



Sustainability Disclosures and Tax Aggressiveness of Listed Multinational Companies in Nigeria.

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Abstract

Tax aggressiveness poses a significant transparency and accountability concern in listed multinational companies. This study therefore investigates whether or not mandatory sustainability disclosures can effectively curb tax avoidance strategies or merely serve as a cosmetic compliance measure. The objective of the study is to examine the effect of sustainability disclosure on tax aggressiveness among listed multinational companies in Nigeria. Using panel data and the fixed effects regression model, results showed that both economic sustainability disclosure (ECOSD) and environmental sustainability disclosure (EVRSD) have a significant and positive effect on tax aggressiveness measured by non-debt tax shields (NDTS). A unit increase in ECOSD and EVRSD led to a 0.0329 and 0.0063 unit increase in NDTS respectively. The results underscore a noteworthy relationship between sustainability disclosure and tax aggressiveness. Specifically, both economic sustainability disclosure (ECOSD) and environmental sustainability disclosure (EVRSD) exhibit a significant positive impact on tax aggressiveness, as measured by non-debt tax shields (NDTS). Surprisingly, an increase in ECOSD and EVRSD corresponds to a proportional rise in NDTS, indicating that heightened transparency in sustainability disclosure paradoxically correlates with more pronounced tendencies toward aggressive tax avoidance. These findings imply that greater transparency regarding sustainability disclosure is associated with more aggressive tax avoidance behavior, contrary to expectations. The study suggests that sustainability disclosures may not necessarily lead to more responsible tax practices, but rather may be used as a way to mask or justify aggressive tax avoidance strategies. The study further recommends that implementing robust reporting regulations and disclosure standards becomes imperative to mitigate the risk of opportunistic sustainability disclosures aimed at masking underlying tax avoidance motives.

Keywords: Corporate Sustainability Disclosure, Environmental Disclosure, Economic Disclosure, Tax Aggressiveness, Multinational Companies.

I. INTRODUCTION

The intersection of sustainability disclosures and tax aggressiveness within listed multinational companies in Nigeria constitutes a critical focal point for examination amidst the dynamic global tax landscape and the growing emphasis on corporate responsibility. Taxes, serving as a vital revenue source globally, present a challenge for Nigeria, an emerging economy, seeking to diversify revenue beyond oil-dependent streams. Effective tax compliance gains added importance due to the necessity of funding essential public services and infrastructure (Akwe, 2014). However, tax aggressiveness, involving strategic tax planning to minimize burdens, poses challenges to tax authorities and undermines revenue collection efforts (Olaoye & Ekundayo, 2019). Nigeria, historically known for being reliant on oil revenue, faces the imperative of diversifying tax sources in the wake of global financial crises and oil price volatility (Obi, 2018). Against this backdrop, understanding the relationship between sustainability disclosures and tax aggressiveness in multinational companies listed on the Nigerian Exchange Group is important. The research on "Sustainability Disclosure and Tax Aggressiveness," incorporating variables such as Environmental Disclosure and Economic Disclosure, delves into a crucial intersection between corporate sustainability practices and tax behavior within multinational companies. Against the backdrop of a rapidly evolving global tax landscape and an increasing emphasis on sustainability disclosures, this study addresses the intricate relationship between sustainability disclosures and tax aggressiveness, specifically focusing on the Nigerian context. In the contemporary global business environment, multinational companies play a pivotal role, not



only as economic entities but also as agents influencing broader societal and environmental concerns. Taxes, being a cornerstone of government revenue worldwide, particularly in emerging economies like Nigeria, pose challenges for revenue diversification beyond traditional sources such as oil.

Tax aggressiveness, characterized by strategic tax planning to minimize tax burdens, presents a significant challenge to tax authorities and raises concerns about revenue collection efforts. Nigeria's reliance on oil revenue has become increasingly precarious due to global financial crises and oil price volatility. To mitigate this vulnerability, it is imperative to diversify tax revenue streams. This research investigates the impact of sustainability disclosures on tax aggressiveness among multinational companies listed on the Nigerian Exchange Group. By examining both environmental and economic aspects of sustainability disclosures, this study aims to uncover whether transparency in sustainability reporting leads to more responsible tax practices. With variables like environmental disclosure and economic disclosure, the research seeks to unravel the nuanced interplay between sustainability practices and tax strategies. It acknowledges the broader implications of this interplay, extending beyond tax policy to encompass corporate governance, transparency, and accountability. Multinational companies operating in Nigeria must navigate complex tax landscapes while aligning with sustainability principles, meeting stakeholder expectations, and adhering to evolving international tax norms. As the global business environment undergoes significant transformations, understanding the dynamic relationship between sustainability disclosure and tax aggressiveness becomes imperative for policymakers, tax authorities, and multinational companies alike. This research contributes to the evolving discourse on responsible corporate behavior and its impact on both financial and non-financial dimensions within the Nigerian and broader international business landscape. The study aims to investigate how sustainability disclosures, covering economic and environmental aspects, shape the tax aggressiveness of multinational firms listed on the Nigerian Exchange Group. This inquiry also gains significance in the contemporary global tax landscape marked by initiatives such as the Organization for Economic Co-operation and Development's (OECD) Base Erosion and Profit Shifting (BEPS) Action Plan which is saddled with

responsibility to negate strategies used by multinational companies to shift profits to low or no-tax locations, thereby eroding the tax base of higher-tax countries. The BEPS Action Plan aims to address these issues by promoting fair tax practices and ensuring that profits are taxed where economic activities generating the profits are performed and where value is created. The contemporary global tax challenges accentuate the relevance of sustainability disclosures and their implications for tax aggressiveness. Efforts led by the OECD and the G20 address BEPS concerns through initiatives like the Pillar 1 and Pillar 2 proposals (OECD, 2013). Pillar 1 introduces a new taxing right for market jurisdictions in the digitalized economy, while Pillar 2 seeks to establish a global minimum tax rate (OECD, 2013). These proposals aim to combat tax avoidance and ensure multinational corporations pay their fair share of taxes. Understanding how sustainability disclosures influence tax aggressiveness in the context of BEPS-related regulations is also essential. The contemporary relevance of these initiatives underscores the need to investigate how sustainability disclosures, reflecting a company's commitment to economic and environmental responsibilities, intersect with tax planning strategies.

Listed multinational corporations (MNCs) in Nigeria face significant challenges in balancing the need for transparency in sustainability disclosures with the pressures to minimize tax liabilities through aggressive tax planning. The lack of standardized reporting frameworks, regulatory uncertainties, and diverse stakeholder expectations complicate these efforts. Additionally, while tax aggressiveness can enhance financial performance, it risks damaging corporate reputations and undermining stakeholder trust. Integrating sustainability commitments with effective tax strategies is critical but challenging, necessitating sophisticated management and strategic alignment. This study aims to explore how sustainability disclosures influence tax aggressiveness in Nigerian listed MNCs and the broader implications for economic realities and sustainable development. There is a critical need for listed MNCs in Nigeria to integrate their sustainability and tax strategies effectively. This integration is essential to ensure that sustainability commitments are not undermined by aggressive tax practices. However, achieving this integration requires sophisticated management and strategic alignment, which many companies find challenging in the face of competing priorities and resource constraints. Despite the potential synergies between



sustainability disclosures and tax compliance, challenges persist in navigating this complex terrain. Despite extensive prior research examining the influence of environmental accounting disclosures on corporate performance, a notable gap exists in understanding its impact on tax aggressiveness, particularly within the Nigerian context. This study aims to bridge this gap by investigating the relationship between sustainability disclosure and tax aggressiveness in listed multinational corporations in Nigeria. The a priori expectation is that both economic and environmental sustainability disclosure should have a positive and significant effect on aggressiveness. The basic hypotheses underlining this study are stated in their null form as follows:

H0₁ There is no significant effect between Environmental Disclosure Index and Non-Debt Tax Shield of listed Multinational Companies in Nigeria.

H0₂ There is no significant effect between Economic Disclosure Index and Non-Debt Tax Shield of listed Multinational Companies in Nigeria.

