tax-induced EM can be very different from those in advanced economies. On the other hand, firms may engage in cosmetic accounting practices if they operate in a setting with a dual tax regime. Under this regime, proprietors are obliged to pay taxes from already taxed income in addition to the company's income tax. The above argument aligns

with the dual divided theory, which proposes the likelihood of using income from green taxes to decree other manipulations in a tax system [23–25]. Similarly, ref. [26] confirmed that the existence or nonexistence of a dual dividend must be addressed emphatically. Furthermore, it has been argued that engaging in cosmetic accounting practices to reduce tax liabilities has become a tax motive for managers to costume their profit [4]. Similarly, the political costs have confirmed that bigger firms face advance inspection and therefore engage in income-decreasing EM to limit political and regulatory cost [27]. Consequently, one of the government's rules is to collect taxes from companies, which suggests that if a company reduces its earnings, it directly signifies that such a company will pay lower taxes.

Many prior studies have explored the influence of taxation regimes on EM practices [2,28,29]. In the context of small and medium-size enterprises (SMEs), ref. [2] explored the influence of taxes on EM practices. They examined SMEs in Finland for the periods 2006 to 2010. They found that firms' willingness to pay taxes had a significant consequence on EM in avoiding tax liabilities. Ref. [4] examined how EM influences the nexus between financial systems and tax planning. He employed panel data from the sampled firms in Nigeria. He found that tax planning increases the likelihood of EM practices in Nigerian firms. This confirmed the findings of [30], who examined the influence tax avoidance on EM of Chinese firms. They reported that tax avoidance has been a motivating deriver for EM. On the contrary, ref. [31] used five large European nations to explore the nexus between tax avoidance and EM. They revealed that firms do not employ tax manipulation to reduce their tax obligations. They also reported that the vacuum between accounting and taxes seems to be basically unaffected by EM. However, ref. [6] used a sample of over-polluting firms in China and examined the influence of green taxes on EM. They discovered that green taxes compel firms to engage in upward accrual EM. However, they argued that private firms have more considerable motivations to engage in tax avoidance or tax planning and are more inspired to engage in EM practice. Furthermore, ref. [32] examined the influence of environmental levies on firms' EM in China. They revealed a favorable significant association between environmental levies and EM. They documented that environmental levies increase the incentive of enterprise EM. Wang et al. [33] studied the influence environmental taxes on firm EM in the Chinese manufacturing segment. They found that environmental levies have an inverse significant influence on EM. Ref. [34] measured the effect environmental taxes on the EM of Chinese companies. They documented that the environmental tax regime instigates Chinese companies to engage in income-reducing EM. It can be observed that most of the studies examined above were from the Chinese financial market; therefore, there is a need to examine the influence of green taxes on EM practice of Nigerian markets. Moreover, Nigeria has been classified as one of the most polluted economies in sub-Saharan Africa, being one of the largest producers of oil in the region [35–37]. Therefore, green taxes are aimed at decreasing activities that have an adverse effect on the environment. However, firms that engage in harmful activities might face expenditure as a result of green taxes, which can put them under pressure to engage in cosmetic accounting practice to preserve their profitability. In view of the foregoing arguments, this study hypothesizes the following:

**$H_1$.** *Green taxes have a significant influence on the cosmetic accounting practice of firms in Nigeria.*

### *2.2. Board Structure, Green Taxation, and Cosmetic Accounting*

Earlier studies have argued that corporate governance structure has a strong influence on cosmetic accounting practice [8–11,38–40]. They argue that the manifestation of board expertise, board autonomy, board gender diversity, audit committee (AC) expertise, and AC autonomy in the corporate board and AC decrease the possibility that a firm will smooth its income. Similarly, it has been contended that high green uncertainty motivates managers in companies to engage in opportunistic activities [12]. It has also been argued that supervision of autonomous directors as a structure of corporate governance can decrease agency issues that rise, such as cosmetic accounting practice or EM. These opportunistic activities carried out by managers include minimizing tax expenses in order to costume firms' earnings

so that managers receive bonuses [13]. Consistent with [41], management can engage in higher levels of tax avoidance when the corporate governance mechanism of firms is weak. Recently, ref. [42] explored the influence of board gender diversity on tax avoidance and EM in the Malaysian market. They documented that green accounting practice is negatively related to tax avoidance in firms with a high ratio of female directors. From the foregoing literature, it is expected that a robust corporate governance structure, such as an autonomous and diverse board with an effective oversight function and transparency, can ensure that green taxes are properly managed and disclosed. However, there are few empirical studies on how corporate governance mechanisms influence the nexus between sustainability practices and EM [43]. This study therefore fills this gap by exploring the influence of board mechanisms on the nexus between green taxes, green innovation, and cosmetic accounting practice. Thus, a robust board structure can assist in reducing cosmetic accounting practice that firms engage to avoid paying green tax. On the contrary, feeble corporate governance might result in high likelihood for accounting manipulations due to green taxes. Therefore, the link between green taxation and cosmetic accounting practices can be affected by the efficacy of the board structure of firms. In view of the foregoing arguments, this study hypothesizes the following:

**$H_2$.** *Corporate board structure has a significant influence on the cosmetic accounting practice of firms in Nigeria.*

**$H_3$.** *Board structure moderates the influence of green taxation on the cosmetic accounting practice of firms in Nigeria.*

### *2.3. Green Innovation and Cosmetic Accounting*

Prior studies have argued that increasing green innovation is an essential support to attaining the sustainable development agenda and achieving the objective of "double carbon" [14,15]. Green innovation may include green goods and other technological inventions [15]. From the Indonesian context, ref. [44] argued that green innovation has a substantial influence on EM. This affirmed the findings of [45], who studied the influence of green intellectual capital, EM, and future stock earnings. The study revealed that green intellectual capital has a strong influence on future stock earnings. Ref. [15] explored the influence of EM on the link between CEO changes on green innovation in China. They revealed that green innovation increases EM both prior to and after CEO change. This was confirmed by the findings of [46], who studied the influence of enterprise green innovation on EM in China. They argued that green renovation can assist firms restrain accrual based EM. Therefore, it is expected that green innovation can enhance transparency in the financial report. This provides stakeholders or investors with better information about the firm's environmental performance, which in return promotes the reliability of financial reports. Therefore, the following is expected:

