

ENVIRONMENTAL ACCOUNTING PRACTICE DETERMINANTS AND FIRMS' SUSTAINABLE GROWTH IN NIGERIA

Mofehintolu Tony AKINNOLA

Postgraduate Student, Department of Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria
akinnolamofehintolu@gmail.com

Olusola Esther IGBEKOYI (PhD)

Department of Accounting, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria.

Orcid: <https://orcid.org/0000-0001-9887-3755>

Elijah Oladeji OLADUTIRE (PhD)

Department of Accounting, Adekunle Ajasin University, Akungba Akoko, Ondo State

Abstract

The global economic development increased business activities that result in environmental impacts which affects negatively the social, economic and ecological well-being of the society. This study examined the effect of environmental accounting disclosure practice determinants on firms' sustainable growth in Nigeria. The study is longitudinal research design, using descriptive statistics and panel data regression analysis on the secondary data provided by the census sampling that focused on the 45 firms listed in the industrial goods, consumer goods, and oil and gas sectors of the Nigerian Stock Exchange Group covered 10 years period of 2014 to 2023. The study revealed that board nationality diversity showed positive and insignificant effect on the sustainable growth of firms; profitability exhibited positive and significant effect; leverage shows negative and insignificant effect; while regulatory requirements has negative and significant effect. The study concludes that companies achieve sustainable growth when they are profitable with enough resources to fund environmental accounting disclosure. That heightened pressure to adopt eco-friendly technologies can adversely affect the sustainable growth of business. It is therefore recommended that management should make effort to improve their profitability that will boost the returns on assets and environmental disclosure effort.

Keywords: Environmental impacts, Environmental accounting disclosure practice determinants, Firms' sustainable growth, Eco-friendly technologies

1. Introduction

The global economic development efforts have put more pressure on firms and increased business activities, putting substantial pressure on ecosystems and natural resources, thereby leading to environmental impacts, such as; degradation, pollution, and ozone layer depletion (Angela & Handoyo, 2021). These environmental impacts have negatively affected the social, economic and ecological well-being of the society due to injection of hazardous components into the ecological and societal environment (Igbekoyi et al., 2021). These have

caused anti-social and societal unrest due to protests by civil society groups and indigenous people (Nwanwu, 2022). The impression of these adverse effects on stakeholders necessitated the demand for more accounting information disclosures in conformity with global best business practices (Atang & Eyisi, 2020). Hence, the need for disclosure of information on environmental activities that will mitigate the adverse environmental impacts of business operations (Zayol et al., 2021). This current change in accounting information needs of stakeholders and the move to respond to sustainability in the business world have led most corporations to be socially, ecologically, and humanitarially responsive (Ji et al., 2022).

Environmental accounting has become necessary because the traditional accounting system which handles most environmental costs as overhead costs, is reasonably insufficient in providing managers with sufficient information for strategic decision making that will affect the business performance and the firm sustainability growth. Environmental accounting, therefore, aims at achieving sustainable development, maintaining a favourable relationship with the community and pursuing effective and efficient environmental conservation activities (Solikhah et al., 2021). This accounting information deals with operations, plans, ambitions, and public images in connection with the environment, employees, customers, and communities (Suileek & Alshurafat, 2022). Therefore, managers can use environmental reporting to enhance customer trust, lessen reputational risks, and create long term shareholders' value (Arumona et al., 2021). Based on the benefits of environmental reporting, it is clear that the advocates of environmental reporting are convinced that reporting is a crucial lever for change in the direction of improved environmental performance and in the longer term bring about eco-efficiency and firms' sustainable growth.

Despite the importance of environmental reporting, and society's heightened interest in many parts of the world, environmental reporting remains voluntary in Nigeria. The consequence of voluntary regime of the disclosure of environmental information especially in Nigeria, is that there are wide disparities in terms of the quality and quantity of environmental disclosures by firms (Nguyen et al., 2019). However, the decision whether a firm engages in environmental reporting or not was influenced by a lot of factors as documented in literature. These factors has been categorised into financial determinants (Dibia & Onwuchkwka, 2021), non-financial determinants (Hanan et al., 2020) and regulatory determinants (Mondal et al., 2023).

Board nationality diversity has potential influence on accounting disclosures, corporate decision making and sustainability due to its heterogeneous characteristics (Githagia & Kosgei, 2020). This will fosters better understanding of the global business trends and behaviour,

creativity in problem solving, guarantee good corporate governance practices, and supportive to environmental accounting disclosures and firms' sustainable growth (Agyemang et al., 2020). Rabi (2021) asserted that board nationality diversity positively influence environmental accounting disclosures. Profitability drives business enterprise and show that the company's has good prospects for carrying out and on its business (Rujjin & Sukirman, 2020). The more profitable businesses are, the more ambitious they are to satisfy the information needs of their stakeholders, especially those who hold control over the companies' resources and sustainability (Nguyen et al., 2024). Therefore, companies with profitability often devote financial resources to disclose more environmental information than others (Salvation et al., 2022).

Companies with a high level of leverage indicates that the capital is derived more from debt than the company's equity. They are more inclined to build good relations with multiple stakeholders by disclosing more social and environmental accounting information to keep them abreast about operating performance (Chowdhury et al. 2020; Fahd & Nidheesh, 2020). Regulatory requirements play a crucial role in determining environmental accounting disclosures by setting standards and mandates for how companies should report their environmental impacts and sustainability practices (Sendawula et al., 2021). The requirements ensure that companies provide more detailed and reliable environmental information. To ensure compliance with these requirements, regulatory bodies were established. Hence, there is need to treat environmental disclosure as fundamentals rather than alternative data in published annual reports (Amaechi & Nwankwoke, 2020).

In Nigeria, past studies concentrated on the factors influencing environmental accounting. Sabo (2020) examined the determinants of environmental accounting disclosure of listed Oil and Gas firms in Nigeria. The study showed that profitability has negative and significant effect on environmental information disclosure while audit firm type and firm size have positive and significant effect on environmental accounting disclosure and leverage has insignificant effect. Nevertheless, the study did not look at how these determinants affect the firm performance. Similarly, Gbemigun (2024) investigated corporate environmental disclosure determinants and financial performance of selected listed manufacturing firms in Nigeria. The study revealed that industry type and firm size were significant with a direct effect on return on assets, while financial leverage was significant with an indirect effect on return on assets. This study was limited to the relationship between environmental accounting disclosure practice determinants and firm's financial performance. Therefore, this study focuses on how environmental accounting disclosure practice determinants affect firms' sustainable growth in

Nigeria. Firms' sustainable growth unlike financial performance is a long-term goal of firms. Hence, this study tend to reveal how the environmental accounting disclosure practice determinants can affect firms' capacity to grow in a balance and stable manner, ensuring survival and competitiveness in the market.

The broad objective of this study is to examine the effect that environmental accounting disclosure practice determinants have had on firms' sustainable growth in Nigeria. The study's specific goals look into how the firms' sustainable growth is affected by the board nationality diversity, profitability, leverage, and regulatory requirements. Nigerian organizations and general public would be able to discover that these determinants will foster firms' sustainable growth. It provides empirical evidence that firms can employ these determinants to improve sustainable growth. In addition, it will serve as a blueprint for Nigeria's future environmental accounting disclosure regulations. It will increase the body of current literatures on the environmental accounting disclosure practice determinants and firms' sustainable growth in Nigeria.

2. Literature Review

This section encompasses conceptual review, theoretical review, empirical review, and identified gaps in literatures.

2.1. Conceptual Review

This subsection offers conceptual viewpoints on the dependent and independent variables pertinent to this study.

2.1.1 Firm Sustainable Growth

Firm sustainable growth focuses on the firm's ability to continue, grow and expand its business while maintaining the necessary funding sources (Madbouly, 2022). Firm can maintain and increase its performance without financial problems or distress. Sustainable growth is essential for a firm's survival and expansion in the current competitive business market without running into financial problems (Sunday & Godspower, 2022). That is, firm sustainable growth is the realistically attainable growth that a company could maintain without financial stress. It combines the operating elements (profit margin and asset efficiency), financial elements (capital structure and retention rate) and also soft resources, such as intellectual capital, innovation, and board diversity into one comprehensive measure (Anwar et al., 2018; Ge et al., 2018; Ain et al., 2021; Al-Slehat & Altameemi, 2021).