II. LITERATURE REVIEW

2.1 Conceptual Framework

2.1.1 Sustainability Disclosures

The corporate environmental sustainability reporting approach has garnered significant attention due to growing concerns about its enduring impact on the natural environment. This literature review synthesizes research on the drivers, quality, and impact of sustainability disclosures, focusing on insights provided by Gnanaweera and Kunori (2018), Mensah (2019), as well as additional contributions from Hahn and Kühnen (2013), and Adams (2002). Gnanaweera and Kunori (2018) explore key drivers of sustainability disclosure, emphasizing the role of regulatory frameworks and market expectations. They argue that companies are motivated by both compliance with regulations and the strategic advantages gained from enhanced transparency. The research highlights the increasing integration of sustainability reporting into corporate strategy as a response to stakeholder demands and regulatory pressures, facilitated by the evolution of reporting standards towards more comprehensive and standardized frameworks that provide comparable and consistent information. Effective sustainability disclosure requires adherence to these standards and a genuine commitment to sustainable practices.

Mensah (2019) provides a critical analysis of sustainability disclosure in developing economies, noting that while there is a growing awareness and adoption of sustainability reporting, the quality of disclosures often falls short due to limited resources and expertise. He underscores the importance of capacity-building and the role of international organizations in supporting robust reporting practices. Additionally, Mensah examines the influence of cultural and institutional factors on sustainability disclosure, suggesting that local contexts significantly shape how companies approach and implement reporting. Tailored approaches that consider these contextual differences are necessary to improve the effectiveness of sustainability disclosures. Complementing this, Hahn and Kühnen (2013) provide a comprehensive review of empirical studies on sustainability reporting, highlighting trends, determinants, and impacts across various contexts, further emphasizing the variability in reporting practices and quality.

The conceptual framework for sustainability disclosure is built upon two fundamental dimensions: environmental disclosure and economic disclosure. These dimensions serve as the core through which companies communicate their commitment to sustainability. The framework identifies several driving forces that propel companies towards sustainable practices, including the regulatory landscape, stakeholder influence, and market dynamics. Adams (2002) discusses how internal organizational factors, such as corporate governance and management attitudes, also play a crucial role in shaping sustainability reporting practices. Companies adopt varied approaches to sustainability disclosure, which can be categorized into proactive disclosure strategies, compliance-based approaches, and integrated reporting, reflecting the different ways companies engage with sustainability.

The effectiveness of sustainability disclosures is evaluated through performance indicators such as financial performance, stakeholder relationships, and long-term value creation. The framework also recognizes various contingencies that influence a company's approach to sustainability disclosure, including organizational characteristics, leadership styles, and institutional pressures. This comprehensive framework offers a structured lens for understanding the multifaceted dimensions, influences, and impacts of sustainability disclosure in the corporate landscape. As companies



increasingly embrace sustainability reporting, leveraging these insights will be crucial for advancing transparency and accountability in corporate sustainability practices. Future research should continue exploring the contextual factors that shape sustainability disclosure practices, focusing on enhancing the quality and impact of these disclosures across different regions and industries.

2.1.2 Environmental Disclosure

Environmental disclosure is a disclosure related to company's policies, attitudes or actions toward environmental impact, emissions, pollution, cleaning, planting, or energy efficiency. Environmental accounting serves as a provider of environmental information to internal and external parties. Environmental accounting functions internally (Environment Management Accounting or EMA) to provide information to assist management in improving environmental performance of company, while function of external environmental accounting (Environment Financial Accounting or EFAs) is present information to external parties or company stakeholders.

Environmental disclosure involves companies providing information about their environmental performance, impacts, and initiatives in financial and non-financial reports, aiming to inform stakeholders about their environmental practices and their effects (Ngwakwe, 2018). This practice includes narrative descriptions, quantitative data, and communication of environmental policies and strategies, addressing the company's stance on emissions, effluents, pollution control, cleaning, planting, and energy efficiency (Ijeoma, 2015). Environmental disclosure is facilitated by environmental accounting, encompassing both internal functions (Environment Management Accounting) for improving environmental performance and external functions (Environment Financial Accounting) for communicating information to stakeholders (Ngwakwe, 2018). Often referred to as green accounting, environmental disclosure measures firms' economic performance concerning the environment, covering identification, measurement, and reporting of environmental-specific costs and benefits (Weng & Chen, 2015). Recognized for enhancing corporate transparency, accountability, and responsibility, environmental disclosure allows stakeholders to assess a company's environmental impact, performance, and commitment to sustainability, influencing decision-making and fostering a more sustainable business environment.

2.1.3 Environmental Disclosure Index

The Environmental Disclosure Index (EDI) serves as a critical quantitative tool used to evaluate and measure the extent and quality of environmental disclosures made by companies. It typically involves a checklist of environmental information disclosed by companies. Indicators, such as emissions data, energy usage, waste management, and water conservation efforts will be considered in this paper. The index helps in comparing companies' environmental transparency and performance. Grounded in Stakeholder Theory, the EDI addresses the increasing demand for transparency and accountability in corporate environmental performance by various stakeholders, including investors, regulators, and the public (Freeman, 1984). By providing a structured approach to measure and compare disclosures across firms, the EDI facilitates the assessment of how well companies communicate their environmental impact and sustainability practices. Research indicates that a well-constructed EDI not only enhances the comparability of environmental reporting but also drives improvements in corporate environmental transparency, as companies strive to meet or exceed industry standards (Clarkson et al., 2008). This index, therefore, plays a pivotal role in promoting better environmental practices and informing stakeholder decisions.

2.1.4 Economic Disclosure

"Economic disclosure" pertains to the release of information about a company's financial health, performance, risks, and strategies, typically found in financial statements and annual reports, aiming to provide transparency to investors, regulators, and stakeholders (Christian & Peter, 2016). This disclosure extends beyond financial data, including non-financial aspects such as a company's contributions to employment, local communities, social and environmental impacts, and broader economic trends. It offers a comprehensive view of the company's influence on various economic factors, attracting socially responsible investors, environmental activists, and community organizations as stakeholders. Economic disclosure involves revealing both positive and negative news, data, and operational details that impact the company's business, adhering to reporting rules and regulations enforced by a central authority (Christian & Peter, 2016). This broad definition encompasses profitability reporting, financial reporting, and monitoring compliance, ensuring that firms provide essential information to investors, consumers, regulators, and the public.



2.1.5 Economic Disclosure Index

The Economic Disclosure Index (EDI) measures the comprehensiveness and quality of a company's economic information disclosed by companies. It uses a set of indicators to evaluate how well a company reports its economic performance, including profitability, market share, and value creation for stakeholders. Rooted in Agency Theory, the EDI addresses the need to reduce information asymmetry between management and stakeholders by ensuring transparent and detailed economic reporting (Healy & Palepu, 2001). This index evaluates various aspects of economic disclosures, including financial performance, market position, and value creation, providing a standardized approach for comparing firms across industries. The development and application of an EDI are crucial in enhancing the comparability of economic data, thereby improving stakeholder decision-making and promoting accountability in corporate reporting (Boesso & Kumar, 2007). By encouraging higher standards of economic disclosure, the EDI plays a significant role in fostering corporate transparency and aligning company practices with stakeholder expectations.

2.1.6 Tax Aggressiveness

Tax aggressiveness involves strategies or activities adopted by companies to minimize their tax liability, often pushing the boundaries of tax laws and regulations without necessarily violating them (Frank, 2004). This practice utilizes legal means, exploiting loopholes, exemptions, or ambiguities in tax codes to reduce the amount of taxes owed (Yusuf & Mulyani, 2019). While not inherently illegal, tax aggressiveness may navigate close to the ethical and acceptable limits of tax planning. It is characterized by actions aiming to decrease the tax burden through strategies classified as tax planning, not necessarily tax violations, within the confines of tax laws (Hanlon & Heitzman, 2013). In contrast to some definitions, tax aggressiveness can be seen as an act or strategy of tax avoidance to reduce corporate tax burdens, potentially violating tax regulations or using legal loopholes, though remaining within the gray area of the law (Frank et al., 2004; Ridha & Martani, 2014; Hanlon & Heitzman, 2013; Chen et al., 2014). It involves efforts to make the effective tax rate more favorable through aggressive tax planning (Hlaing, 2012). The distinction between tax avoidance and tax evasion becomes blurred in the gray area, and aggressive transactions may potentially fall into either category (Chen et al., 2014). Tax aggressiveness, while providing advantages like

maximizing net profit and increasing cash distribution to shareholders, comes with risks, including potential sanctions and penalties from tax authorities (Pradipta et al., 2016; Plorensia et al., 2015). For the purpose of this study, tax aggressiveness was proxy using non-debt tax shield which is in consonance with the apriori expectations.