**$H_4$.** *Green innovation has a significant influence on the cosmetic accounting practice of firms in Nigeria.*

### *2.4. Corporate Board Structure, Green Innovation, and Cosmetic Accounting*

Ref. [47] examined the influence of green innovation on board diversity and firm value. They documented that the influence of the female directors' strategy has a constructive impact on green innovation. By exploring a sample of 108 firms, ref. [48] examined the role of green innovation on the nexus between female directors and firm value. The study revealed that female directors' strategies promote the green innovation of companies in Indonesia. Therefore, board structure can play an essential role in influencing the firm's strategy on green innovation and cosmetic accounting practice. Thus, an effective board with dissimilar perceptions, autonomous directors, and effective oversight functions is more probable to stimulate green innovation and financial reporting quality. Therefore, we hypothesize:

**$H_5$.** *Board structure moderates the influence of green innovation on the cosmetic accounting practice of firms in Nigeria.*

## 3. Methodology

This study adopted auxiliary data from the annual reports of the World Bank, OECD, and Nigerian corporations. Data on the outcome variable were obtained from the OECD. Data on explanatory variables were obtained from the annual reports of Nigerian corporations. The analysis involved 792 firm-year observations out of 1384 firm-year observations from 2014 to 2021. The choice of the period was based on the availability of information obtained from the World Bank and OECD, while the 792 firm-year observations were obtained after applying the following filtering criteria: First, any firm that was delisted during the period 2014 to 2021 was removed from the investigation. Finally, any firm that did not provide a complete information during the period 2014 to 2021 was removed from the investigation. In this study, logistic regression was adopted due to the nature of the outcome variable being a dichotomous variable. Logistic regression estimates the likelihood of the existence of a certain phenomenon, which is vital for making a rational decision in management and economic studies [49,50]. The reasons for the choice of logistic regression is that cosmetic accounting is often detected in the form of a binary outcome such as smoothing or non-smoothing firms. Therefore, a logistic model is more appropriate for modelling a binary outcome variable, as it provides the likelihood that an observation fits into a specific category. It is also more flexible in controlling various kinds of independent variables, has ease of interpretation, and is more robust to violations of strict presumptions. These make logistic regression a strong technique for examining the determinants of cosmetic accounting practices of firms.

This study employed the model from [51], as recommended by previous studies on cosmetic accounting [49,52,53]. The model from [51] can be employed to categorize the incidence of cosmetic accounting practice based on their probabilities or likelihoods, which provides an avenue for a rational decision-making process. Consistent with [51], firms are inclined to smooth their reported incomes over time through cosmetic accounting practices to decrease their earnings variations. They regularly engage in cosmetic accounting practice to make their economic performance look more stable and reliable to external stakeholders. In general, the model from [51] helps to detect firms that may be managing their incomes by smoothing methods (we categorize these firms as 1) versus firms that report their income faithfully without engaging in cosmetic accounting practice (we categorize these firms as 0). Table 1 contains information on the study variables and their individual measurements.

*Model Specification*

For an examination of this study's hypotheses, the following estimation model was used:

$$COSA_{it} = \beta_{0it} + \beta_1 TGREENTAX_{it} + \beta_2 GREENINIVO_{it} + \beta_3 + FirmSiz_{it} + \beta_4 + BGS_{it} + \beta_5 GDPPERCAP + \varepsilon_{it}$$

where $COSA_{it}$ = cosmetic accounting practice, TGREENTAX = total green taxations, GREENINIVO = green innovations, FirmSiz = firm size, BGS = board structure, GDPPERCAP = GDP per capita, $\varepsilon$ = error terms, it = firm/period, and $\beta_1$–$\beta_5$ = gradients of the explanatory variables.

**Table 1.** Variable measurement.

| Name of Variable | Short Form | Measurement | Source |
|---|---|---|---|
| Dependent Variable | | | |
| Cosmetic accounting | COSA | The difference in the coefficient deviation of income (CVI) is divided by the difference in the coefficient variation of sales/revenue (CVS). If a corporation's CVI/CVS quotient is more than/equal to 1, a corporation is perceived to have smoothed income and otherwise is 0. | [10,53] |
| Independent Variable | | | |
| Total green taxes | TGREENTAX | Environmental taxes revenue as % of GDP ("All tax bases (sources from energy, transport pollution, and resources taxes") | OECD data |
| Green innovation | GREENINIVO | It is computed as the proportion the share of environment-related inventions on all inventions in all technologies at home-based and the portion of environment-related inventions on all inventions in all technologies in the globe). An index of 1 indicates that an economy invents as much in "green" technologies as the globe; an index more than 1 shows a comparative technological advantage of a country compared to the globe. | OECD data |
| Control Variables | | | |
| Firm size | FirmSiz | Natural log of firm assets | [54,55] |
| Board structure (board expertise, board autonomy, board gender diversity, audit committee expertise, and audit committee autonomy) | BGS | 1 is assigned for a board that has at least a financial expert in the Board and 0 otherwise.<br>1 is assigned for a board that has majority members as autonomous directors and 0 otherwise.<br>1 is assigned for a board that has at least a female member in the Board and 0 otherwise.<br>1 is assigned for an AC that has at least a financial expert in the AC and 0 otherwise.<br>1 is assigned for a AC that has majority members as autonomous directors and 0 otherwise. | [56,57] |
| Gross domestic product | GDPPERCAP | Natural log of GDP per capita. | World Bank data |

Source: authors' contribution.

## 4. Results and Explanation

### *4.1. Descriptive Statistics*

Table 2 shows the descriptive statistics of this study. It is observed that COSA has a mean value of 0.814 with minimum and maximum values of 0 and 1, respectively. The mean of 0.814 suggests that 80.14% of the sample firms engaged in COSA practices during the study period. The minimum value of 0.00 indicates the non-smoothing firms, while the maximum value of 1.00 indicates the smoothing firms. TGREENTAX shows an average of 1.70% of Nigeria's GDP with a smallest and highest value of 0.00% and 2.00%, respectively. The minimum value of TGREENTAX proposes that some nations in the research sample did not have any momentous quantity of green levies in the study period. GREENINIVO shows an average of 1.322 of Nigeria's GDP with a smallest and highest value of 0.00% and 3.470, respectively. This means that on average, Nigeria has a comparative advantage in green innovation. FIRMSIZ had a mean value of 16.568. BGS had an average of 3.194 with a smallest and highest value of 2.00% and 5.00%, respectively.