Companies can achieve sustainability growth if they are not only profit-oriented but also pay attention to the impact of the company's operations on the environment and various stakeholders (Ariyani & Hartomo, 2018). Sustainable growth provides an analytical framework

to help determine which elements of the management, companies' operational and financial structures that should be focused on (Chen, et al., 2021). Strategic planning that addresses political constraints, environmental impacts, limits on leverage and dividend payments that can help a company sustain its growth will evolve. This will help companies in crisis, such as, COVID-19 pandemic, where the priority should be to reduce the impact of the pandemic on companies' performance and sustainability (Nor et al., 2020). Therefore, faster sustainable growth would burden the company's limited asset base, making the underlying capital structure riskier while too slow sustainable growth can limit the confidence of investors and interest groups and create lost opportunities (Ginting, 2019). Hence, environmental accounting disclosure is a vital tool for sustainability (Shakkour et al., 2018).

In this study, firms' sustainable growth is proxy by sustainable growth rate. This measure the maximum rate a business can grow using its internal resources without external financing. Kumar (2018) claimed that sustainable growth rate can be computed as the product of return on equity and retention rate. Return on equity is the percentage of company's earnings in relation to shareholders equity while retention rate is the percentage of company's earning an organisation retain or keeps for future growth. The choice of this rate attempts to appraise firm's capacity to grow on the long-run in a balance and stable manner, ensuring survival and competitiveness of firm in the market.

2.1.2 Environmental Accounting Disclosure Practice Determinants

Environmental accounting disclosure practice is the production of financial and non-financial information of an organisation's environmental impacts for a particular accounting period to stakeholders as a form of stewardship responsibility (Solomon, 2020). In this study, Environmental accounting disclosure practice determinants are proxies with: Board Nationality Diversity, Profitability, Leverage, and Regulatory Requirements. These determinants are itemized in the measurement of variables in the methodology section of this work.

2.1.2.1 Board Nationality Diversity

The board of directors consist of both executive and non-executive directors that play crucial roles in the alignment of corporate behaviour, ensuring compliance with legal framework and maintaining credibility in the eyes of stakeholders through proper and timely accounting information disclosures (Khatib et al., 2021). The effectiveness of board depends on its composition. Board nationality diversity reflect heterogeneous characteristics, which lead to dissimilar leadership, thinking, emotional styles and even risk preferences and behaviours (Githagia & Kosgei, 2022). This fosters better understanding of the stakeholders' claims, global business trends and behaviour, creativity in problem solving, contribute

additional value to the intended expansion of the company, conveys a good impression to foreign investors as a guarantee of good corporate governance practices, enhance the board's independence and transparency, make hypercritical decisions, and supportive to environmental reporting and firm sustainable growth (Okezie & Ihendinihu, 2019; Agyemang et al., 2020). Hence, board nationality diversity improves corporate decision making and sustainability (Salvation et al., 2022). It is measured as the proportion of foreign directors to total number of directors on the board (Ramzan et al., 2021).

In their study on corporate board demographic diversity and sustainability reporting, Anazonwu et al. (2018) and Rahma & Aldi (2020), showed that national diversity does not affect sustainability reporting disclosure because the citizenship status of the board is not a guarantee that there will be an increase in sustainability reporting disclosure. However, research conducted by Rabi (2021); Beji et al. (2020); and Masud et al. (2020) on the effects of foreign directors on environmental accounting disclosures revealed a positive and significant relationship between the presence of foreign directors on the board and the environmental accounting disclosures.

2.1.2.2 Profitability

Profitability is the company's ability to earn an excess revenue over associated expenses for an activity over a period of time (Oluwatuyi & Obafemi, 2023). It covers the firm's ability to manage and control resources at its disposal and indicates how well a firm is utilizing its resources to maximize the shareholders' wealth (Abdul-Khadir, et al., 2023). Profitability is the results obtained from management efforts on funds invested by firm owners (Anshori et al., 2020). It is the level of operational efficiency in the usage of assets to generate profits within a specific period (Khan et al., 2020). Hence, the more profitable businesses are, the more ambitious they are to satisfy the information needs of their stakeholders, especially those who hold control over the companies resources (Nguyen et al., 2024). It is measured as the ratio of net income to total assets (Madbouly, 2022). Hence, Sustainable growth of the firm is compatible with profitability.

Firms that have higher profitability often devote financial resources to disclose more environmental information than others (Salvation et al., 2022). Profitability has a positive and significant effect on company market value and sustainability (Sari & Sedana, 2020). Modugu (2017) claimed that profitability does not have any bearing with either mandatory or voluntary disclosures.

2.1.2.3 Leverage

Leverage is the level of the loan by company to perform its operational actions (Setiana & Hadianto, 2023). The comparison of the amount of assets and the amount of debt the company has (Jaunanda & Oktaviyanti, 2023). That is, it is the ratio of the total book value of debt to total assets. Financial leverage was employed in this study. Estiasih, et al. (2024) claimed that it is the extent to which a company uses debt funding to expand its production activities and how much profit it has to cover interest costs. Hence, a high level of leverage indicates that the capital structure of a firm is derived more from debt than company's equity.

Firms that have higher financial leverage are more inclined to build good relations with multiple stakeholders by disclosing more social and environmental information to keep them abreast about operating performance (Fahd & Nidheesh, 2020). Sylvia (2021), and Khuong et al. (2022) claimed that leverage negatively affects environmental accounting disclosure practice. However, studies by Markonah (2020), and Rokhmania & Kartika (2021) demonstrated a positive association. Meanwhile, Lestari & Harymawan (2020) and Sabila et al. (2021) cannot prove this relationship.

2.1.2.4 Regulatory Requirements

Regulatory requirements are rules, laws, or guidelines established by regulatory authorities that firms must follow to operate legally and ethically within a specific industry (Zhao & Qi, 2020). It plays a crucial role in determining environmental accounting disclosures by setting standards and mandates for how companies should report their environmental impacts and sustainability practices. It ensures that companies provide more detailed and reliable environmental impacts information. These regulations compel firms to innovate and adopt sustainable practices, impacting production processes, resource allocation, environmental responsibilities, and compliance costs which will ensure transparency and accountability that will help firms' mitigate their risks (Sendawula et al., 2021). Firms navigating these regulations face heightened pressures to reduce environmental impacts, adopt eco-friendly technologies, and ensure responsible resource usage (Fanjing, 2024). Hence, as environmental concerns grow, governments and regulatory bodies are likely to continue strengthening their requirements, pushing companies to provide more details environmental information. Therefore, log compliance cost was employed in this study to measure regulatory requirements.

In Nigeria, there are several regulatory requirements such as, National Environmental Standards and Regulation Enforcement Agency Act, 2007; Environmental Impact Assessment Act, 2004; Harmful Waste (Special Criminal Provisions) Act, 2004; Oil in Navigable Waters Act, 2004; Associated Gas Re-injection Act, 2004; Oil Pipelines Act, 2004 among others and

regulatory bodies, such as, National Environmental Standards and Regulation Enforcement Agency; National Oil Spill Detection and Response Agency; Federal Ministry of Environment; Directorate of Petroleum Resources; Nigerian Nuclear Regulatory Authority and Federal Ministry of Water Resources established to ensure compliance with these regulatory requirements.

2.2 Theoretical Review

This subsection offers theory that is pertinent to this study, that is, Legitimacy theory.

2.2.1 Legitimacy Theory

Dowling & Pfeffer (1975) proposed legitimacy theory from the concept of organizational legitimacy. They viewed organizational legitimacy as a condition or status which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part. Legitimacy theory relies on the fact that a social contract exist between an organization and the society in which it operates (Deegan et al., 2002). The society offers organizations legal rights and authorities to access natural and human resources that they need for their operations (Yaya et al., 2018). In exchange for the access of societal resources, organizations must continuously seek to comply with the community expectations to ensure their operations remain legitimate. Therefore, the corporate environmental disclosure practice is a response to economic, social and political pressures surrounding companies in their efforts to legitimize corporate existence and behaviours (Gray et al., 1995). When there is a disparity between the two value systems, there is a threat to the company's legitimacy (Ali & Hafez, 2014). Guthrie & Parker (1990) opined that if the legitimacy theory holds true, then corporations will react by disclosing more information when there are major social and environmental events.