2.1.7 Non-Debt Tax Shield

The Non-Debt Tax Shield encompasses tax savings resulting from deductions unrelated to interest on debt, representing a reduction in taxable income through allowable deductions, excluding debt interest. Companies claim depreciation expenses on capital assets, including intangible assets, and can carry forward operating losses, acting as non-debt tax shields (Donald et al., 2005). Amortization of intangible assets and tax credits, such as investment or research and development credits, also contribute to this shield. Net Operating Losses (NOLs) and jurisdiction-specific tax incentives for certain investments are additional components. The ratio of depreciation to total assets and dividends defines the non-debt tax shield, emphasizing its percentage in relation to total assets (Donald et al., 2005). In summary, the Non-Debt Tax Shield is crucial for companies to lower their tax burden legitimately, optimizing tax planning within legal and ethical bounds to avoid potential legal consequences.

2.1.8 Firm Size

In research, a control variable, such as firm size, is a factor not in the primary focus of the study but included to address its potential influence on the dependent variable. Firm size, often measured by metrics like total assets, revenue, or market capitalization, serves as a constant in this study, denoted by Total Company Value/Firm Size = $TEV/FS = (\text{Market Cap}) + (\text{Debt})$. Market capitalization is calculated as the market value of equity (number of shares * share price), plus total debt (long-term debt + short-term debt). Firm size is employed as a control variable to account for its potential impact on the relationship between the variables of interest, contributing to refined analyses and more accurate interpretations. This approach ensures that any observed correlation between environmental disclosure and financial performance is not solely attributed to the size of certain companies.



2.1.9 Firm Age

Firm age, considered as a control variable in this study, pertains to the number of years since a company's establishment. It serves to account for the potential influence of a firm's age on the relationships between the variables under investigation. Firm age, measured in years from the company's founding or incorporation, is represented by the number of years elapsed since incorporation, plus one year to avoid ages of zero, according to Shumway (2001). The inclusion of firm age as a control variable is rooted in the understanding that ageing firms often exhibit increased productivity, higher profits, larger size, lower debt ratios, and higher equity ratios. This study assumes that firms improve with age due to practical industry experience and the development of an extended network of business relationships over time. The use of firm age as a control variable enhances the robustness of research findings by addressing potential confounding variables associated with the age of the firms, contributing to a more nuanced understanding of the relationships being examined.

2.1 Empirical Review

2.2.1 Environmental Disclosures and Tax Aggressiveness

Saraswatie et al. (2020) conducted a study titled 'Environmental Disclosure and Tax Aggressiveness of Property and Real Estate Sector Companies,' focusing on the impact of environmental disclosure on tax aggressiveness in property and real estate sector companies, with evidence from Indonesia. The research employed 38 property and real estate companies listed on the Indonesia Stock Exchange (IDX) from 2014 to 2016. The dependent variable, tax aggressiveness, was measured using the effective tax rate (ETR) proxy, a widely used indicator in tax aggressiveness research. Corporate social responsibility (CSR) disclosure was the independent variable, assessed through Global Reporting Initiative Generation (GRI G4) indicators. The study incorporated control variables such as company size (SIZE) and leverage (LEV). Linear regression analysis revealed a significantly negative relationship between CSR disclosure and tax aggressiveness. Surprisingly, firm size and leverage were not found to be significantly related to tax aggressiveness. Notably, the research is restricted to the real Estate Sector Companies within prior years. This gap is specifically addressed by examining tax aggressiveness in the context of multinational companies within a more current time frame.

In the research paper titled "Environmental Accounting Disclosures and Tax Aggressiveness of Quoted Firms in Nigeria" by Fabian *et al.* (2021), the study explores the relationship between environmental accounting disclosures and tax aggressiveness of quoted firms in Nigeria. The data were sourced from the annual financial reports of ICT firms, healthcare firms, and oil & gas firms listed on the Nigerian Exchange Group (NGX) from 2013 to 2020. Environmental accounting disclosure was proxied using waste management disclosure (WMD), environmental remediation disclosure (ERD), and pollution control disclosure (PCD) based on the GRI G4 content index. Tax aggressiveness was represented by the effective tax rate (ETR). The study formulated three hypotheses, and OLS regression analysis using STATA V.15 was employed for statistical testing. The findings suggest a significant and positive influence of waste management disclosure, environmental remediation disclosure, and pollution control disclosure on firms' tax aggressiveness, as measured by the effective tax rate (ETR). Consequently, the study concludes that environmental accounting disclosures play a role in determining the tax aggressiveness of quoted firms. The research recommends that companies embrace environmentally friendly practices and enhance the disclosure of such information in their annual reports to positively impact their tax aggressiveness. Notably, the study identifies a gap, emphasizing the need for empirical evidence on tax aggressiveness which is not restricted only to quoted firms in Nigeria, but cuts across more recent and a wider range of various sectors from multinational companies which this study seeks to address.

In another empirical study on Norwegian companies, titled "Corporate Tax Behavior and Environmental Disclosure Strategic Trade-offs across Elements of CSR," Fallana and Fallana (2019) investigate strategic trade-offs between corporate tax behavior and environmental performance disclosure as integral components of corporate social responsibility (CSR). The study posits that tax and environmental disclosure represent conflicting stakeholder interests, and corporate strategies may involve trade-offs across CSR elements. Analyzing cross-sectional data from the annual reports of publicly listed corporations on the Oslo Stock Exchange (OSE), including 269 companies, the research finds no indications of trade-offs between corporate tax aggressiveness and mandatory disclosure, suggesting compliant behavior for both. However, a positive relationship between tax aggressiveness and voluntary disclosure



indicates the existence of strategic trade-offs, ensuring an acceptable level of legitimacy from various stakeholders. This study identifies a research gap related to the country used as a case study, and the current research aims to address this gap by focusing on multinational companies in Nigeria.

In the research study titled "Firm Characteristics and Corporate Environmental Disclosure Practices in India," Mukherjee et al. (2010) explore the voluntary reporting of environmental information by Indian companies in response to the global concern for corporate environmental disclosure. The study aims to identify the influence of firm-specific factors on environmental disclosure in selected Indian companies. The firm-specific characteristics considered include firm size, profitability, leverage, effective tax rate, and liquidity. Environmental disclosure is measured using an environmental disclosure index. The sample comprises companies from ten environmentally sensitive industries. Multiple regression analysis is conducted to assess the relationship between corporate characteristics and environmental disclosure. The findings highlight that effective tax rate, liquidity, and leverage are influential variables explaining variation in firms' environmental disclosure. The research focuses primarily on environmentally sensitive industries, and it is anticipated that the present research, addressing tax aggressiveness in multinational companies across various sectors, will contribute to filling this gap in the research landscape.

In the paper titled "The Determinants of Corporate Social and Environmental Disclosure in the Nigerian Oil and Gas Industry: An Empirical Investigation," Mohammed et al. (2020) examined the factors influencing the level and quality of social and environmental disclosure in the Nigerian oil and gas industry. The study focuses on leverage, management efficiency, liquidity, and tax as determinants of disclosure. Data from eight listed Nigerian oil and gas companies for the period 2004–2013 are analyzed using word count and compliance-oriented content analysis for quantity and quality measurement, respectively. Pooled ordinary least squares with panel corrected standard errors is employed to explore the relationship between disclosure quantity and quality and the identified determinants. The findings reveal low and poor disclosures on selected Global Reporting Initiative items, with size and, to some extent, management efficiency explaining the low

disclosure quantity, while corporate size, management efficiency, and liquidity jointly and individually account for poor disclosure quality. The study suggests that listed Nigerian oil and gas companies may exploit Nigeria's vulnerabilities as a resource-rich less developed country, and legitimacy theory explains social and environmental disclosure through management efficiency and liquidity. Although the paper focuses on listed Nigerian oil and gas companies, the research aims to diverge by investigating tax aggressive behaviors concerning environmental disclosures in multinational companies in Nigeria.

In the research conducted by Yoon *et al.* (2021) titled "The Effect of ESG Performance on Tax Avoidance from Korea," the study explores the relationship between a firm's engagement in socially responsible activities, as measured by environmental, social, and corporate governance (ESG) scores, and its tendency to engage in tax avoidance. The sample period spans from 2011 to 2017, focusing on Korean corporations. The study tests three hypotheses and identifies a negative relationship between ESG scores and tax avoidance, with a more pronounced negative association observed in non-chaebol affiliate samples. Additionally, a more significant relationship is found between the social score and the tendency to avoid tax. The book-tax difference (BTD) is used as the dependent variable, estimating the degree of tax avoidance, and the findings suggest that firms with strong CSR performance are less likely to manipulate taxable profits, aligning with corporate culture theory. Interestingly, this trend is more pronounced for chaebol-affiliated firms than non-chaebol firms. The study contributes to empirical evidence supporting the culture and theory of corporations regarding CSR performance sustainability and tax avoidance. It also underscores the role of firm characteristics in shaping the relationship between CSR performance and corporate policies. The research identifies social reputation as a crucial factor influencing the negative association between ESG scores and the tendency to avoid tax. The study highlights the need for further research in the context of firms listed on the Nigerian Exchange Group to address existing gaps in the literature.