**Table 2.** Descriptive statistics.

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| COSA | 792 | 0.814 | 0.389 | 0.000 | 1.000 |
| TGREENTAX | 792 | 0.017 | 0.007 | 0.000 | 0.020 |
| GREENINIVO | 792 | 1.322 | 0.932 | 0.000 | 3.470 |
| FIRMSIZ | 792 | 16.568 | 1.590 | 13.755 | 19.450 |
| BGS | 792 | 3.194 | 0.660 | 2.000 | 5.000 |
| GDPPERCAP | 792 | 11.924 | 1.341 | 9.110 | 13.623 |

Source: authors' contribution. Note: COSA = cosmetic accounting; TGREENTAX = total green taxation; FIRMSIZ = firm size; BGS = board structure; GDPPERCAP = GDP per capita.

This suggests that the sampled firms had average scores for three of the board governance indices used in this study. The minimum and maximum values of BGS suggest that some sampled firms had at least scored two of the corporate board indices, while some of them had scored all of the corporate board indices. GDP per capita ranged from 9.110 to 13.623. The mean GDP per capita is 11.924.

### *4.2. Correlation*

The correlation results are depicted in Table 3. The table depicts that TGREENTAX, GREENINOV, and GDPPERCAP had positive relations with COSA. However, FIRMSIZ and BGS had negative relations with COSA. It is observed from the table that the associations of the explanatory variables fall within the normal array and are therefore not excessive. Consequently, as suggested by the previous literature, the results might imply that the estimate model may possibly not be related to the glitches in multicollinearity [58–60].

**Table 3.** Correlation.

| Variable | COSA | TGREENTAX | GREENINOV | FIRMSIZ | BGS | GDPPERCAP |
|---|---|---|---|---|---|---|
| COSA | 1.000 | | | | | |
| TGREENTAX | 0.0863 ** | 1.000 | | | | |
| | 0.015 | | | | | |
| GREENINOV | 0.0758 * | 0.0973 *** | 1.000 | | | |
| | 0.033 | 0.006 | | | | |
| FIRMSIZ | −0.017 | 0.007 | −0.035 | 1.000 | | |
| | 0.630 | 0.840 | 0.322 | | | |
| BGS | −0.051 | −0.036 | 0.3376 *** | 0.003 | 1.000 | |
| | 0.149 | 0.318 | 0.000 | 0.926 | | |
| GDPPERCAP | 0.029 | −0.3858 *** | 0.1938 *** | 0.001 | 0.1699 *** | |
| | 0.408 | 0.000 | 0.000 | 0.979 | 0.000 | 1.000 |

Source: authors' contribution. Note: COSA = cosmetic accounting; TGREENTAX = total green taxation; GREENINOV = green innovation; FIRMSIZ = firm size; BGS = board structure; GDPPERCAP = GDP per capita. *** = significance at 1%; ** = significance at 5%; and * = significance at 10%.

### *4.3. Regression Estimates*

Table 4 shows the regression estimates of the direct nexus between TGREENTAX and COSA. The table shows that TGREENTAX had a positive significant influence on COSA. This can be detected from the delta coefficient (dy/dx) of 5.568 and *p*-values ($p > z$) of 0.008. Thus, it implies that green taxes induce firms to engage in cosmetic accounting practice in Nigeria. This means that firms costume their income to avoid payment of environmental taxes (which include energy taxes and transport taxes) or to generate a more constructive image of their green practices. This is consistent with the findings of [32,34], who found that green taxes instigate Chinese firms to engage in income smoothing. The result also supports our first hypothesis ($H_1$), which assumed that green taxes have a significant influence on the cosmetic accounting practice of firms in Nigeria. The implication of this result could suggest that policymakers may need to devise sterner monitoring and regulatory mechanisms to ensure strict compliance with green tax laws without companies

resorting to cosmetic accounting practice. This might include best governance practices, rigorous accounting standards, and punishments for noncompliance.

**Table 4.** Logistic regression (direct model).

| | **Delta Method** | | | |
|---|---|---|---|---|
| **Var.** | **dy/dx** | **Std. Err.** | **z** | ***p* > z** |
| TGREENTAX | 5.568 | 2.115 | 2.630 *** | 0.008 |
| GREENINOV | 0.034 | 0.017 | 2.030 ** | 0.042 |
| FIRMSIZ | −0.004 | 0.008 | −0.430 | 0.666 |
| BGS | −0.052 | 0.021 | −2.460 ** | 0.014 |
| GDPPERCAP | 0.000 | 0.000 | 1.820 * | 0.069 |
| Pseudo $R^2$ | 0.134 | | | |
| Wald $X^2$ | 79.210 | | | |
| Probability of Wald $X^2$ | 0.000 | | | |
| Linktest (Hatsq) | 0.769 | | | |
| Gof test group (10) | 0.686 | | | |
| Correctly classified | 81.440 | | | |

Source: authors' contribution. Note: COSA = cosmetic accounting; TGREENTAX = total green taxation; FIRMSIZ = firm size; BGS = board structure; GDPPERCAP = GDP per capita; *** = significance at 1%; ** = significance at 5%; * = significance at 10%.

Similarly, the table reveals that GREENINOV had a positive significant influence on COSA. This can be detected from the delta coefficient (dy/dx) of 0.034 and *p*-values (*p* > z) of 0.042. Therefore, it infers that green innovation attracts firms to engage in cosmetic accounting practice in Nigeria. A possible explanation for this is that companies that partake in green innovation might overstate or pervert their environmental activities to promote their image or attract environmentally sensitive investors. This might lead to cosmetic accounting practice by changing the variability in their earnings and present healthier performance than is truly realized. Furthermore, companies under regulatory pressure to prove compliance to environmental laws or to achieve sustainable goals might partake in cosmetic accounting to elude penalties or to receive positive treatment from regulatory agents. Similarly, the positive significance influence between GREENINOV and COSA in firms indicates the complexity involved in the trade-off between sustainability practices and financial reporting integrity. Therefore, corporate boards should reinforce their monitoring functions to make sure that green innovation practices are followed in an ethical and transparent manner. This might include instating dedicated committees to effectively supervise green initiatives and the financial reporting process. The result is consistent with the findings of [15], who found that innovation increases EM. The result also supports our hypothesis ($H_4$), which presumed that green innovation has a significant influence on the cosmetic accounting practice of firms in Nigeria.