Consequently, firms ensure that they operate within the bounds and norms of the societies they operate in and legitimize their actions by engaging in corporate social disclosure to obtain approval from the society and thus guarantee their sustainability. Environmental accounting disclosure helps to manage corporate image and minimize their exposure to social and political risks which if not properly handled, will cost the company heavily and also affect the stake of investors (Zayol, 2021). Hence, by disseminating environmental information, the business demonstrates its legitimacy in the eyes of the public, which is necessary for the firm to justify its existence in the eyes of society (Deegan, 2002). The theory provides useful insights for corporate social and environmental disclosures (Gehan & Naser, 2015). Notwithstanding, legitimacy theory fails to specify the theory adequately. For example, a company with legitimacy threats may legitimate its activities by adapting its output, goals and business

operation to conform to prevailing definitions of legitimacy. The companies may seek to achieve legitimacy by appearing to be ethical when this appearance may have little resemblance with the actual environmental performance of the companies.

This study is anchored on legitimacy theory because management must react to environmental issues (community expectations and changes) to gain acceptance of the society and survival of their firm (Ofoegbu & Megbuluba, 2016). Hence, it provides a more comprehensive viewpoint on corporate social disclosure as it clearly recognizes that organizations are bound by the social contract to perform various socially desired actions in return for approval of their objectives, which guarantees their continued existence and their successful operations.

2.3. Empirical Review

The empirical review will be constructed by considering several recent studies that have determined the roles that the independent variables played on the dependent variable.

2.3.1 Board Nationality Diversity and Firm Sustainable Growth

EmadEldeen et al. (2025) examined the impact of board diversity on sustainability performance in UK-listed companies over a 20-years period (2002–2021) using data from 1814 companies. The study used multi-theoretical approach and applied regression model. This research revealed that board nationality diversity positively impacted sustainability of companies. The study provided practical guidance for companies looking to improve board diversity for better firm's sustainability. However, the study covered a period ended 2021, even though the work is published in 2025, the time lag requires an update in literature in order to allow for sufficient reliable and valid findings.

Adediran (2023) examined board of director nationality and the financial performance of listed insurance firms in Nigeria. A sample of forty two listed insurance firms for the period 2010 to 2021 was selected. Data was analysed using descriptive statistics and panel ordinary least squares estimation method. Findings revealed that board nationality exerted a negative and non-significant impact on the insurance firms' financial performance. The study provided empirical nexus between board nationality diversity and financial performance, thus, further research is needed to ascertain how board nationality diversity will impact the sustainability of non-financial quoted companies in Nigeria.

Alshareef & Sulimany (2024) investigated the effects of board gender and foreign directorship on the financial sustainability of 103 Saudi non-financial listed companies from 2013 to 2022.

The panel data was analysed using regression model and generalized method of moments (GMM) was used for robust test. The research findings suggest a strong and positive effect of foreign directorship on financial sustainability, consistent with the resource dependency view and agency theory. The paper sparked a greater discussion and improved readers' understanding on the effects of board gender and foreign directorship on firm sustainable growth. However, this study is foreign to Nigeria economy. Consequently, future research might concentrate on Nigeria economy in order to allow for better relevancy.

Due to this inconclusive, this study proposed to test the hypothesis below:

Ho₁: Board nationality diversity has no significant influence on firms' sustainable growth in Nigeria.

2.3.2 Profitability and Firm Sustainable Growth

Alfando & Apriani (2021) examined the effect of profitability on firm sustainable growth in Malaysian and Indonesian manufacturing firms using regression analysis on the secondary data provided by the purposively selected companies from years 2016 to 2018. The outcome indicated that the profitability of the firm significantly influenced the firm's sustainable growth. This research implied that manager in manufacturing firms may boost the profit to achieve sustainable growth by Indonesian companies over 3 years. However, the study covered a period ended year 2018, even though the work was published in year 2021, the time lag requires an update in literature in order to yield a more reliable result and generalisation.

Rahim et al. (2021) investigated the corporate factors affecting sustainable growth rate of firms listed on the Malaysian Stock Exchange from 2007 to 2016. An expo-facto survey design and data collected was analysed with structural equation model (SEM). Based on the results, profitability is positively and significantly related to sustainable growth rate. This is in agreement with the empirical result of Manaf et al. (2018) that the firm generate profits may be used for investment opportunities and thereby increase the sustainability of the firms. The research demonstrated how profitability influenced sustainable growth rate of firms listed on the Malaysian Stock Exchange market. However, this study is foreign to Nigeria economy, hence, future research need concentrate on Nigeria economy.

Ozele & Agbo (2023) examined the effect of firm characteristics determinants on sustainable growth of listed industrial goods firms in Nigeria for a 10-years period ranging from 2011 to 2020. An expo-facto and non-experimental research design. The study conducted panel least square regression on the secondary data collected on the 14 industrial products companies

listed on the Nigerian Exchange Group (NGX). Findings from the analysis revealed that profitability have a negative insignificant effect on sustainable growth. The study had a limited industrial emphasis, revealed the relationship between firm characteristics determinants and firm sustainable growth. Therefore, more research is needed to look at different sectors in order to get a more thorough generalization.

Based on these empirical studies inconclusiveness, the second hypothesis is formulated as follows:

Ho₂: Profitability has no significant effect on firms' sustainable growth in Nigeria.

2.3.3 Leverage and Firm Sustainable Growth

Mamilla (2019) analysed the effect of financial leverage on firm sustainable growth rate (SGR). An expo-facto survey design, secondary data was sourced from the sampled companies' annual reports and was analysed with descriptive and inferential statistics. The study found that financial leverage had a significant negative relationship with SGR in consonant with the study of Vukovic et al. (2022). The sampled companies were more dependent on debt, creating an adverse leverage effect with less flexibility to meet their financial obligations. The study helps companies that need a permanent capital structure to use their financial leverage in the best possible way. Further research is needed on companies that are not dependent on debt to provide a more comprehensive picture and generalisation.

Madbouly (2022) examined the effect of firm performance accounting indicators on the Sustainable Growth Rate (SGR) of firms listed in the Egyptian Stock Market for 5 years period from 2015 to 2019. An expo-facto survey design and data collected was analysis using descriptive and Pearson Correlation statistics. The empirical results found statistically positive and significant relationships between SGR and firms' leverage. The study offered empirical proof that leverage affect Sustainable Growth Rate (SGR) of firms listed in the Egyptian Stock Market. However, a further research could delve deeper into longer period to allow for better validity of the findings.

Mukherjee & Sen (2018) analysed the association of liquidity (Cash Flow Ratio), profitability and leverage with sustainable growth rate of 115 companies listed in NSE in Indian and covered a period of five years from 2010 to 2014. Data was analysed by Pooled OLS regression. The findings of the study revealed that there is a significant positive relationship of liquidity, profitability and leverage with sustainable growth rate of the firm. The paper improved readers' understanding on the effects of liquidity, profitability and leverage on firm sustainable growth. However, this study is foreign to Nigeria economy. Consequently, future research might concentrate on Nigeria economy in order to allow for better relevancy.

To verify the truism of the above findings, the following hypothesis is proposed:

Ho₃: Leverage has no significant effect on firms' sustainable growth in Nigeria.

2.3.4 Regulatory Requirements and Firm Sustainable Growth

Nosike et al. (2021) examined the relationship between regulatory requirements and performance of pharmaceutical companies in Anambra State, Nigeria. The study was descriptive survey research design, used census sampling technique on the entire sixty-three healthcare products manufacturers in Awka metropolis. Data was analysed using descriptive and inferential statistics. The results showed that regulatory requirements had a negative significant effect on organizational performance. The study provided empirical nexus between regulatory requirements and performance of pharmaceutical companies, thus, further research is needed to ascertain how regulatory requirements affect the long-term performance of pharmaceutical quoted companies in Nigeria.

Wang et al. (2021) studied the effect of environmental regulation on firm's performance with evidence from Chinese cement industry. This paper used regression model to analyse the data derived from purposively sampled listed cement industries in china. They found that environmental regulation has negative effects on firms' performance. The study offered empirical proof that environmental regulation influenced firms' performance in China. However, this study is foreign to Nigeria economy. Consequently, future research might concentrate on Nigeria economy in order to allow for better relevancy and be extended to cover long-term performance of this industry.