2.2.2 Economic Disclosures and Tax Aggressiveness

In the research conducted by Huang *et al.* (2018) titled 'Executive cash compensation and tax aggressiveness of Chinese firms,' the study explores the impact of corporate compensation policies on



the tax aggressiveness of Chinese firms, focusing on an emerging market where executive compensation is predominantly in cash form. The analysis, based on a dataset of 958 firm-year observations of Chinese listed firms from 2006 to 2012, reveals that firms offering higher executive cash compensation are associated with lower tax aggressiveness. This relationship remains consistent even when considering excess cash compensation measures, controlling for executive shareholding, firm profitability, size, growth opportunity, and board independence. The study also finds that mutual funds exert pressure on firms paying higher compensation to reduce tax aggressiveness, indicating mutual funds' adverse selection against firms engaging in risky tax avoidance activities. Additionally, high leverage offsets the negative link between cash compensation and tax aggressiveness, suggesting a complementary effect between debt and tax avoidance and implying weak creditor monitoring. While the results contribute valuable insights for developing countries with concentrated ownership structures, weak institutional environments, corruption, and ongoing social and political transformations, the study is limited to Chinese firms. There is a need for further research focusing on Nigerian multinational firms.

In a related study titled 'The effect of earnings management and tax aggressiveness on shareholder wealth and stock price crash risk of German companies,' by Neifar and Utz (2018), the authors investigate the impact of earnings management (EM) and tax aggressiveness (TA) on shareholder wealth and stock price crash risk (SPCR) of German companies. Analyzing a sample of 820 firm-year observations of 188 non-financial companies listed on German stock exchanges from 2008 to 2014, the study utilizes generalized least square panel regression to overcome autocorrelation and heteroscedasticity issues. The findings indicate that EM and TA are not related concerning their effects on shareholder wealth and SPCR. EM does not influence shareholder wealth but significantly affects SPCR, while TA has a positive impact on shareholder wealth but does not affect SPCR. The study suggests that both EM and TA practices observed in German companies are non-opportunistic. However, the research is limited to accounting variables, and a more comprehensive study encompassing a broader range of economic variables and their effects on tax aggressiveness is recommended.

In the research by Davenport *et al.* (2015) titled 'The financial reporting and tax aggressiveness

Implications of Schedule Uncertain Tax Position taken on a tax return (UTP),' the study investigates whether increased reporting of uncertain tax positions directly to the Internal Revenue Service (IRS) through Schedule UTP is associated with changes in how firms report uncertain tax benefits (UTBs) in their financial statement footnotes. Conducting a pre-post analysis using annual data from Form 10-K and quarterly data from Form 10-Q, the research assesses the impact of Schedule UTP on disclosure quality, tax aggressiveness, investor reaction, earnings management, tax reporting, and financial reporting. The results indicate that firms not only reduce the levels of reported UTBs but also significantly decrease the year-to-year changes in reported UTBs. Firms required to file Schedule UTP earlier demonstrate an incrementally more substantial reduction in reported UTBs. However, the study finds mixed evidence for financially conservative firms, with no incremental significance for those in the upper quartile of tax aggressiveness. Additionally, the analysis reveals a decrease in book-tax differences subsequent to Schedule UTP, suggesting a change in reporting behavior rather than a change in aggressive tax behavior. The study suggests the need for a more robust methodology to handle the complexity of the topic.

In the research by Rachmawati *et al.* (2020) titled 'Do Country Characteristics Affect the Complementary Level of Financial and Tax Aggressiveness,' the study aims to examine whether two country characteristics, namely book-tax conformity and law enforcement, influence the complementary level of financial and tax aggressiveness. Filling a gap in previous studies with inconclusive results on the relationship between financial and tax aggressiveness, the research develops a new measure for this complementary level. Analyzing a sample of firms from 15 countries in East Asia and Europe from 2014 to 2016, the study finds that firms in countries with higher book-tax conformity and stronger law enforcement tend to exhibit a lower complementary level of financial and tax aggressiveness. In a supplementary test, the study shows that in countries with lower book-tax conformity, the effect of law enforcement on the complementary level of financial and tax aggressiveness is stronger than in countries with higher book-tax conformity. These findings suggest that country characteristics influence managers' decisions regarding the simultaneous presentation of aggressive financial statements and tax reporting. Given the inconclusive results in previous research on the relationship between financial and tax aggressiveness, this study



provides a detailed empirical review with clear results, using Nigeria as a case study to enhance the understanding of these dynamics in a specific context.

In another related research by Hashim *et al.*, (2016) titled 'Accounting Irregularities and Tax aggressiveness' the association between the incidence of accounting irregularities and aggressive tax reporting was examined. This study investigates the relationship between accounting irregularities and aggressive tax reporting since past studies provide contradictory and varied findings on whether firms expressing more financial reporting aggressiveness are also aggressive in their tax reporting. (The Beneish's M-score model was used to measure accounting irregularities and effective tax rates (ETR) to measure tax aggressiveness. Based on analysis of publicly listed Malaysian firms from 2008 to 2011, a positive but not significant relationship between accounting irregularities and tax aggressiveness was found. Though contrary to prior findings, the study adds to the evidence of the various motivations behind the unethical behavior involving financial reporting and/or taxation decisions. The scope of this study needs to be extended from Malaysian firms to current trends in Nigerian Multinational Companies, hence expanding the scope beyond accounting disclosures and tax aggressiveness to researching on the effect of environmental and economic disclosures on tax aggressiveness.

2.3 Theoretical Framework

2.3.1 Legitimacy Theory

The legitimacy theory, initially developed by John Dowling and Jeffrey Pfeffer in 1975 according to Guthrie *et al.* (2006), suggests that organizations operate based on an implicit contract with society. Legitimacy theory exists when an established value system is congruent with the value system of the larger social system of which the establishment is a part. The theory is a concept within the field of corporate social responsibility (CSR) and accounting that explores how organizations seek to maintain and enhance their legitimacy in the eyes of various stakeholders. The theory suggests that organizations are motivated to act in ways that are perceived as socially responsible and acceptable by the broader society to gain and maintain legitimacy. Legitimacy theory is a company management system that is oriented to alignment with individuals, society, and the government (Gray *et al.*, 2012). Legitimacy theory states that organizations continuously try to ensure that they carry out activities in accordance with

societal boundaries and norms (Deegan *et al.*, 2002).

Legitimacy Theory posits that a company strives to justify its operations and secure societal approval to ensure its continued existence. According to Purwanggono (2015), legitimacy is the community's assessment of the company and its goals. Octaviana (2014) identifies two dimensions for obtaining legitimacy support: aligning organizational activities with community values and ensuring that reported activities reflect social values. When a company's actions deviate from community expectations, management may use disclosure media to bridge the gap, presenting it as a statement of compliance with community expectations (Lanis & Richardson, 2013). In the context of Legitimacy Theory, companies seek recognition by conducting activities in line with community norms and values, not solely to fulfill shareholder wishes but also to address community expectations, ultimately enhancing the company's public image.

Key aspects of Legitimacy Theory include viewing legitimacy as a valuable resource, strategic behavior aligning with social expectations, responsiveness to stakeholder perceptions, recognition of institutional pressures, management of legitimacy gaps, and the use of disclosure and transparency as tools to convey commitment to socially responsible practices. This theory, often applied in corporate reporting, emphasizes the significance of companies communicating their endeavors in sustainability, corporate social responsibility, and ethical business practices, reflecting their commitment to societal well-being. The relationship between Legitimacy Theory, Tax Aggressiveness, and Sustainability Disclosures lies in the pursuit of organizational legitimacy through strategic actions. Legitimacy Theory views legitimacy as a valuable resource, and organizations seek to justify their operations to gain societal acceptance. In the context of tax aggressiveness, companies may engage in strategic behaviors and adopt transparent sustainability disclosures to signal their commitment to socially responsible practices. By aligning tax strategies with societal expectations and demonstrating responsible corporate behavior, organizations aim to bridge any legitimacy gap that may arise. Sustainability disclosures play a crucial role in communicating these efforts, contributing to a positive image in the eyes of stakeholders and fostering long-term legitimacy. The interplay between these elements showcases how organizations strategically manage their actions, disclosures, and stakeholder perceptions to maintain



legitimacy in the face of societal expectations and institutional pressures.