However, Table 4 shows that the moderating variable BGS had a significant negative influence on COSA. This can be discovered from the delta coefficient (dy/dx) of −0.108 and *p*-values (*p* > z) of 0.033. Therefore, it infers that BGS (represented by "board expertise, board autonomy, board gender diversity, audit committee (AC) expertise, and AC autonomy") mitigates firms' involvement in cosmetic accounting practice in Nigeria. This implies that firms that have effective BGS including board expertise, board autonomy, board gender diversity, audit committee (AC) expertise, and AC autonomy have effective supervisory mechanisms, which can prevent the likelihood of cosmetic accounting practice. This is because the existence of BGS can facilitate the evaluation of financial reports, challenge managers who exhibit opportunistic behavior, and in return prevent the likelihood of earnings manipulations. This is consistent with the findings of [9,10,38], who claimed that the manifestation of board expertise, board autonomy, board gender diversity, audit committee (AC) expertise, and AC autonomy in the corporate board and AC decreases the likelihood of firms' engagement in income smoothing. The result also supports our second

hypothesis ($H_2$), which presumed that corporate board structure has a significant influence on the cosmetic accounting practice of firms in Nigeria.

Table 5 represents the regression estimates of the moderating influence of BGS on the nexus between TGREENTAX and COSA. The table shows that the interactions between BGS TGREENTAX (TGREENTAX*BGS) had a negative significant influence on COSA. This can be seen from the delta coefficient (dy/dx) of −6.853 and *p*-values ($p > z$) of 0.005. Thus, this implies that green taxes might prevent firms from engaging in cosmetic accounting practices in companies that have effective BGS.

**Table 5.** Logistic regression (moderation model).

| | **Delta Method** | | | |
|---|---|---|---|---|
| **Var.** | **dy/dx** | **Std. Err.** | **z** | ***p* > z** |
| TGREENTAX | 28.827 | 7.842 | 3.680 *** | 0.000 |
| GREENINOV | 0.126 | 0.029 | 4.280 *** | 0.000 |
| TGREENTAX*BGS | −6.853 | 2.459 | −2.790 *** | 0.005 |
| GREENINOV*BGS | −0.027 | 0.008 | −3.420 *** | 0.001 |
| FIRMSIZ | 0.000 | 0.008 | 0.020 | 0.984 |
| BGS | −0.108 | 0.051 | −2.140 ** | 0.033 |
| GDPPERCAP | 0.000 | 0.000 | 2.340 ** | 0.019 |
| Pseudo $R^2$ | 0.148 | | | |
| Wald $X^2$ | 56,125.99 | | | |
| Probability of Wald $X^2$ | 0.000 | | | |
| Linktest (Hatsq) | 0.838 | | | |
| Gof test group (10) | 0.815 | | | |
| Correctly classified | 81.690 | | | |

Source: authors' contribution. Note: COSA = cosmetic accounting; TGREENTAX = total green taxation; FIRMSIZ = firm size; BGS = board structure; GDPPERCAP = GDP per capita; *** = significance at 1%; ** = significance at 5%.

It further suggests that an effective BGS stimulates honest and transparent decision-making, which enables firms to reduce the likelihood of cosmetic accounting practices related to green taxation. In addition, an effective BGS might stimulate accountable decision-making about green impact and green taxes. Thus, when the board of directors and managers are aligned on ethical and green business practices, there may be less motivation to engage in cosmetic accounting by manipulating green taxes to artificially smooth earnings. Previous studies have argued that BGS can decrease agency issues that arise, such as cosmetic accosting practice. These opportunistic activities performed by managers include minimizing tax expenses in order to costume firms' earnings so that managers can receive bonuses. Hence, management engages in greater heights of tax avoidance when the corporate governance mechanism of firms is weak [12,41,42]. The result also supports our hypothesis ($H_3$), which predicted that corporate board governance structure moderates the influence of green taxation on cosmetic accounting practice of firms in Nigeria.

Table 5 also shows that the interactions between BGS and GREENINOV (GREENINOV*BGS) had a negative significant influence on COSA. This can be seen from the delta coefficient (dy/dx) of −0.027 and *p*-values ($p > z$) of 0.001. Thus, this implies that green innovation might prevent firms from engaging in cosmetic accounting practices in companies that have effective BGS. A possible explanation for this is that companies that have an effective board structure might offer an effective monitoring role. This could limit the risk of earnings manipulation irrespective of the company's engagement in green innovation. The findings support our fifth hypothesis ($H_5$), which suggests that board structure moderates the influence of green innovation on the cosmetic accounting practice of firms in Nigeria.

### *4.4. Supplementary Analysis*

Like most quantitative research, this study provides a supplementary analysis to test the robustness of the main findings. Supplementary analysis is a diagnostic technique

that ensures that unbiased results are produced from a dataset [61]. This study used the generalized moment method (GMM) model with dynamic panel data to test the robustness of the main findings. The GMM model is a dominant and flexible statistical tool that addresses several intrinsic issues in examining panel data, such as endogeneity, serial correlation, and heteroscedasticity [62–66]. Therefore, the results in Tables 6 and 7 depict the GMM models (both direct and moderation models). It is observed from the table that both the signs and parameters of the GMM models are similar to those of the main models. Therefore, we expected our results to not be sensitive to the estimation models.