Liu et al. (2022) investigated the short pain and long gain effect of environmental regulation on financial performance of Chinese listed polluting firms. This paper quantitatively analysed the current and lagged effect of environmental regulation on financial performance, based on the data of 361 highly polluting A-shares firms and 936 mildly polluting A-shares firms in China. The result revealed that environmental regulation exerts a negative effect on the financial performance of polluting firms in the short run and a positive effect in the long run. Therefore, the findings are mixed. However, this study revealed the empirical nexus between regulatory requirements and financial performance. Hence, further research is needed to ascertain how regulatory requirements influenced the long-term performance of Chinese listed polluting firms.

Wu et al. (2023) investigated the influence of environmental regulations on the financial performance of 182 listed petrochemical companies in China from 2011-2021. The data was analysed using descriptive statistics and regression model. The results indicated that environmental regulations have a significant positive effect on the financial performance of

petrochemical companies. This study revealed the relationship between environmental regulations and financial performance. Hence, further research is needed to ascertain how regulatory requirements affect the sustainable growth of listed petrochemical companies in China.

Consequently, the reviewed literatures present mixed findings, this creates room for further studies to validate existing findings in other context. Thus in this context, it was proposed to test the hypothesis below:

Ho₄: Regulatory Requirements has no significant effect on firms’ sustainable growth in Nigeria.

2.4. Gap in Literature

Based on the empirical review of literatures, the results show conflicting and inconclusive findings, making it imperative for a similar study to be conducted in a developing economy (like Nigeria). Therefore, this study focuses on how environmental accounting disclosure practice determinants affect firms’ sustainable growth in Nigerian listed industrial goods, consumer goods, oil and gas sectors of the Nigerian Stock Exchange because of their direct operational impacts on the environment and their significant to the country's economy. Firm sustainable growth unlike financial performance is a long-term goal of firms. This study tend to reveal how the environmental accounting disclosure practice determinants can affect firms’ capacity to grow in a balance and stable manner, ensuring survival and competitiveness in the market. Also, it can be observed in the reviewed literatures that none-of the studies have Board Nationality Diversity joint nexus between board nationality diversity, profitability, leverage, regulatory requirements and firms’ sustainable growth in Nigerian.

2.5. Conceptual Framework

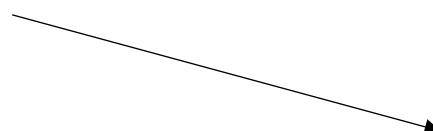
The conceptual framework reveals the nexus between the independent and dependent variables. Figure 1 illustrates the study's focus on the dependent variable, firms’ sustainable growth proxy with sustainable growth rate and independent variables, environmental accounting disclosure practice determinants proxies with: board nationality diversity, profitability, leverage, and regulatory requirements used in the investigation.

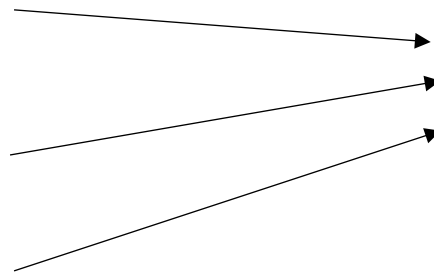
Figure 1:

Conceptual framework

Independent Variable

Dependent Variable





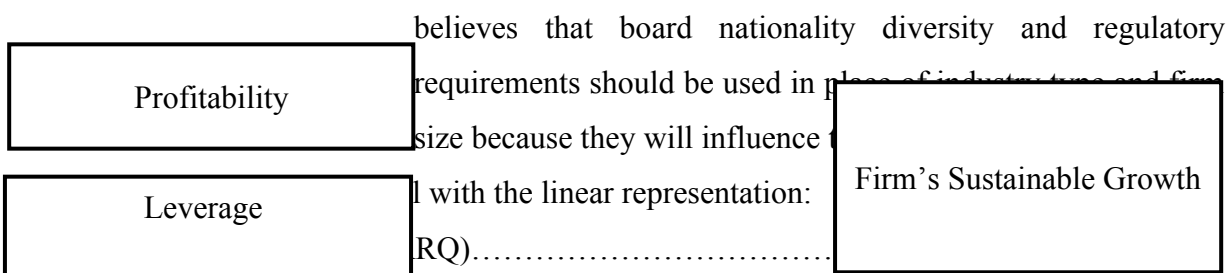
Source: Researcher’s Design (2025)

3. Methodology

Longitudinal research design was employed because it will assist in determining the influence of environmental accounting disclosure practice determinants on firms’ sustainable growth in Nigeria. The study focussed on the 45 firms listed in the industrial goods, consumer goods, and oil and gas sectors of the Nigerian Stock Exchange because of their direct operational impacts on the environment. Data were collected from their annual audited reports over a period of 2014 to 2023 and were analysed using descriptive and panel regression statistics.

3.1. Model Specification

This research adapted the model of Gbemigun (2024) on corporate environmental disclosure determinants and financial performance in Nigeria. However, this study modified the model by substituting sustainability growth rate as a stand-in for financial performance as a long-term goal of firm. To make this model robust and meet its objectives, the researcher



The model for econometrics will therefore be:

$$SGR_{it} = \beta_1 BND_{it} + \beta_2 PRO_{it} + \beta_3 LEV_{it} + \beta_4 RRQ_{it} + \varepsilon_{it} \dots \dots \dots (2)$$

- where: SGK = Sustainable Growth Rate
- BND = Board Nationality Diversity.
- PRO = Profitability.
- LEV = Leverage.
- RRQ = Regulatory Requirements

i = Company script

t = Year script

ϵ_{it} = Oversight script or error term

β_0 = constant/intercept;

$\beta_1 - \beta_5$ = slope of the independent elements

The *a priori* expectations were predicted as: $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0$, and $\beta_4 > 0$.

Table 1: Variables Descriptions

S/N	Variables	Descriptions	Measurements	Sources
1.	Sustainable Growth Rate	A firm growth rate without financial challenges.	Measured as the product of return on equity and retention rate.	Kumar (2018)
2.	Board Nationality Diversity	It is the foreign directors in the board.	The proportion of foreign directors to total number of directors on the board.	Ramzan et al.(2021)
3.	Profitability (2022)	It indicates how well a firm is utilizing its resources to maximize the shareholder's wealth.	Measured as the ratio of net income to total assets.	Madbouly
4.	Leverage	It is a comparison of the amount of assets and the amount of debt the company has	Measured as the ratio of total debt to total assets.	Jaunanda & Oktaviyanti (2023).
5.	Regulatory Requirements	These are rules established by regulatory authorities that firms must follow.	log compliance cost	Zhao & Qi (2020)

Source: Author's Compilation (2025)

4. Data Analysis and Discussion of Findings

4.1. Descriptive Statistics

The descriptive analysis of variables is reported in Table 2. The results shows that sustainable growth rate (SGR) of the firms sampled on the average is -0.675 with standard deviation of 0.510, this indicate that sustainable growth rate of the firms has negative trend.

The standard deviation value shows that there is moderate variability in the rate of growth across the sampled firms while the standard error of mean implied that the sample mean is a reflection of the actual population having a small value close to zero (0) indicating 0.025. Firms with the min growth has -4.110 while the maximum sustainable growth recorded is 6.374 which imply sustainable growth is positive for some firms. The total sum of sustainable growth rate is -373.43 and the data is positively skewed and have abnormal distribution.

In addition, Table 2 shows that BND, PRO, LEV, and RRQ for sampled firms are on the average of 0.212, 0.089, 0.123, and 0.352 with standard deviation of 0.211, 0.105, 0.197 and 1.213 respectively. The standard deviation values showed that there are low variability across the sampled firms for PRO, moderate for BND and LEV but high for RRQ. The standard error of mean of 0.010, 0.005, 0.010 and 0.059 for the independent variables implied that the sample means are reflection of the actual population having a small value compared to their mean respectively. Furthermore, firms with the least BND, PRO, LEV and RRQ has 0 while the firms with the maximum has 0.875, 0.543, 0.985 and 6.446 respectively. The total sum by all the sampled firms of these proxies are 88.369, 37.188, 51.205 and 146.243 which showed that the data were positively skewed while kurtosis revealed that only BND is normally distributed at 2.106 value.