2.3.2 Stakeholders' Theory

Stakeholder Theory, which asserts that organizations should consider the interests of all stakeholders, not just shareholders, was developed by R. Edward Freeman in 1984 (Freeman 2002). Freeman's groundbreaking work marked a shift in organizational perspectives, urging businesses to recognize and incorporate the diverse interests of stakeholders beyond financial shareholders. In traditional business models, the primary focus had been on maximizing shareholder value. However, Stakeholder Theory broadens this outlook by advocating for the inclusion of concerns and well-being of all individuals or groups affected by or affecting the organization. This theory emphasizes the interconnected relationships between a business and its customers, suppliers, employees, investors, communities, and other stakeholders, urging organizations to create value for all stakeholders, not just shareholders. Stakeholder Theory, with Freeman as a key proponent, has significantly influenced the field of business ethics and corporate governance, reshaping organizational practices in managing relationships with a broader range of stakeholders.

Stakeholder Theory is a management and ethical theory that suggests that businesses and organizations should consider the interests and expectations of all stakeholders, not just shareholders, when making decisions and formulating strategies (Freeman 2010). Stakeholders in this context refer to any individuals or groups that have a stake and interest in an organization's operations, outcomes or are affected by the actions and decisions of an organization. It stresses the interconnected relationships between a business and its customers, suppliers, employees, investors, communities and others who have stake in the organization. In traditional business models, the focus has often been primarily on maximizing shareholder value. However, Stakeholder Theory broadens this perspective by asserting that organizations should take into account the concerns and well-being of all individuals or groups affected by or affecting the organization. The theory argues that firms should create value for all stakeholders and not just shareholders. Stakeholder Theory advocates for the inclusive consideration of a diverse range of stakeholders in decision-making processes, recognizing the legitimacy of their interests. The theory underscores the need for organizations to balance conflicting stakeholder

interests, navigating trade-offs effectively. It encourages a long-term perspective, moving beyond short-term financial gains to prioritize sustainability in stakeholder relationships and the enduring impact of business decisions. Ethical considerations and responsible corporate citizenship are integral, urging organizations to operate not just within legal boundaries but also in socially responsible ways. Aligned with Corporate Social Responsibility (CSR), Stakeholder Theory emphasizes that organizations bear responsibilities beyond mere financial obligations, promoting positive relationships with stakeholders, building trust, and contributing to sustainable development. This approach has become influential in business ethics and corporate governance, shaping organizational practices in managing relationships with the broader community (Freeman 2010).

The clear link between Stakeholder Theory, Tax Aggressiveness, and Sustainability Disclosures is grounded in Stakeholder Theory's emphasis on ethical considerations, transparency, and balancing conflicting interests. Stakeholder Theory encourages organizations to consider a wide array of stakeholders, aligning with sustainability disclosures that reflect a commitment to responsible business practices. In the context of tax aggressiveness, organizations need to navigate trade-offs effectively, weighing the interests of tax authorities, communities, and shareholders. The long-term perspective advocated by Stakeholder Theory aligns with considering the enduring impact of tax decisions on stakeholder relationships and sustainability goals. The interplay between ethical behavior, transparent reporting, and a comprehensive approach to stakeholder interests fosters responsible corporate citizenship and contributes to sustainable development.

2.3.3 Contingency Theory

Contingency theory, developed by Fred Fiedler in 1964, emerged as a pivotal framework in organizational and management studies. The theory posits that there is no universally optimal way to manage or lead an organization; instead, the best approach depends on specific situational factors. Fiedler's model, which introduced the concept of situational favorableness and the Least Preferred Co-worker (LPC) scale, highlighted the contingency between leadership style and contextual variables. This theory underscores the importance of adapting management strategies to fit environmental conditions, organizational size, technology, and task structure. Contingency Theory is a management and organizational theory that suggests there is no one-



size-fits-all approach to organizing and leading a business. Instead, the effectiveness of organizational structures and management practices depends on the specific internal and external factors, or contingencies, that an organization faces. The theory asserts that different situations or environments require different approaches to achieve optimal performance. The theory claims that there is no best way to organize a corporation, to lead a company, or to make decisions. Instead, the optimal course of action is contingent upon the internal and external situation. A theory which aims to offer a response to these tensions is the Contingency theory, which states that an organization is performing at its best when they achieve alignment or fit between internal and external elements (Smith & Lewis, 2011) contrary to early theories, the contingency theory does not assume that there is one best way for managers to face operational decision. Each situation needs to be addressed in a unique way and successful managers must choose the path which best aligns strategy and structure (Smith & Lewis, 2011). Contingency Theory underscores the importance of aligning organizational structure and management practices with environmental demands for optimal effectiveness. It identifies contingency factors such as organization size, task nature, external environment, and technology as key influencers on organizational design. The theory emphasizes adaptability, urging organizations to be flexible and adjust structures based on changing contingencies. Leadership style is considered situation-dependent, advocating for leaders to tailor their approaches accordingly. Adopting a holistic view, Contingency Theory treats organizations as complex systems influenced by multiple interconnected factors, emphasizing the need for customized solutions rather than universal prescriptions to address organizational challenges. Contingency Theory can relate to tax aggressiveness in the sense that an organization's approach to tax strategies may be contingent upon various factors. For instance, the size of the organization, the nature of its business operations, and the regulatory environment can influence the choice of tax planning strategies. Contingency factors such as the complexity of the tax code, industry-specific regulations, and the level of scrutiny from tax authorities may shape the organization's decisions regarding tax aggressiveness. In a dynamic and uncertain tax landscape, organizations may need to adapt their tax strategies based on changing contingencies. The effectiveness of a particular tax planning approach may depend on how well it aligns with the

organization's unique circumstances. Additionally, the leadership style within an organization may play a role in determining its stance on tax aggressiveness, as leaders make decisions in response to specific contingencies they face.

The underpinning theory for this research is Contingency Theory which forms the theoretical foundation for this research, asserting that the appropriateness and effectiveness of tax aggressiveness strategies hinge on various contextual factors. This choice stems from the theory's principle that no universal or optimal approach exists for managing business decisions; rather, effectiveness is contingent on specific situations. The study, grounded in Contingency Theory, seeks to explore how diverse factors such as firm size, age, industry, country, competition level, disclosure practices, and regulatory environments influence the relationship between tax aggressiveness and outcomes like ownership structure, capital structure, and corporate disclosures. By emphasizing alignment with the broader organizational context, including societal norms, ethics, and legal constraints related to tax aggressiveness, the research aims to uncover how companies respond to diverse expectations. Additionally, the study will investigate how internal organizational characteristics, such as corporate governance, top management composition, and risk appetite, interact with external factors to shape decisions regarding tax aggressiveness. Overall, Contingency Theory offers a valuable framework for comprehending the intricate and dynamic nature of tax aggressive decisions and their consequences.

III. METHODOLOGY

This study adopts the ex-post facto research designs and correlational approaches, utilizing secondary data from published annual reports and accounts of sampled Multinational Companies listed on the Nigerian Exchange Group (NSE). The research focuses on cross-sectional time series (panel) data spanning ten years (2013-2022). Employing descriptive, correlation, and regression analyses, the study explores relationships between variables, assess mean outcome deviations, and establish associations. The data analysis for this study involves utilizing the panel regression model with STATA version 16 to examine the effects of sustainability disclosure and corporate tax aggressiveness in listed Multinational Companies (MNCs) in Nigeria. As a quantitative study, it utilizes data analytical techniques such as descriptive, correlation, and regression analyses to estimate the impact of sustainability disclosure, with



environmental and economic disclosure as proxies for the independent variable. The dependent variable, tax aggressiveness, is proxy by non-debt tax shield.