**Table 6.** GMM (direct estimation using Eckel model).

| | **Delta Method** | | | |
|---|---|---|---|---|
| **Var.** | **dy/dx** | **Std. Err.** | **z** | ***p* > z** |
| COSA | | | | |
| L1. | 0.038 | 0.002 | 19.460 *** | 0.000 |
| TGREENTAX | 5.297 | 0.127 | 41.580 *** | 0.000 |
| GREENINOV | 0.105 | 0.024 | 3.567 *** | 0.000 |
| FIRMSIZ | 0.005 | 0.001 | 3.540 *** | 0.000 |
| BGS | −0.125 | 0.014 | −11.187 *** | 0.000 |
| GDPPERCAP | −0.031 | 0.001 | −32.090 *** | 0.000 |
| | 0.000 | 0.000 | 52.400 *** | 0.000 |
| _cons | 0.561 | 0.021 | 27.330 *** | 0.000 |
| Wald. $X^2$ | 1,050,000 | | | |
| Prob. of $X^2$ | 0.000 | | | |
| AR I: Prob. | 0.000 | | | |
| AR II: Prob. | 0.369 | | | |
| Prob. of Sargan | 0.388 | | | |
| Prob. of Hansen | 0.684 | | | |

Source: authors' contribution. Note: COSA = cosmetic accounting; TGREENTAX = total green taxation; FIRMSIZ = firm size; BGS = board structure; GDPPERCAP = GDP per capita; *** = significance at 1%.

**Table 7.** GMM (moderation estimation using Eckel model).

| | **Delta Method** | | | |
|---|---|---|---|---|
| **Var.** | **dy/dx** | **Std. Err.** | **z** | ***p* > z** |
| COSA | | | | |
| L1. | 0.116 | 0.018 | 6.370 *** | 0.000 |
| TGREENTAX | 8.685 | 1.281 | 6.780 *** | 0.000 |
| GREENINOV | −0.058 | 0.013 | −4.500 *** | 0.000 |
| TGREENTAX*BGS | −1.680 | 0.385 | −4.360 *** | 0.000 |
| GREENINOV*BGS | 0.015 | 0.004 | 3.940 *** | 0.000 |
| FIRMSIZ | 0.031 | 0.004 | 8.170 *** | 0.000 |
| BGS | −0.013 | 0.011 | −1.150 | 0.248 |
| GDPPERCAP | 0.000 | 0.000 | 4.090 *** | 0.000 |
| _cons | 0.163 | 0.061 | 2.690 *** | 0.007 |
| Wald. $X^2$ | 7,800,000 | | | |
| Prob. of $X^2$ | 0.000 | | | |
| AR I: Prob. | 0.000 | | | |
| AR II: Prob. | 0.121 | | | |
| Prob. of Sargan | 0.797 | | | |
| Prob. of Hansen | 0.531 | | | |

Source: authors' contribution. Note: COSA = cosmetic accounting; TGREENTAX = total green taxation; FIRMSIZ = firm size; BGS = board structure; GDPPERCAP = GDP per capita; *** = significance at 1%.

### *4.5. Alternative Measurement of Outcome Variable*

To further enhance the robustness of the study model, we provide further analysis using the model from [60]. The model from ref. [60] is more complex in detecting manipulations and might serve a robust measure of EM. One of the distinctive features of

the model in [60] is the inclusion of firm growth as a pivotal determinant of EM. They argue that companies grow significantly across industries, which affects the companies' motives regarding EM. Thus, growing companies can have more elasticity or pressure to costume earnings for financing purposes or to achieve market expectations. Consequently, the results in Tables 8 and 9 depict the GMM models (both direct and moderation models using [60]). It is observed from the table that both the signs and parameters of the models are similar to those of the main models. Therefore, we expected our results to not be sensitive to the supernumerary measurement of criterion variable.

**Table 8.** GMM (direct estimation using Collins model).

| | **Delta Method** | | | |
|---|---|---|---|---|
| **Var.** | **dy/dx** | **Std. Err.** | **z** | ***p* > z** |
| COSA | | | | |
| L1. | 0.151 | 0.002 | 80.480 *** | 0.000 |
| TGREENTAX | 6.362 | 0.609 | 10.440 *** | 0.000 |
| GREENINOV | −0.035 | 0.004 | −8.790 *** | 0.000 |
| FIRMSIZ | 0.003 | 0.003 | 0.940 | 0.346 |
| BGS | −0.117 | 0.016 | −8.165 *** | 0.000 |
| GDPPERCAP | −0.024 | 0.003 | −8.180 *** | 0.000 |
| | 0.000 | 0.000 | 11.680 *** | 0.000 |
| _cons | 0.151 | 0.002 | 80.480 *** | 0.000 |
| Wald. $X^2$ | 1,050,000 | | | |
| Prob. of $X^2$ | 0.000 | | | |
| AR I: Prob. | 0.000 | | | |
| AR II: Prob. | 0.463 | | | |
| Prob. of Sargan | 0.880 | | | |
| Prob. of Hansen | 0.702 | | | |

Source: authors' contribution. Note: COSA = cosmetic accounting; TGREENTAX = total green taxation; FIRMSIZ = firm size; BGS = board structure; GDPPERCAP = GDP per capita; *** = significance at 1%.

**Table 9.** GMM (moderation estimation using Collins model).

| | **Delta Method** | | | |
|---|---|---|---|---|
| **Var.** | **dy/dx** | **Std. Err.** | **z** | ***p* > z** |
| COSA | | | | |
| L1. | 0.176 | 0.007 | 24.750 *** | 0.000 |
| TGREENTAX | −18.780 | 2.694 | −6.970 *** | 0.000 |
| GREENINOV | 0.053 | 0.013 | 4.170 *** | 0.000 |
| TGREENTAX*BGS | 9.118 | 0.809 | 11.270 *** | 0.000 |
| GREENINOV*BGS | −0.036 | 0.004 | −9.490 *** | 0.000 |
| FIRMSIZ | 0.008 | 0.007 | 1.220 | 0.221 |
| BGS | −0.130 | 0.013 | −10.190 *** | 0.000 |
| GDPPERCAP | 0.000 | 0.000 | 16.210 *** | 0.000 |
| _cons | 0.269 | 0.114 | 2.370 ** | 0.018 |
| Wald. $X^2$ | 7,800,000 | | | |
| Prob. of $X^2$ | 0.000 | | | |
| AR I: Prob. | 0.000 | | | |
| AR II: Prob. | 0.781 | | | |
| Prob. of Sargan | 0.895 | | | |
| Prob. of Hansen | 0.850 | | | |

Source: authors' contribution. Note: COSA = cosmetic accounting; TGREENTAX = total green taxation; FIRMSIZ = firm size; BGS = board structure; GDPPERCAP = GDP per capita; *** = significance at 1%; ** = significance at 5%.