Table 2: Descriptive Statistics

Stats	SGR	BND	PRO	LEV	RRQ
Mean	-0.675	0.212	0.089	0.123	0.352
S.D	0.510	0.211	0.105	0.197	1.213
Se(mean)	0.025	0.010	0.005	0.010	0.059
Min	-4.110	0.000	0.000	0.000	0.000
Max	6.374	0.875	0.543	0.985	6.446
Sum	-373.43	88.369	37.188	51.205	146.243
Skewedness	2.912	0.558	2.649	2.647	3.433
Kurtosis	15.396	2.106	10.847	10.697	13.752

Source: Author’s Computation (2025)

4.2. Correlation Analysis

Table 3 shows the results of a pairwise correlation coefficient test to determine the linear relationship between environmental accounting disclosure practice determinants and firms’ sustainable growth. The data revealed a direct and insignificant relationship between sustainable growth rate (SGR) and board nationality diversity (BND), as evidenced by the coefficient value 0.0149 and probability of 0.7623. Furthermore, the firms has a positive and

significant correlation between profitability (PRO) and sustainable growth (SGR), having coefficient value of 0.2411* indicating an increase in profitability will results to 24.11 percent increase in the growth of firms. In addition, Table 3 shows an inverse linear association between listed firms leverage and their growth evidenced by a coefficient of -0.0227 and p-value of 0.6445. Likewise, the relationship between regulatory requirements and sustainable growth having coefficient value of -0.0936 and p-value of 0.0565.

The overall implication of this relationships is that among the determinants of environmental accounting disclosure practice, only board nationality diversity and profitability of firms will bring improvement in business sustainable growth.

Table 3: Correlation Analysis of Study Variables

Variables	SGR	BND	PRO	LEV	RRQ
SGR	1.0000				
BND	0.0149 (0.7623)	1.0000			
PRO	0.2411* (0.000)	-0.1389* 0.0045	1.0000		
LEV	-0.0227 0.6445	-0.0416 0.3972	0.2171 *	1.0000	
RRQ	-0.0936 0.0565	0.1529* (0.0018)	0.0013 8	0.0926 (0.0592)	1.0000

Source: Author’s Computation (2025)

4.3. Pre and Post-Estimation Tests

4.3.1. Pre-Estimation Tests

Panel Unit Root Test of the Variables

Panel variables have the tendency of been non-stationary at level which may likely affect the parameter stability and consistency of the model. However, in order to identify the stationary conditions of the variables, the study uses Phillips-Perron unit-root test. The null hypothesis assumption of the unit root test is that all panels contain unit roots while the alternate

hypothesis implies that some panels are stationary. The results of unit root tests were displayed in Table 4. It shows that all the variables are integrated of order zero, that is, $I(0)$ which is significant at 5 percent level of significance. Therefore, we reject the null hypothesis and conclude that the series is stationary. Therefore, it is not necessary to conduct the co-integration test in order to determine the long run relationship among the variables.

Table 4: Panel Unit Root Test

Variable	Phillips-Perron unit-root test	
	Statistics	P-value
SGR	19.4870	0.0000
BND	3.1184	0.0009
PRO	2.8820	0.0020
LEV	3.1401	0.0008
RRQ	8.0091	0.0000

Source: Author’s Computation (2025)

4.3.2. Post-Estimation Tests

Error test for model specification is conducted using Ramsey RESET test. The results shows probability of 0.3563 and this indicate that the model has no omitted variable bias and misspecification. The heteroscedasticity test was conducted to check the validity of homoscedasticity assumption that variance in the residuals are constant. Heteroscedasticity test was conducted using Breusch-Pagan/Cook-Weisberg test and the result is presented in Table 5. Data for the study revealed there is presence of heteroscedasticity given the probability value of 0.0000 which is lower than 0.05. Likewise, variables for the study is also tested for auto-correlation using Wooldridge test for autocorrelation in panel data. Autocorrelation depicts how closely variable values are correlated across time. The result shows the probability of 0.5221 which is insignificant indicating that there is no problem of auto-correlation hence the null hypothesis that there is no first-order correlation is accepted.

Furthermore, the cross-sectional dependence test is carried out using Pesaran’s test and the result is presented in Table 5. The result indicate that null hypothesis which implied there is no cross-sectional dependence is accepted as the statistics shows -1.365 with probability value indicated 1.8276. Hence, there is sufficient evidence to conclude that environmental accounting disclosure practice determinants under random - effect condition does not exhibits

cross-sectional dependence. However, the observed estimation problem of heteroscedasticity is to be corrected using panels corrected standard errors (PSCE) with the option that the standard error is independent- corrected. The Hausman test was also conducted to specify the appropriate model between fixed-effect model and random effect model and the result favoured the random effect model as the probability shows 0.5372 implying that difference in coefficient is not systematic. The appropriate model between random effect and pooled OLS regression examined using Breusch and Pagan Lagrangian multiplier test for random effects and the result shows that random effect is most appropriate as the probability is significant showing p-value of 0.0000 supporting the null hypothesis.

Table 5: Summary of Post Estimation Test Results

Ramsey RESET test		
Null Hypothesis	F-Statistics	Probability
Ho: model has no omitted variables (P>0.05)	1.08	0.3563
Tolerance and VIF Value		
Null Hypothesis	VIF	Mean VIF
There is no multicollinearity among the variables (1/VIF >0.10)	-	1.06
Breusch-Pagan/Cook-Weisberg test for Heteroscedasticity		
Null Hypothesis	Chi ² Statistics	Probability
Constant variance across the variables residuals (P>0.05)	26.79	0.0000
Wooldridge test for autocorrelation		
Null Hypothesis	F-Statistics	Probability
No first-order autocorrelation (P>0.05)	0.417	0.5221
Pesaran's test of cross sectional independence		
Null Hypothesis	Statistics	Probability
There is no cross-sectional dependence (P>0.05)	-1.365,	1.8276
Hausman Test		
Null Hypothesis	Statistics	Probability
Difference in coefficients not systematic (P>0.05)	3.12	0.5372
Breusch and Pagan Lagrangian multiplier test for random effects		
Null Hypothesis	Statistics	Probability
Difference in coefficients not systematic (P<0.05)	186.60	0.0000

Source: **Author's Computation (2025)**

4.4. Environmental Disclosure Practice Determinants and Sustainable Growth Rate

The model specification test revealed that random effect model is more appropriate for interpretation. However, in order to correct statistical problem of heteroscedasticity that made the model negate the assumption of linear regression, the effect of determinants of environmental disclosure practice peroxide by board national diversity, profitability, leverage and regulatory requirement is inferred from the result of Praise-Winsten regression. This is a panel corrected standard error regression computed after correcting observed statistical problems identified in the pre and post estimation tests. The regression corrected the heteroscedasticity problem making it suitable for interpretation. Probability value and the Z-statistics is used as the indices of interpretation for the linear relationship. The overall result shows that determinants of environmental disclosure practice have significant effect on sustainable growth and this is evidenced by the Wald χ^2 which is significant and this imply that the model analysed is significant at 5 percent. The variance that can be caused in sustainable growth rate by environmental disclosure practice determinants is 7 percent.

The regression result shows that board nationality diversity (BND) have positive but insignificant effect on sustainable growth rate (SGR) having z-statistics of 1.1 and probability of 0.272. The implication of the result is that having foreign nationals as directors has a good impression on growth effort of the companies as they contribute to the ability of the board to make hypercritical decisions, and they are supportive to environmental reporting which translate to firm growth. Since the results shows the effect is not significant, it may simply not all citizenship status of the board guarantee that there will be sustainable growth. The exposure and expertise of the foreign national may be a factor to be considered.