Research Model

The model of the study is adapted from that proposed by Chen *et. al.* (2019) on The impact of ownership structure on tax aggressiveness: Evidence from China. *Journal of Contemporary Accounting & Economics*, 15(1), 17-30. The research model adapted is stated as follows:

Adapted Model:

$$ETR_{it} = \beta_0 + \beta_1 INST_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 ROA_{it} + \beta_5 CSR_{it} + \epsilon_{it} \dots \dots \dots (adapted)$$

Where:

- ETR = Effective Tax Rate
- Fsize= Firm Size
- INST = Institutional Ownership
- ROA = Return on Asset
- LEV = Firm Leverage
- CSR = Corporate Social Responsibility
- $\beta_0 - \beta_{it}$ = coefficient of the regression.
- i = number of multinational companies
- t = number of years
- ϵ = Error term

Similarly, the research model for this study is stated as follows:

Model:

$$NDTS_{it} = \beta_0 + \beta_1 EcoSD_{it} + \beta_2 EvrSD_{it} + \beta_3 Fsize_{it} + \beta_4 Fage_{it} + \epsilon_{it} \dots \dots \dots (i)$$

Where:

- NDTS = Non-Debt Tax Shield
- EcoSD = Economic Sustainability Disclosure
- EvrSD = Environmental Sustainability Disclosure
- Fsize= Firm Size
- Fage = Firm Age
- $\beta_0 - \beta_{it}$ = coefficient of the regression.
- i = number of multinational companies
- t = number of years

Apriori Expectation

The apriori expectation is that both economic and environmental sustainability disclosures should positively and significantly influence a company's tax aggressiveness. This expectation is based on the premise that increased transparency in reporting economic and environmental practices is likely to correlate with more aggressive tax strategies. Companies that are more open about their sustainability efforts may engage in aggressive tax planning to optimize their financial performance while maintaining a socially responsible image. Therefore, the anticipation of this study is that higher levels of sustainability disclosure will be associated with higher levels of tax aggressiveness, reflecting a strategic balance between transparency and financial optimization.

Table 3.1: Measurement of Variables

SN	Variables	Type of Variables	Measurements	Sources
1.	Environmental Disclosure Index	Independent Variable	Content analysis score of sustainability reports (sum of disclosed items)	Gnanaweera & Kunori (2018); Mensah (2019)
2.	Economic Disclosure Index	Independent Variable	Key financial metrics: Revenue (R), Net Income (NI), EBITDA (EBITDA), Financial Ratios: Return on Assets (ROA), Return on Equity (ROE)	Mensah (2019); Grewal et al. (2020)
3.	Non-Debt-Tax Shield	Dependent Variable	Ratio of Depreciation to Total Assets (D/TA), Investment Tax Credits (ITC), R&D Tax Credits (R&DTC), Other Non-Debt Tax Benefits (ND)	Donald <i>et. al.</i> (2005); Richardson & Lanis (2007)
4.	Firm Size	Control Variable	Total Assets (TA), Market Capitalization (MC), Revenue (R) Number of Employees (E)	Rajha & Alslehat (2014); Adam Hayes (2021)
5.	Firm Age	Control Variable	Years (N) Since Incorporation (Y)	Adam Hayes (2021)

Source: Authors compilation, 2024



IV. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The purpose of this analysis is to examine the relationships between non-debt tax shield (NDTS) and various factors such as economic sustainability disclosure (ECOSD), environmental sustainability disclosure (EVRSD), firm size (FSIZE), and firm age (FAGE) among listed multinational firms in Nigeria. By employing descriptive statistics and correlation analysis, we aim to understand the extent of variability in these variables and the strength and direction of their relationships. This will provide insights into how sustainability disclosures and firm characteristics influence tax aggressiveness.

Table 4.1 Descriptive statistics

. summarize ndts ecosd evrsd fsize fage

Variable	Obs	Mean	Std. Dev.	Min	Max
ndts	260	.0186923	.0223136	0	.09
ecosd	260	.5798077	.1968035	.25	1
evrsd	260	1.092115	.5375058	.33	2.2
fsize	260	11.08692	1.049569	8.6	13.18
fage	260	32.30769	14.98846	1	57

Source: STATA 16 output Results based on study data

Table 4.1 shows that the average non-debt tax shield (NDTS) of listed Multinational firms in Nigeria was 0.019 with a standard deviation (SD) of 0.022 which shows the variability or spread of NDTS values around the mean. The SD of 0.022 is an indication that the NDTS of the sampled firms deviate from both sides of the mean by 0.022, which means that the data is not widely dispersed from its mean. The NDTS also has a minimum and maximum value of 0 and 0.09 respectively. The table also shows that the average economic sustainability disclosure (ECOSD) of the listed Multinational firms in Nigeria was 0.58 with the variability or spread of ECOSD values around the mean of 0.197 representing its Standard Deviation (SD), implying that ECOSD deviates from both sides of the mean by 0.197. The smallest and largest values of ECOSD are 0.25 and 1 respectively. Furthermore, the average value of environmental sustainability disclosure (EVRSD) of the sampled firms for the study period was 1.092 with an SD of 0.538 indicating that EVRSD deviate from both sides of the mean

by 0.538 implying that the data is widely dispersed from the mean. The EVRSD also has a minimum and maximum values of 0.33 and 2.2 respectively. Similarly, the table shows that the firm size (FSIZE) of the sampled firms has an average of 11.087 with an SD of 1.05 which implies that FIZE deviate from both sides of the mean by 1.05, meaning that the data is widely dispersed from the mean. The minimum and maximum value of FSIZE were 8.6 and 13.18 respectively. Finally, Table 4.1 shows that the firm age (FAGE) of the sampled firms has an average of 32.308 with an SD of 14.99 which implies that FAGE deviate from both sides of the mean by 14.99, meaning that the data is widely dispersed from the mean. The minimum and maximum value of FAGE were 1 and 57 respectively.

Correlation Matrix

The purpose of the decision rule in the context of correlation analysis is to establish criteria for interpreting the strength and direction of the relationships between variables. The decision rule helps to determine whether the observed correlation coefficients are statistically significant and to understand the practical implications of these relationships. By setting thresholds for what constitutes a weak, moderate, or strong correlation, the decision rule aids in the systematic evaluation of the data. This, in turn, informs decision-making by identifying meaningful associations that warrant further investigation or action. In the study, this rule facilitates the interpretation of how economic and environmental sustainability disclosures, firm size, and firm age relate to tax aggressiveness, guiding conclusions and recommendations based on the strength and direction of these relationships.

Table 4.2 Results of correlation analysis

. correlate ndts ecosd evrsd fsize fage
 (obs=260)

	ndts	ecosd	evrsd	fsize	fage
ndts	1.0000				
ecosd	0.2898	1.0000			
evrsd	0.1463	0.3191	1.0000		
fsize	-0.2399	0.1485	0.2994	1.0000	
fage	0.4221	0.2875	0.0520	-0.3913	1.0000

Source: STATA 16 output Results based on study data



Table 4.2 above shows the results of the association between tax aggressiveness (proxy with non-debt tax shield) and sustainability disclosure (proxy with economic sustainability disclosure and environmental sustainability disclosure) with firm size and firm age as a control variable. It contains the Pearson pairwise correlation coefficients of the variables under study. These correlation coefficients provide insights into the strength and direction of linear relationships between pairs of variables. A positive correlation indicates that as one variable increases, the other tends to increase, while a negative correlation suggests that as one variable increases, the other tends to decrease. The magnitude of the correlation coefficient indicates the strength of the relationship, with values closer to 1 or -1 indicating stronger relationships. The correlation matrix is as presented in Table 4.2 above.

The result in table 4.2 shows a weak positive correlation of 0.290 and 0.146 between *ndts*, *ecosr* and *evrsd* respectively. This implies that ceteris paribus a unit increase in *ecosr* and *evrsd* will lead to 0.290 and 0.146 units increase in *ndts* respectively and vice versa. Firm size on the other hand has a weak negative correlation with *ndts* as shown by the correlation coefficient of -0.240 which implies that a unit increase in firm size leads to a decrease of 0.240 units in *ndts* and vice versa. Similarly, firm age has a weak positive correlation with *ndts* as shown by the correlation coefficient of 0.114 which implies that a unit increase in firm size leads to an increase of 0.114 units in *ndts*.

The table also revealed a moderate positive correlation of 0.319 and a weak positive correlation of 0.149 between *ecosd* and *evrsr* and *ecosd* and *fsize* which implies that as *ecosd* increases, there is a tendency for *ecosd* and *fsize* to increase. Finally, the study revealed that there is a weak positive correlation of 0.299 and 0.223 between *ecosd* and *fsize* and *ecosd* and *Fage* respectively, which implies that as *evrsd* increases, there is a tendency for *fsize* to increase.

Multicollinearity

The purpose of assessing multicollinearity in this regression model, as indicated by the Variance Inflation Factor (VIF) test results in Table 4.3, is to identify the extent to which predictor variables are correlated with each other. Multicollinearity can distort the interpretation of regression coefficients by inflating their standard errors, which can lead to erroneous conclusions about the relationships between predictors and the outcome variable.