## 5. Conclusions and Implications

This study explores the influence of corporate governance structure on the link between green taxation and cosmetic accounting practices of firms. This study documented that firms costume their income to avoid payment of environmental taxes (which include

energy taxes and transport taxes) or to generate a more constructive image of their green practices. The insinuation of this result could be the recommendation that policymakers devise sterner monitoring and regulatory mechanisms to ensure strict compliance with green tax laws without companies resorting to cosmetic accounting practice. This might include best governance practices, rigorous accounting standards, and punishments for noncompliance. Moreover, it was established that firms engage in cosmetic accounting practice to partake in green innovation. This might be as a result of the fact that companies that partake in green innovation might overstate or pervert their environmental activities to promote their image or attract environmentally sensitive investors. This might lead to cosmetic accounting practice by changing the variability in their earnings and presenting healthier performance than is truly realized. Furthermore, companies under regulatory pressure to prove compliance to environmental laws or to achieve sustainable goals might partake in cosmetic accounting to elude penalties or to receive positive treatment from regulatory agents. Consequently, corporate boards should buttress their monitoring functions to make sure that green innovations creativities are followed in an ethical and transparent manner. This might include instituting some dedicated committees to effectively supervise green initiatives and financial reporting process. It was also found that firms that have effective corporate board mechanisms, including board expertise, board autonomy, board gender diversity, audit committee (AC) expertise, and AC autonomy, have effective supervisory instruments that can prevent the likelihood of cosmetic accounting practice. Finally, it was recognized that green taxation and green innovation might prevent companies from engaging in cosmetic accounting practices when they have effective corporate board mechanisms. From a practical point of view, exploring the role of board structure in the link between green taxation, green innovation, and cosmetic accounting in Nigeria is essential for better comprehension of how green policies are applied and their expected influence on companies. Active corporate board mechanisms can assist in ensuring transparency and reliability in financial reporting, which in return stimulates companies to comply with green regulations and implement unpretentious sustainability practices. Therefore, the findings of this study provides valuable information for the regulatory authority, policymakers, and companies pursuing the promotion of sustainable growth and green protection. Despite the implications of this study, we observed on shortcoming: The data for the current study are from a single country; therefore, the outcome of this study might not be applicable to other countries. Thus, future studies should be conducted using data from sub-Saharan Africa or other regions with emerging economies.

**Author Contributions:** H.B. presented the research idea, collected and analyzed the data, and wrote the original draft; A.S.A.N. contributed to the analysis and provided valuable suggestions; A.A.S. contributed to the literature review and proofreading; A.A. contributed to writing the literature review. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by a grant from the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research at King Faisal University in Saudi Arabia [KFU241424].

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** The data used in this study are available on request from the corresponding author. Also, the datasets were obtained from the OECD and the annual reports of Nigerian corporations.

**Conflicts of Interest:** The authors declare no competing interests.

## References


1. Lin, B.; Lu, R.; Zhang, T. Tax-induced earnings management in emerging markets: Evidence from China. *J. Am. Tax. Assoc.* **2012**, *34*, 19–44. [CrossRef]
2. Karjalainen, J.; Kasanen, E.; Kinnunen, J.; Niskanen, J. Dividends and tax avoidance as drivers of earnings management: Evidence from dividend-paying private SMEs in Finland. *J. Small Bus. Manag.* **2023**, *61*, 906–937. [CrossRef]
3. Famous, W.O. Tax Avoidance Practices and Earnings Management. *Edo J. Arts Manag. Soc. Sci.* **2023**, *5*, 121. [CrossRef]
4. Tanko, U.M. Financial attributes and corporate tax planning of listed manufacturing firms in Nigeria: Moderating role of real earnings management. *J. Financ. Report. Account.* **2023**, *ahead-of-print*. [CrossRef]
5. Ball, R.; Kothari, S.; Robin, A. The effect of international institutional factors on properties of accounting earnings. *J. Account. Econ.* **2000**, *29*, 1–51. [CrossRef]
6. Fu, S.; Yuan, J.; Xiao, D.; Chen, Z.; Yang, G. Research on environmental regulation, environmental protection tax, and earnings management. *Front. Environ. Sci.* **2023**, *11*, 1085144. [CrossRef]
7. Bala, H.; Khatoon, G. Effect of green taxation on renewable energy technologies: An analysis of commonwealth and non-commonwealth countries in Sub-Saharan Africa. *Environ. Sci. Pollut. Res.* **2024**, *30*, 11933–11949. [CrossRef]
8. Yang, C.Y.; Leing Tan, B.; Ding, X. Corporate governance and income smoothing in China. *J. Financ. Rep. Account.* **2012**, *10*, 120–139. [CrossRef]
9. Attia, E.F.; Yassen, S.; Chafai, A.; Qotb, A. The impact of board gender diversity on the accrual/real earnings management practice: Evidence from an emerging market. *Future Bus. J.* **2024**, *10*, 24. [CrossRef]
10. Bala, H.; Ahmad, W.; Khatoon, G.; Karaye, A.B. Audit firm attributes and income smoothing: The moderating influence of audit committee accounting expertise. *Cogent Bus. Manag.* **2022**, *9*, 2127194. [CrossRef]
11. Vasilakopoulos, K.; Tzovas, C.; Ballas, A. The impact of corporate governance mechanisms on EU banks' income smoothing behavior. *Corp. Gov. Int. J. Bus. Soc.* **2018**, *18*, 931–953. [CrossRef]
12. Aprisma, R.; Sudaryati, E. Environmental Uncertainty and Firm Performance: The Moderating Role of Corporate Governance. *J. Akunt.* **2020**, *24*, 187–203. [CrossRef]
13. Eksandy, A. Pengaruh komisaris independen, komite audit, dan kualitas audit terhadap penghindaran pajak (tax avoidance) (studi empiris pada sektor industri barang konsumsi yang terdaftar di Bursa Efek Indonesia periode 2010–2014). *Compet. J. Akunt. Dan Keuang.* **2017**, *1*, 1–20. [CrossRef]
14. Aguilera-Caracuel, J.; Ortiz-de-Mandojana, N. Green innovation and financial performance: An institutional approach. *Organ. Environ.* **2013**, *26*, 365–385. [CrossRef]
15. Yang, Y.; Zhu, Y.; Li, Y.; Zheng, Z.; Han, Y. The effect of CEO succession on green technology innovation: The mediating effect of earnings management. *Environ. Dev. Sustain.* **2023**, 1–42. [CrossRef]
16. De Villiers, C.; Naiker, V.; Van Staden, C.J. The effect of board characteristics on firm environmental performance. *J. Manag.* **2011**, *37*, 1636–1663. [CrossRef]
17. Taglialatela, J.; Miroshnychenko, I.; Barontini, R.; Testa, F. Talk or walk? The board of directors and firm environmental strategies. *Bus. Strategy Environ.* **2024**, *33*, 2890–2910. [CrossRef]
18. Arora, A.; Aliani, K. Nexus between corporate environmental disclosures and gender diversity: Interaction effects of board independence. *Bus. Strategy Environ.* **2024**, *33*, 1113–1128. [CrossRef]
19. Eisenhardt, K.M. Agency theory: An assessment and review. *Acad. Manag. Rev.* **1989**, *14*, 57–74. [CrossRef]
20. Jensen, M.C.; Meckling, W.H. Theory of the firm: Managerial behavior, agency costs and ownership structure. In *Corporate Governance*; Gower: Aldershot, UK, 1976; pp. 77–132.
21. Baporikar, N. Revisiting Governance Theories for Understanding ESG and Sustainability Nexus. In *Corporate Governance and CSR Strategies for Sustainability*; IGI Global: Hershey, PA, USA, 2024; pp. 206–232. [CrossRef]
22. Kim, J.; Song, J.-W.; Borah, D. Towards a typology of governance mechanisms in cross-sector partnerships based on multiple agency theory. In *International Business and SDG 8: Exploring the Relationship between IB and Society*; Springer: Berlin/Heidelberg, Germany, 2024; pp. 239–262.
23. McKitrick, R. Double dividend environmental taxation and Canadian carbon emissions control. *Can. Public Policy/Anal. De Polit.* **1997**, *23*, 417–434. [CrossRef]
24. Jennings, J.; Kim, J.M.; Lee, J.; Taylor, D. Measurement error, fixed effects, and false positives in accounting research. *Rev. Account. Stud.* **2024**, *29*, 959–995. [CrossRef]
25. Ikeokwu, Q.; Micha, L.C.; Umobong, A.A. Creative Accounting and Financial Performance of Quoted Nigerian Manufacturing Companies. *GPH-Int. J. Bus. Manag.* **2024**, *7*, 21–49. [CrossRef]
26. Goulder, L.H. Environmental taxation and the double dividend: A reader's guide. *Int. Tax Public Financ.* **1995**, *2*, 157–183. [CrossRef]
27. Watts, R.L.; Zimmerman, J.L. Positive accounting theory: A ten year perspective. *Account. Rev.* **1990**, *65*, 131–156. Available online: https://www.jstor.org/stable/247880 (accessed on 19 June 2024).
28. Mamatzakis, E.; Pegkas, P.; Staikouras, C. The impact of debt, taxation and financial crisis on earnings management: The case of Greece. *Manag. Financ.* **2023**, *49*, 110–134. [CrossRef]
29. Floropoulos, S.; Tsipouridou, M.; Spathis, C. Book-Tax Conformity and Earnings Management: A Research Agenda. *Forthcom. J. Int. Account. Audit. Tax.* **2023**, *54*, 100603. [CrossRef]