The result presented on Table 6 shows profitability (PRO) have z-statistics of 5.17 and P-value of 0.000 and this indicate positive and significant effect on sustainable growth (SGR). This indicates when there is enough resources to sponsor environmental practice and its disclosure thereof, it will signal the ability to meet the information need of the stakeholders and this attract the benefit of legitimacy and support from business stakeholders that will guarantee the company sustainable growth. Furthermore on Table 6, it is shown that leverage (LEV) has negative and insignificant effect on the sustainable growth (SGR) of firms with and this is evidenced by z-statistics of -1.49 and probability value of 0.135. This may be an implication that the environmental practices of the companies are not financed through debt

but rather used it in funding the expansion of its production activities. It also imply that levered companies are more committed to their debtors and give little attention to environmental responsibility leading to the negative effect.

Lastly on Table 6, it is shown that regulatory requirement compliance (RRQ) has negative and significant effect on the sustainable growth of firms in Nigeria. This is evidenced by z-statistics of -2.27 and probability value of 0.023. This imply that the company's expenses on regulatory compliance diminishes the resources available to grow the firm. The effect is so significant that annual expenditure safety measures and other environmental compliance depending of the industry will diminish the growth rate of the firms if not curtailed and well managed.

The regression result shows that board nationality diversity (BND) have positive but insignificant effect on sustainable growth rate (SGR) having z-statistics of 1.1 and probability of 0.272. The implication of the result is that having foreign nationals as directors has a good impression on growth effort of the companies as they contribute to the ability of the board to make hypercritical decisions, and they are supportive to environmental reporting which translate to firm growth. Since the results shows the effect is not significant, it may simply not all citizenship status of the board guarantee that there will be sustainable growth. The exposure and expertise of the foreign national may be a factor to be considered.

The result presented on Table 6 shows profitability (PRO) have z-statistics of 5.17 and P-value of 0.000 and this indicate positive and significant effect on sustainable growth (SGR). This indicates when there is enough resources to sponsor environmental practice and its disclosure thereof, it will signal the ability to meet the information need of the stakeholders and this attract the benefit of legitimacy and support from business stakeholders that will guarantee the company sustainable growth. Furthermore on Table 6, it is shown that leverage (LEV) has negative and insignificant effect on the sustainable growth rate (SGR) of firms, this is evidenced by z-statistics of -1.49 and probability value of 0.135. This may be an implication that the environmental practices of the companies are not financed through debt but rather used their resources in funding the expansion of their production activities. It also imply that levered companies are more committed to their debtors and give little attention to environmental responsibility leading to the negative effect.

Lastly on Table 6, it is shown that regulatory requirement compliance (RRQ) has negative and significant effect on the sustainable growth of firms in Nigeria. This is evidenced by z-statistics of -2.27 and probability value of 0.023. This imply that the company's expenses

on regulatory compliance diminishes the resources available to grow the firm. The effect is so significant that annual expenditure safety measures and other environmental compliance depending on the industry will diminish the growth rate of the firms if not curtailed and well managed.

The findings of the study corroborates the results of similar studies such as EmadEldeen et al. (2025) which examined the impact of board diversity on sustainability performance in UK-listed companies and the result revealed that board nationality diversity positively impacted sustainability of companies. More so, it supports Alshareef & Sulimany (2024) which found out that foreign directorship has a strong and positive effect of foreign directorship on financial sustainability. It equally support the result of Alfando & Apriani (2021) that examined the effect of profitability on firm sustainable growth in Malaysian and Indonesian manufacturing firms and the outcome indicated that the profitability of the firm significantly influenced the firm's sustainable growth. Also, it support the result of Vukovic et al. (2022) study as it found that financial leverage had a negative relationship with sustainable growth rate. It further support the findings of Liu et al. (2022) which investigated the short and long gain effect of environmental regulation on financial performance of Chinese listed polluting firms. The result revealed that environmental regulation exerts a negative effect on the financial performance of polluting firms.

More so, it contradict the findings of Adediran (2023) which examined board of director nationality and the financial performance of listed insurance firms in Nigeria. The findings revealed that board nationality exerted a negative and non-significant impact on the insurance firms' financial performance. Also, the result of Ozele & Agbo (2023) negates the findings of the study as it found that profitability had a negative relationship with sustainable growth rate. In addition, the findings of Madbouly (2022) contradict the study result as it revealed that firms' financial leverage had a positive relationship with sustainable growth rate. Likewise, it contradict the findings of Wu et al. (2023) which investigated the influence of environmental regulations on the financial performance of listed petrochemical companies in China. The results indicated that environmental regulations have a significant positive effect on the financial performance of petrochemical companies.

Table 6: Panels Corrected Standard Errors Regression

SGR	Coeff.	Het-corrected Std.Err	z	P> z
BND	0.1388	0.1263	1.1	0.272
PRO	1.2421	0.2403	5.17	0.000

LEV	-0.1815	0.1215	-1.49	0.135
RRQ	-0.0273	0.0120	-2.27	0.023
_cons	-0.7835	0.0444	-17.63	0.000
Number of obs	416			
R-squared	0.0703			
Wald chi2(4)	38.62			
Prob > chi2	0.0000			

Source: Author’s Computation (2025)

4.5. Policy Implication of Findings

The findings of the study shows that profitability and regulatory requirements are the determinants of environmental disclosure practices among firms which is capable of influencing the firms’ growth in a sustainable manner. The implication of this findings should motivate management of Nigerian firms to boost their profitability to be at the forefront of environmental disclosure now that country is transitioning to mandatory environmental disclosure and with the target to have sustainable growth. The result is of use to regulatory bodies on the review of requirements from the firms because the adverse effect of the burden of regulatory requirement on the companies may threaten their survival as many of the companies have a discouraging sustainable growth.

This findings is to serve as a blueprint for regulations on disclosure practices as other determinants studied such as board national diversity and leverage which have non-significant influence in the context of Nigeria studies is of positive significance in developed countries. This may imply that the measure of the determinants is either low or high and to have a good outcome, there is a need to have a well-balanced quota to ensure that conflict of interest which may be the reason of negative influence is addressed. The goal of maintaining company operations without running into problem that will threaten the survival of the company is a collaboration of the company management and regulatory factors from government and the other agencies.

5. Conclusion and Recommendations

The study examined the effect of environmental accounting disclosure practices determinants on firm sustainable growth in Nigeria. In this era of sustainable development goals for countries and organisations coupled with the society’s heightened interest in environmental responsibilities of firms, the possible intertwined relationship between this important concept and firms’ growth is considered. This is propelled from the fact that the advocates of environmental reporting are convinced that reporting is a crucial leveler for change in firms’ performance and firm sustainable growth. The study is motivated from the

fact that the disparity in the quality and outcome of environmental report in Nigeria compared with the developed countries is high and now that the country is moving to the era of mandatory disclosure, the outcome of the practice on firm survival is expedient.

Employing longitudinal research design and sourcing data secondarily from annual reports, obtained data for 45 firms was analysed and the findings shows that profitability have positive and significant effect on sustainable growth of firms in Nigeria. The empirical results supports previous researchers who admit the positive effect of good financial standing on environmental disclosure practice and observed significant influence of regulatory requirement on firm's growth. The study concluded that companies achieve sustainable growth when they are profitable and have enough resources to fund environmental practices. It is also concluded that heightened pressure to adopt eco-friendly technologies can adversely affect the sustainable growth of business. It is then recommended that management should give make effort to improve their profitability that will boost the returns on assets and environmental disclosure effort.

References

- Abdul-Khadir, M.I., Ahmadu, N.D. & Ibrahim, K.B. (2023). Effect of firm size and firm age on profitability: a study of listed industrial goods firms in Nigeria (2013-2022). *International Journal of Public administration (IJOPAD)*, 2(2), 30-44.
- Adediran, K.A. (2023). Board of directors' nationality and financial performance of listed insurance firms in Nigeria. *Sapientia Foundation Journal of Education, Sciences and Gender Studies (Sfjesgs)*, 5(1), 297 – 313.
- Agyemang, A.O., Yusheng, K., Ayamba, E.C., Twum, A.K., Chengpeng, Z., & Shaibu, A. (2020). Impact of board characteristics on environmental disclosures for listed mining companies in China. *Environmental Science and Pollution Research*, 27(17), 21188-21201.
- Ain, Q.U., Yuan, X., Javaid, H.M., & Naeem, M. (2021). Board diversity and sustainable growth rate: Chinese evidence. *Economic Research-Ekonomika Istrazivanja*, 35(1), 1364–1384.
- Alfando, W., & Apriani, D.R.A. (2021). Profitability and sustainable growth of manufacturing firms: empirical evidence from Malaysia and Indonesia. *Jurnal Riset Akuntansi Dan Keuangan*, 9(1), 13-24.
- Ali, A & Hafez, A. (2014). Determining the motives or reasons that make companies disclose environmental information. *Journal of Economics, Business and Management*, 2(2),117-121.