Table 4.3 Results of VIF Test (Multicollinearity Test)

```
. estat vif
```

Variable	VIF	1/VIF
fsize	1.40	0.711937
fage	1.39	0.718502
ecosd	1.27	0.788672
evrsd	1.21	0.826056
Mean VIF	1.32	

```
. xtreg ndts ecosd evrsd fsize fage, fe
```

Source: STATA 16 output Results based on study data

Table 4.3 above shows the Variance Inflation Factor (VIF) for each variable in the regression model. VIF is a measure of how much the variance of an estimated regression coefficient increases if the predictors are correlated. Generally, a high VIF indicates potential multicollinearity, which can lead to unreliable regression coefficient estimates. The result revealed a VIF of 1.21, 1.27, 1.40, 1.39 and 1.32 for *evrsd*, *ecosd*, *fsize* and *fage* respectively which is relatively low and a corresponding 1/VIF of 0.8261, 0.7887, 0.7119 and 0.7185 indicating that about 82.61%, 78.87%, 71.19% and 71.85% of the variance in the estimated coefficient for *evrsd*, *ecosd*, *fsize* and *fage* is not due to multicollinearity. The mean VIF which is calculated as the average of the individual VIF values for all variables in the model is 1.32, which is quite low which indicates that, on average, there is a low level of multicollinearity in the model. Overall, the VIF values are low, suggesting that there is no severe multicollinearity among the predictor variables in the regression model. This is a positive result, as multicollinearity can make it challenging to interpret the individual contributions of predictors to the dependent variable. The low VIF values indicate that the variance in the estimated coefficients for each variable is mostly independent of the other predictors, contributing to the stability and reliability of your regression results. The Hausman specification test is commonly used to assess the presence of endogeneity in a regression model, particularly in the context of choosing between fixed effects (FE) and random effects (RE) models. The test helps determine whether the differences in the coefficients estimated by the two models are statistically significant, indicating the presence of endogeneity.



Modified Wald Test for Group-Wise Heteroskedasticity in Fixed-Effect Regression

The purpose of the Modified Wald test for group-wise heteroskedasticity in fixed-effect regression is to detect whether variances differ significantly across groups or clusters within the dataset. The decision rule involves comparing a test statistic to critical values from a chi-squared distribution: if the test statistic exceeds the critical value, it indicates evidence of heteroskedasticity, highlighting the need for adjustments to ensure accurate regression results.

Table 4.4: Modified Wald test for groupwise Heteroskedasticity in fixed effect regression model

chi2 (26) = 16327.05
Prob>chi2 = 0.0000

Source: STATA 16 Output Results based on study data

Table 4.5 above present the results of heteroskedasticity test which was conducted to ascertain whether the data have unequal variance. The null hypothesis (H0) assumes that the variance of the errors is the same for all groups, while the alternative hypothesis suggests that there are differences in variances among the groups. The decision rule is to fail to reject the null hypothesis if the P value is greater than 5% (0.05), otherwise accept the alternative hypothesis if the P value is less than 5% (0.05). The Modified Wald test for groupwise heteroskedasticity was used to assess whether there is evidence of heteroskedasticity in the error terms of a fixed-effects regression model across different groups. Since the probability associated with the chi-squared value of 17824.95 (Prob > chi2) is very close to zero (0.0000), the study rejects the null hypothesis. This low p-value indicates that there is strong evidence against the assumption of equal variances across all groups. In other words, there is groupwise heteroskedasticity in the fixed-effects regression model. This result suggests that the variability of the errors differs significantly across the groups included in the fixed-effects model and this can impact the efficiency and reliability of the estimated coefficients for individual groups. This problem was corrected using panel corrected standard errors estimator to obtain valid standard errors for the fixed-effects regression coefficients. These adjustments help account for the potential heteroskedasticity and provide more accurate standard errors for hypothesis testing. The

result of Wooldridge test for autocorrelation in panel data which was used to test for the presence of first-order autocorrelation in the residuals of the panel data regression model is presented in table 4.6 below. Autocorrelation occurs when there is a correlation between the error terms of a regression model at different time points for the same cross-sectional unit. The null hypothesis of this test is that there is no serial correlation while the alternative hypothesis is that there is serial correlation. The decision rule is to accept the null hypothesis if the PV is greater than 0.05 %, otherwise accept the alternative hypothesis if the P value is less than 5% (0.05).

Hausman Test

The purpose of the Hausman test is to assess whether the coefficients estimated by a random-effects model are consistent and efficient compared to those estimated by a fixed-effects model. The decision rule is that if the p-value from the Hausman test is less than the chosen significance level (e.g., 0.05), it indicates that the random-effects model is inconsistent due to endogeneity. This suggests that the fixed-effects model should be preferred for more reliable coefficient estimates in regression analysis.

Table 4.5: Results of Hausman test

	Coef.	P-value
Chi-square test value	10.55	0.0321

Source: STATA 16 Output Results based on study data

The low p-value of 0.00321 provides evidence for rejecting the null hypothesis implied by the Hausman test. In the context of the Hausman test, the null hypothesis typically states that the coefficients from the fixed effects model are consistent and efficient, implying that there is no endogeneity. The results of the Hausman test indicate that there is evidence of endogeneity in the model. The rejection of the null hypothesis implies that the random effects model may be less efficient than the fixed effects model due to the presence of endogeneity. In such a case, choosing the fixed effects model may be more appropriate.



Table 4.6 Wooldridge test for autocorrelation in panel data

F (1, 25)	34.514
Prob > F	0.0000

Source: STATA 16 Output Results based on study data

The results of the Wooldridge test in table 4.6 above shows a test statistic of 34.514 with a corresponding p value of 0.000 which provide strong evidence that there is first-order autocorrelation in the residuals of the panel data regression model. The presence of autocorrelation can affect the efficiency and reliability of the estimated coefficients, leading to biased standard errors. The problem of autocorrelation was corrected by running a panel corrected standard error regression which account for and address the autocorrelation in the analysis.

Table 4.7 Pesaran's test of cross sectional independence

Pesaran's test	-0.861
Prob	0.3894

Source: STATA 16 Output Results based on study data

Table 4.7 above present the result of Pesaran's test of cross-sectional independence which is a diagnostic test used in the context of panel data or cross-sectional time-series data. The test assesses whether there is cross-sectional dependence among the individual units (cross-sectional entities) in the dataset.

The test statistic being close to zero suggests a limited presence of cross-sectional dependence. The probability (Pr) of 0.3894 is higher than a typical significance level of 0.05, which suggests that there is enough evidence to reject the null hypothesis of cross-sectional independence.

Table 4.8: Panel Corrected Standard Error Regression Results

Panel-corrected	ndts	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
ecosd	0.0224	0.0071	3.16	0.002	0.0085	0.0363
evrds	0.0053	0.0019	2.730	0.006	0.00150	0.0091
fsize	-0.00420	0.0004	-9.370	0.000	-0.0051	-0.0033
fage	0.0004	0.00049	0.350	0.000	-0.0003	0.0005
_cons	0.03290	0.0045	7.28	0.000		0.0240
0.0418						
R-squared	0.2421					
Wald chi2 (3)	363.99					
Prob > chi2	0.0000					
Number of observation	260					

Source: STATA 16 Output Results based on study data

4.2 Test of research hypotheses

The Wald chi2 statistics of 363.99 and a corresponding Prob.>F of 0.0000 and an overall R-squared value is 0.2421, indicating that the model explains about 24.21% of the variance in the dependent variable. This indicates that the model is fit to explain the relationship expressed in the study. The nature and extent of the relationship between the dependent variable and each of the independent variables of the study in terms of coefficients, z-values, and p-values are explained further:

Ho₁: Economic sustainability disclosure index has no significant effect on non-debt tax shield of listed multinational companies in Nigeria

Economic sustainability disclosure (ECOSD) of the sampled listed multinational companies during the study period has a positive relationship with tax aggressiveness as explained by the coefficient of 0.0224. This means that for every unit increase in ECOSD, tax aggressiveness (NTDS) increases by 0.0224 unit. The results also revealed that ECOSD of the sampled firms has a significant effect on tax aggressiveness of listed multinational companies in Nigeria. This was supported by a z-value of 3.16 and a P-value of 0.002 which is statistically significant at 5%. As a result, the study rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that ECOSD has a significant effect on tax aggressiveness of quoted multinational firms in Nigeria.