30. Wang, S.; Chen, S. The motivation for tax avoidance in earnings management. In Proceedings of the International Conference on Engineering and Business Management, Shanghai, China, 26–28 March 2012; pp. 447–450.
31. Delgado, F.J.; Fernández-Rodríguez, E.; García-Fernández, R.; Landajo, M.; Martínez-Arias, A. Tax avoidance and earnings management: A neural network approach for the largest European economies. *Financ. Innov.* **2023**, *9*, 19. [CrossRef]
32. Zhang, J.; Han, S.; Shan, J. An Empirical Analysis of the Impact of Environmental Protection Tax on Corporate Earnings Management. *Mob. Inf. Syst.* **2022**, *2022*, 5298873. [CrossRef]
33. Wang, Y.; Guo, L.; Tu, J.; Huang, Y.; Ye, B. How environmental protection tax affect corporate earnings management—Evidence from Chinese manufacturing industry enterprises. *Highlights Bus. Econ. Manag.* **2023**, *16*, 34–43. [CrossRef]
34. Liu, W.; Cheng, X. The Impact of the Environmental Protection Tax Law on Earnings Management. *Adv. Econ. Manag. Res.* **2023**, *7*, 99. [CrossRef]
35. Udemba, E.N.; Agha, C.O. Abatement of pollutant emissions in Nigeria: A task before multinational corporations. *Environ. Sci. Pollut. Res.* **2020**, *27*, 26714–26724. [CrossRef]
36. Abaje, I.; Bello, Y.; Ahmad, S. A review of air quality and concentrations of air pollutants in Nigeria. *J. Appl. Sci. Environ. Manag.* **2020**, *24*, 373–379. [CrossRef]
37. Echendu, A.J.; Okafor, H.F.; Iyiola, O. Air Pollution, Climate Change and Ecosystem Health in the Niger Delta. *Soc. Sci.* **2022**, *11*, 525. [CrossRef]
38. Manukaji, I.J. Corporate governance and income smoothing in the Nigerian deposit money banks. *Int. J. Bus. Law Res.* **2018**, *6*, 27–38.
39. Ekadjaja, A.; Chuandra, A.; Ekadjaja, M. The impact of board independence, profitability, leverage, and firm size on income smoothing in control of agency conflict. *Dinasti Int. J. Educ. Manag. Soc. Sci.* **2020**, *1*, 388–399. [CrossRef]
40. Jam'ah, M.; Seomitra, A.; Daulay, A.N. The Effect of Profitability and Solvency on Income Smoothing with Good Corporate Governance as a Moderating Variable at Pt Bank Muamalat Indonesia in 2018–2022. *Ekombis Rev. J. Ilm. Ekon. Dan Bisnis* **2024**, *12*, 11–28. [CrossRef]
41. Kovermann, J.; Velte, P. The impact of corporate governance on corporate tax avoidance—A literature review. *J. Int. Account. Audit. Tax.* **2019**, *36*, 100270. [CrossRef]
42. Rakia, R.; Kachouri, M.; Jarboui, A. The moderating effect of women directors on the relationship between corporate social responsibility and corporate tax avoidance? Evidence from Malaysia. *J. Account. Emerg. Econ.* **2024**, *14*, 1–24. [CrossRef]
43. Adeneye, Y.B.; Fasihi, S.; Kammoun, I.; Albitar, K. Does earnings management constrain ESG performance? The role of corporate governance. *Int. J. Discl. Gov.* **2024**, *21*, 69–92. [CrossRef]
44. Sugiyanto, S.; Febrianti, F.D. The effect of green intellectual capital, conservatism, earning management, to future stock return and its implications on stock return. *Indones. Account. Rev.* **2021**, *11*, 93. [CrossRef]
45. Febrianti, F.D.; Sugiyanto, S.; Fitria, J.R. Green Intellectual Capital Conservatism Earning Management, to Future Stock Return as Moderating Stock Return (Study of Mining Companies in Indonesia Listed on Idx for the Period of 2014–2019). *Account. J. Binaniaga* **2020**, *5*, 141–154. [CrossRef]
46. Lei, Y.; Yan, Y.; Chen, C.; Luo, T.; Wang, Y.; Wu, H. Can enterprise green transformation inhibit accrual earnings management? Evidence from China. *Heliyon* **2024**, *10*, e23783. [CrossRef]
47. Makpotche, M.; Bouslah, K.; M'Zali, B. Corporate governance and green innovation: International evidence. *Rev. Account. Financ.* **2024**, *23*, 280–309. [CrossRef]
48. Lestari, K.C.; Soewarno, N. Do female directors influence firm value? The mediating role of green innovation. *Gend. Manag. Int. J.* **2024**, *39*, 255–273. [CrossRef]
49. Bala, H.; Amran, N.A.; Shaari, H. Audit committee attributes and cosmetic accounting in Nigeria: The moderating effect of audit price. *Manag. Audit. J.* **2020**, *35*, 177–206. [CrossRef]
50. Bayaga, A. Multinomial Logistic Regression: Usage and Application in Risk Analysis. *J. Appl. Quant. Methods* **2010**, *5*, 288.
51. Eckel, N. The income smoothing hypothesis revisited. *Abacus* **1981**, *17*, 28–40. [CrossRef]
52. Almeida, J.E.F.d.; Sarlo Neto, A.; Bastianello, R.F.; Moneque, E.Z. Effects of income smoothing practices on the conservatism of public companies listed on the BM & FBOVESPA. *Rev. Contab. Finanças* **2012**, *23*, 65–75. [CrossRef]
53. Atik, A. Detecting income-smoothing behaviors of Turkish listed companies through empirical tests using discretionary accounting changes. *Crit. Perspect. Account.* **2009**, *20*, 591–613. [CrossRef]
54. Shaheen, R.; Luo, Q.; Bala, H. Female CEO succession and corporate social disclosure in China: Unveiling the significance of ownership status and firm performance. *Environ. Sci. Pollut. Res.* **2023**, *30*, 14223–14239. [CrossRef]
55. Jiang, T.; Zhang, Y.; Jin, Q. Sustainability efficiency assessment of listed companies in China: A super-efficiency SBM-DEA model considering undesirable output. *Environ. Sci. Pollut. Res.* **2021**, *28*, 47588–47604. [CrossRef]
56. Black, B.; De Carvalho, A.G.; Khanna, V.; Kim, W.; Yurtoglu, B. Corporate governance indices and construct validity. *Corp. Gov. Int. Rev.* **2017**, *25*, 397–410. [CrossRef]
57. Saleem, I.; Khan, M.N.A.; Hasan, R.; Ashfaq, M. Corporate board for innovative managerial control: Implications of corporate governance deviance perspective. *Corp. Gov. Int. J. Bus. Soc.* **2021**, *21*, 450–462. [CrossRef]
58. Aminu, I.M.; Shariff, M.N.M. Strategic orientation, access to finance, business environment and SMEs performance in Nigeria: Data screening and preliminary analysis. *Eur. J. Bus. Manag.* **2014**, *6*, 124–132.