- Alshareef, M.N., & Sulimany, H.G.H. (2024). Effects of board gender and foreign directorship on the financial sustainability of Saudi listed firms: does family ownership matter? *Heliyon* 10(1), 1-11
- Al-Slehat, Z.A.F. & Altameemi, A.F. (2021). The relationship between non-interest revenue and sustainable growth rate: a case study of commercial banks in Jordan. *Journal of Asian Finance, Economics and Business*, 8(5), 99–108.
- Amaechi, E.P., & Nwankwoke, E.M. (2017). Must firms adopt environmental accounting? Adoption challenges in Nigeria. *Trends Economics and Management*, 11(30), 9.
- Anazonwu, H. O., Egbunike, F. C., & Gunardi, A. (2018). Corporate board diversity and sustainability reporting: a study of selected listed manufacturing firms in Nigeria. *Indonesian Journal of Sustainability Accounting and Management*, 2(1), 65–78.
- Angela, S., & Handoyo, H. (2021). Determinants of environmental disclosure quality: empirical evidence from Indonesia. *Journal of Accounting, Auditing and Business*, 4(1), 41-53.
- Anshori, M.Y., Herlambang, T., Karya, D.F., Muhith, A., & Rasyid, R.A. (2020). Profitability estimation of a company in PT.ABCD using extended kalman filter. *Journal of Physics: Conference Series*, 1538(1), 37-60.
- Anwar, M., Khan, S.Z., & Khan, N.U. (2018). Intellectual capital, entrepreneurial strategy and new ventures performance: mediating role of competitive advantage. *Business & Economic Review*, 10(1), 63–94.
- Ariyani, A.P., & Hartomo, O.D. (2018). Analysis of key factors affecting the reporting disclosure indexes of sustainability reporting in Indonesia. *International Journal of Business, Economics and Law*, 16(1), 15-25.
- Arumona, J., Lambe, I., & Ogunmakinde, I. (2021). Effect of environmental disclosure on financial performance of quoted oil and gas companies in Nigeria. *Bingham University Journal of Accounting and Business (BUJAB)*, 1(1), 1-16.
- Atang, R.O., & Eyisi, O. (2020). Factors affecting environmental disclosure practices in Nigerian manufacturing firms. *African Journal of Business and Management*, 8(4), 98-112.
- Beji, R., Yousfi, O., Loukil, N., & Omri, A. (2020). Board diversity and corporate social responsibility: empirical Evidence from France. *Journal of Business Ethics*, 2(5), 2-23.
- Chen, X, Liu, C, Liu, F, Fang, M. (2021). Firm sustainable growth during the COVID-19 pandemic: the role of customer concentration. *Emerging Markets Finance and Trade*, 57(6), 1566–1577.

- Chowdhury, M.A.A., Dey, M., & Abedin, M.T. (2020). Firms' attributes and environmental disclosure: evidence from listed firms in Bangladesh. *Asian Journal of Accounting Perspectives*, 13(2), 57-77.
- Deegan, C (2002). Introduction: the legitimizing effect of social and environmental disclosures – a theoretical foundation. *Accounting, Auditing and Accountability Journal*, 15(3), 282-311.
- Deegan, C., Rankin, M., & Tobin, J. (2002). An examination of the corporate social and environmental disclosures of BHP from 1983-1997: a test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, 15(3), 312-343.
- Dibia, I.N., & Onwuchekwa, J.C. (2021). Factors influencing environmental disclosure in Nigerian corporations. *African Journal of Corporate Responsibility*, 9(4), 176-192.
- Dowling, J. & Pfeffer, J. (1975) Organisational legitimacy: social values and organizational behaviour. *Pacific Sociological Review*, 18(1): 122–36.
- EmadEldeen, R.; Elbayuomi, A.F.; Elmoursy, H.; Bouaddi, M.; & Basuony, M.A.K. (2025). Does board diversity drive sustainability? Evidence from UK-listed companies. *Sustainability*, 17(1), 1-25.
- Estiasih, S.P., Suhardiyah, M.S., Putra, A.C., & Widhayani, P.S. (2024). The effects of leverage, firm size, and market value on financial performance in food and beverage manufacturing firms. *Journal of Applied Management*, 22(2), 414–425.
- Fahad, P., & Nidheesh, K.B. (2020). Determinants of CSR disclosure: an evidence from India. *Journal of Indian Business Research*. 6(2), 18-31.
- Fanjing, K. (2024). The Influences of multi-level environmental regulations on firm performance in China. *Economics*, 18(1), 1-13.
- Ge, W., Li, Z., Liu, Q., & McVay, S. (2021). Internal control over financial reporting and resource extraction: evidence from China. *Contemporary Accounting Research*, 38(2), 1274–1309.
- Gehan, A.M. & Naser, T.H. (2015). Legitimacy theory and environmental practices: short notes. *International Journal of Business and Statistical Analysis*. 2(1), 42-51.
- Gbemigun, C.O. (2024). Corporate environmental disclosure determinants and financial performance of selected listed manufacturing firms in Nigeria. *International Journal of Innovative Research in Accounting and Sustainability*, 9(2), 141-152.
- Ginting, P.J.P. (2019). Sustainable growth and development. *Advances in Economics, Business and Management Research*, 144(1), 482-486.

- Githaiga, P.N., & Kosgei, J.K. (2022). Board characteristics and sustainability reporting: a case of listed firms in East Africa, Corp Gov. *Int J Bus Soc.* 23(1), 3–17.
- Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing and Accountability Journal*, 8(1), 47–77.
- Guthrie, J. & Parker, L. (1990). Corporate social disclosure practice: *A Comparative International Analysis, Advances in Public Interest Accounting*, 3(1), 159-176.
- Hanen, K., Bassem, S., & Jabr, A., (2020). *Impact of board characteristics on governance, environmental and ethical disclosure*. PhD thesis, Department of Accounting, Majmaah University, AlMajma'ah, Saudi Arabia.
- Igbekoyi, O.E., Solanke, F.T., Adeusi, S.A., Alade, M.E., & Agbaje, W.H. (2021). Environmental accounting disclosure and financial performance of listed multinational firms in Nigeria. *Global Journal of Management and Business Research*, 21(2), 1-14.
- Jaunanda, M. & Oktaviyanti, D. (2023). The effect of profitability, leverage, firm size, and firm age on earnings management. *Jurnal Penelitian Akuntansi*, 4(1), 53-66.
- Ji, M., Ji, Y., & Dong, S. (2022). Environmental accounting information disclosure driving factors: the case of listed firms in China. *Sustainability*, 14(23), 15797.
- Khan, K., Qu, J., Shah, M.H., Bah, K., & Khan, I.U. (2020). Do firm characteristics determine capital structure of Pakistan listed firms? A quantile regression approach. *Journal of Asian Finance, Economics and Business*, 7(5), 61-72.
- Khatib, S.F., Abdullah, D.F., Elamer, A.A., & Abueid, R. (2021). Nudging toward diversity in the boardroom: a systematic literature review of board diversity of financial institutions. *Business Strategy and the Environment*, 30(2), 985–1002.
- Khuong, N.V., Rahman, A.A.A., Thuan, P.Q., Liem, N.T., Anh, L.H.T., Thuy, C.T.M., & Ly, H.T.N. (2022). Earnings management, board composition, and earnings persistence in the emerging market. *Sustainability (Switzerland)*, 14(3), 1061.
- Kumar, A. (2018). Impact of financial innovations on sustainable growth rate: a study on Nifty 50 listed Banks in India. *International Journal of Management, IT & Engineering*, 8(9), 196–210.
- Lestari, Y.A., & Harymawan, I. (2020). Voluntary disclosure, earnings response coefficient, and earnings persistence. *Jurnal Reviu Akuntansi & Keuangan*, 10(1), 177–191.
- Liu, X.; Dong, J.; Ji, K.; Li, X.; Xu, S. (2022). Investigating the ‘Short Pain’ and ‘Long Gain’

effect of environmental regulation on financial performance: evidence from Chinese listed polluting firms. *Sustainability*, 14(1), 1-18.