59. Bala, H.; Al-Absy, M.S.M.; Ya'u, A.; Abdullahi, M.; Sani, A.A.; Khatoon, G.; Mustapha, U.A.; Musa, B. The Effect of Environmental Taxes on Environmental Accounting Disclosure of Nigerian Oil and Gas Companies. *Int. J. Energy Econ. Policy* **2024**, *14*, 477–483. [CrossRef]
60. Won, N.C.; Wan, C.Y.; Sharif, M.Y. Effect of leadership styles, social capital, and social entrepreneurship on organizational effectiveness of social welfare organization in Malaysia: Data screening and preliminary analysis. *Int. Rev. Manag. Mark.* **2017**, *7*, 117–122.
61. Aguilera, E.; Lucena, R.; Cárdenas, S.; Valcárcel, M.; Trullols, E.; Ruisánchez, I. Robustness in qualitative analysis: A practical approach. *TrAC Trends Anal. Chem.* **2006**, *25*, 621–627. [CrossRef]
62. Ullah, S.; Akhtar, P.; Zaefarian, G. Dealing with endogeneity bias: The generalized method of moments (GMM) for panel data. *Ind. Mark. Manag.* **2018**, *71*, 69–78. [CrossRef]
63. Agarwala, N.; Pareek, R.; Sahu, T.N. Does board independence influence CSR performance? A GMM-based dynamic panel data approach. *Soc. Responsib. J.* **2023**, *19*, 1003–1022. [CrossRef]
64. Shira, R.K. Connection between corporate diversification, CSR and firm performance in South Asia. *J. Econ. Adm. Sci.*. [CrossRef]
65. Ganda, F. The environmental impacts of financial development in OECD countries: A panel GMM approach. *Environ. Sci. Pollut. Res.* **2019**, *26*, 6758–6772. [CrossRef]
66. Cao, Y.; Liu, J.; Yu, Y.; Wei, G. Impact of environmental regulation on green growth in China's manufacturing industry–based on the Malmquist-Luenberger index and the system GMM model. *Environ. Sci. Pollut. Res.* **2020**, *27*, 41928–41945. [CrossRef]