- Madbouly, D.M.K. (2022). Factors affecting the sustainable growth rate and its impact on firm value: empirical evidence from the Egyptian stock exchange. *NAUS Journal*, 11(1), 1-40.
- Mamilla, R. (2019). A study on sustainable growth rate for firm survival. *Strategic Change*, 28(4), 273-277.
- Markonah, A.S. (2020). Effect of profitability, leverage, and liquidity to the firm value. *Dinasti International Journal of Economics, Finance, and Accounting*, 1(1), 83-94.
- Masud, M.A.K., Nurunnabi, M., & Bae, S.M. (2020). The effects of corporate governance on environmental sustainability reporting: empirical evidence from South Asian countries. *Asian Journal of Sustainability and Social Responsibility*, 3(1), 1-26.
- Modugu, K.P. (2017). Firm performance and corporate disclosure level of listed companies in Nigeria. *Asian Journal of Finance & Accounting*, 9(2), 71-87.
- Mondal, M.S.A., Akter, N., & Polas, M.R.H. (2023). Factors influencing the environmental accounting disclosure practices for sustainable development: a systematic literature review. *International Journal of Financial, Accounting, and Management (IJFAM)*, 5(2), 195-213
- Mukherjee, T., & Sen, S.S. (2015). Sustainable growth rate and its determinants: a study on some selected companies in India. *Global Multidisciplinary*, 10(1), 100-108.
- Nguyen, L.S., Nguyen, T.K.H., & Tran, T.T.H. (2019). Factors affecting the disclosure level of environmental accounting information: a case study at mining companies listed on the Vietnamese stock market. *Journal of Economics and Development*, 261(3), 81-90.
- Nguyen, T.H.L. & Tran, T.D. (2024). Factors affecting environmental accounting disclosure of listed food manufacturing enterprises in Vietnam. *Journal of Sustainability Science and Management*, 19(1), 37-54.
- Nor, F.M., Ramli, N.A., Marzuki, A., & Rahim, N. (2020). Corporate sustainable growth rate: The potential impact of COVID-19 on Malaysian companies. *The Journal of Muamalat and Islamic Finance Research*, 2(5), 25-38.
- Nosike, C.J., Anekwe, I.R. & Egbunike, C.F. (2021). Regulatory environment and performance of selected pharmaceutical companies in Anambra State, Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 12(3), 30-38.
- Ofoegbu, G.N & Megbuluba, A. (2016). Corporate environmental accounting information

- disclosure in the Nigeria manufacturing firms. *International Journal of Management Science and Business Research*, 5(12), 208-220.
- Okezie, S.O., & Ihendinihu, J.U. (2019). Determinants of corporate social responsibility disclosure practices: an empirical study of Nigerian listed firms. *Covenant Journal of Business & Social Sciences (CJBSS)*, 10(1), 15-33.
- Oluwatuyi, A.O. & Obafemi, T.O. (2023). Firm characteristics and financial performance of listed consumer goods companies in Nigeria. *ACU Journal of Social and Management Sciences*, 4(1), 145-160.
- Ozele, C.E. and Agbo, I.S. (2023). Firm specific determinants and sustainable growth of industrial goods firms Nigeria. *British International Journal of Applied Economics, Finance and Accounting*, 7(3), 1-13.
- Rabi, A.M. (2021). Board characteristics and environmental disclosure: evidence from Jordan. *International Journal of Business and Management*, 14(2), 1-57.
- Rahma, A.A., & Aldi, F. (2020). The importance of commissioner's board diversity in CSR disclosures. *International Journal of Economics Development Research (IJEDR)*, 1(2), 136-149.
- Ramzan, M., Amin, M., & Abbas, M. (2021). How does corporate social responsibility affect financial performance, financial stability, and financial inclusion in the banking sector? Evidence from Pakistan. *Research in International Business and Finance*, 55(1), 26-43.
- Rokhmania, N., & Kartika, T.P.D. (2021). Earnings persistence in affecting the stock prices of Malaysian and Indonesian manufacturing companies. *International Journal of Entrepreneurship and Business Development*, 4(3), 363-372.
- Rujiin, C., & Sukirman, P. (2020). The effect of firm size, leverage, profitability, ownership structure, and firm age on enterprise risk management disclosures. *Accounting Analysis Journal*, 9(2), 81-82.
- Sabila, R.F., Evana, E., & Septiyanti, R. (2021). Analysis of the effect of operating cash flow, leverage, and firm size on earnings persistence. *Journal of Management and Public Sector*, 2(3), 42-50.
- Sabo, B. (2020). Determinants of environmental accounting disclosure of listed oil and gas firms in Nigeria. *International Journal of Academic Accounting, Finance and Management Research (IJAAFMR)*, 4(11), 104-115.
- Salvation, J.S., Nyor, T., Agbi, E.S., Joshua, G.S., Adzor, I., Mustapha, L., & Danazumi, E.B.

- (2022). Diversity of board and environmental reporting of listed manufacturing companies in Nigeria: The moderating effect of audit committee. *Journal of Finance and Accounting*, 10(1), 1-18.
- Sari, I.A.G.D.M., & Sedana, I.B.P. (2020). Profitability and liquidity on firm value and capital structure as intervening variable. *International Research Journal of Management, IT & Social Sciences*, 7(1), 116-127.
- Sendawula, K., Turyakira, P., & Ikiror, C.M. (2021). Regulatory compliance and environmental sustainability practices of manufacturing entrepreneurial ventures in Uganda. *Asia Pacific Journal of Innovation and Entrepreneurship*, 15(1), 62-71.
- Setiana, S. & Hadianto, B. (2023). Financial leverage, firm size, company age, and earning. *Ekonomi, Keuangan, Investasi dan Syariah (EKUITAS)*, 4(4), 1220–1226.
- Shakkour, A., Alaodat, H., Alqisi, E., & Alghazawi, A. (2018). The role of environmental accounting in sustainable development empirical study. *Journal of Applied Finance and Banking*, 8(1), 71-87.
- Solikhah, B., Puteri, A.A., Sarwono, E., Ulupui, I., & Al-Faryan, M.A.S. (2021). Improving understanding on determinant of environmental disclosure and moderating effect of corporate governance. *Academy of Strategic Management Journal*, 20(2).14-29.
- Solomon, P.J. (2020). Environmental disclosure and financial performance of listed oil and gas companies in Nigeria: a review on literature. *IOSR Journal of Business and Management (IOSR-JBM)*, 22(9), 58-68
- Suileek, H.A., & Alshurafat, H. (2022). The determinants of environmental accounting disclosure: a review of the literature. Explore business, technology opportunities and challenges after the Covid-19 Pandemic, 463-477.
- Sunday O., & Godspower, A. (2022). Corporate sustainable growth in a pandemic period: the role of growth opportunities. *Journal of Finance and Accounting*, 10(1), 58-63.
- Vukovic, B., Tica, T., & Jakšić, D. (2022). Sustainable growth rate analysis in Eastern European companies. *Sustainability*, 14(1), 1-21
- Wang Q., Xu X., Liang K. (2021). The impact of environmental regulation on firm performance: evidence from the Chinese cement industry. *Journal of Environmental Management*, 299(1), 36-43.
- Wu, M., Dong, Y., Liu, Z., & Yang, Y. (2023). Research on the impact of environmental regulation on the financial performance of petrochemical enterprises. *CDEMS*, 170(1), 1-6.
- Yaya, R., Wibowo, S.A. & Jalaludin, D. (2018). Environmental disclosure practices after mandatory disclosure policy in Indonesia. *Journal of Business and Retail Management Research*, 12(4), 88-100.

Zayol, P.I., Akpa, A., Tsegba, I.N. & Gberindyer, A.C. (2021). Firm characteristics and corporate environmental. *Ae-Funai Journal of Accounting, Business and Finance (FJABAF)*, 8(1), 14-34.

Zhao, X., & Qi, Y. (2020). Why do firms obey? The state of regulatory compliance research in China. *Journal of Chinese Political Science*, 25(2), 339-352.



Global
Scientific
JOURNALS