Ho₂: Environmental sustainability disclosure index has no significant effect on non-debt tax shield of listed multinational companies in Nigeria

Environmental sustainability disclosure (EVRSD) of the sampled listed multinational companies during the study period has a positive relationship with tax aggressiveness as explained by the coefficient of 0.0053. This means that for every unit increase in EVRSD, tax aggressiveness increases by 0.0053 unit. The results also revealed that EVRSD of the sampled Firms has a significant effect on tax aggressiveness of listed multinational companies in Nigeria. This was supported by a z-value of 2.73 and a corresponding P-value of 0.006 which is statistically significant at 5%. As a result, the study rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that EVRSD has a positive significant effect on tax aggressiveness of listed multinational firms in Nigeria.



4.3 Discussion of Findings

In summary, the model seems to fit the data well, and the coefficients for the independent variables are statistically significant. Each of the individual coefficients (ECOSR, EVRSR, and FSIZE) has a statistically significant effect on the dependent variable tax aggressiveness proxy with (NDTS), as indicated by their low p-values. The negative coefficient for FSIZE suggests an inverse relationship with NDTS, while the positive coefficients for ECOSR and EVRSR suggest positive relationships. However FAGE has a positive relationship of 0.0001 with NDTS, which is statistically not significant as revealed by the p value of 0.000

This study examined the effect of sustainability disclosure on tax aggressiveness of listed multinational firms in Nigeria. Specifically, this study sought to examine the effect of economic and environmental sustainability disclosure on tax aggressiveness of listed multinational firms in Nigeria. Therefore, the findings of this study are based on formulated hypotheses, models and analysis carried out. The apriori expectation was that both economic and environmental sustainability disclosure should have a positive and significant effect on aggressiveness.

The study found out that at the level of significance of 5% (0.05) economic sustainability disclosure of the sampled listed multinational companies during the study period has a positive relationship with tax aggressiveness as explained by the coefficient of 0.0224. This means that for every unit increase in economic sustainability disclosure (ECOSD), tax aggressiveness increases by 0.0224 unit. The results also revealed that ECOSD of the sampled firms has a significant effect on tax aggressiveness of listed multinational companies in Nigeria. This was shown by a t-value of 3.16 and a P-value of 0.002 which is statistically significant at 5%. As a result, the study rejected the null hypothesis and accepted the alternative hypothesis, resulting in the conclusion that ECOSD has a positive significant effect on tax aggressiveness of listed multinational firms in Nigeria. The results are similar to those of Hashim *et al.*, (2016) and Rachmawati *et al.* (2020) who also found that ECOSD has positive significant effect on tax aggressiveness. The results were in direct opposition to those of Huang *et al.* (2018), and Davenport *et al.* (2015) who discovered that ECOSD has an insignificant effect on tax aggressiveness. The inconsistency in the findings was as a result of the

difference in the tool of analysis. Huang *et al.* (2018) and Davenport *et al.* (2015) measured tax aggressiveness using effective tax rate (ETR) and used pooled OLS regression while the current study measured tax aggressiveness using non debt tax shield (NDTS) used fixed effect regression as the technique for data analysis. Similarly, the study found out that at the level of significance of 5% (0.05) environmental sustainability disclosure has a positive and significant effect on tax aggressiveness of listed multinational firms in Nigeria. The findings is in line with the apriori expectations. The implication of the above findings is that a unit increase in environmental sustainability disclosure will lead to 0.0053 units increase in tax aggressiveness. The above findings of this study agree with those of Fabian *et al.* (2021), and Fallana and Fallana (2019) who also found that EVRSR has a significant effect on tax aggressiveness. The results were in direct opposition to those of Saraswatie *et al.* (2020) who discovered that EVRSR has a negative and insignificant effect on tax aggressiveness. The inconsistency in the findings was as a result of the difference in the tool of analysis. Saraswatie *et al.* (2020), measured tax aggressiveness using effective tax rate (ETR) and used pooled OLS regression while the current study measured tax aggressiveness using non debt tax shield (NDTS) and used fixed effect regression as the technique for data analysis.

V. CONCLUSION AND RECOMMENDATION

This study provides empirical evidence on the relationship between sustainability disclosure and tax aggressiveness among listed multinational companies in Nigeria. The results indicate that both economic and environmental sustainability disclosures have a significant positive effect on tax aggressiveness, measured using non-debt tax shields. This suggests that companies that disclose more sustainability related information also tend to engage in more aggressive tax avoidance behaviour. The findings contradict the notion that increased transparency through sustainability disclosures should deter aggressive tax planning. Instead, it appears that companies may be using sustainability reporting for reputational benefits while simultaneously avoiding taxes through complex schemes unseen to stakeholders. This highlights potential issues with “greenwashing” and calls for more effective policy interventions. Based on the conclusion of this study, the following recommendations subsists:



- i. Regulators such as the Financial Reporting Council of Nigeria should impose stricter reporting standards and disclosures related to economic sustainability performance to restrict companies from using such information to conceal underlying tax avoidance strategies. Mandating assurances on economic sustainability data quality can improve reliability.
- ii. Tax authorities such as Federal Inland Revenue Service should closely scrutinize the tax practices of companies showcasing strong environmental stewardship credentials. The genuineness of environmental sustainability reports should be verified through audits before granting tax incentives or concessions linked to environmental performance.

The implications of this study extend beyond academic discourse, offering insights for policymakers, stakeholders, tax authorities grappling with the evolving challenges in international taxation and corporate tax behavior. Further research could explore these dynamics in other developing country contexts using different measures of tax avoidance. Investigating the role of sustainability assurance and integrated reporting in influencing the sustainability disclosure-tax aggressiveness relationship also offers rich scope for future studies.

REFERENCES

- [1]. Adams, C. A. (2002). Internal organizational factors influencing corporate social and ethical reporting: Beyond current theorizing. *Accounting, Auditing & Accountability Journal*, 15(2), 223-250.
- [2]. Akwe, J. A. (2014). Impact of non-oil tax revenue on economic growth: The Nigerian perspective. *International Journal of Finance and Accounting*, 3(5), 303-309.
- [3]. Boesso, G., & Kumar, K. (2007). Drivers of corporate voluntary disclosure: A framework and empirical evidence from Italy and the United States. *Accounting, Auditing & Accountability Journal*, 20(2), 269-296.
- [4]. Chen et. al. (2019). The impact of ownership structure on tax aggressiveness: Evidence from China. *Journal of Contemporary Accounting & Economics*, 15(1), 17-30.
- [5]. Chen, S., Xia, C., Qiang, C., & Terry, S. (2010). Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics* 95 (January 2010), 41-61.
- [6]. Chen, Y., Ge, R., Louis, H., & Zolotoy, L. (2019). Stock liquidity and corporate tax avoidance *Review of accounting studies*, 24(1), 309–340.
- [7]. Christain Leuz, & Peter Wysocki, (2016). The economics of disclosure and financial reporting regulation: Evidence and suggestions for future research. University of Chicago Booth School of Business, NBER and ECGI.
- [8]. Clarkson, P. M., Overell, M. B., & Chapple, L. (2011). Environmental reporting and its relation to corporate environmental performance. *Abacus*, 47(1), 27-60.
- [9]. Crowther, D., & Lancaster, G. (2008). *Research methods: A concise introduction to research in management and business consultancy*.
- [10]. Davenport, S. A. (2015). The financial reporting and tax aggressiveness implications of schedule UTP [Master's thesis, University of Alabama]. Retrieved from <https://ir.ua.edu/handle/123456789/2416>
- [11]. Deegan, C., Rankin, M., & Voght, P. (2002). Firms' disclosure reactions to major social incidents: Australian evidence. *Accounting Forum*, 26(1), 101-130.
- [12]. Donald, B., John, D., & William, F.F. (2005). On The extent, growth, and efficiency consequences of state business tax planning. College of Business Administration Creighton University, California.
- [13]. Fabian, O., Onuora, J. K. J., & Onyeka, O. (2022). Environmental accounting disclosures and tax aggressiveness of quoted firms in Nigeria.
- [14]. Fallana, E., & Fallan, L. (2019). Corporate tax behaviour and environmental disclosure: Strategic trade-offs across elements of CSR? *Scandinavian Journal of Management*,
- [15]. Fiedler, F. E. (1964). A Contingency Model of Leadership Effectiveness. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 1, pp. 149-190). Academic Press.
- [16]. Frank, M. M., Lynch, L. J., & Rego, S. O. (2009). Tax reporting aggressiveness and its relation to aggressive financial reporting. *The Accounting Review*, 84(2), 467–496.
- [17]. Freeman, R. E., & Phillips, R. A. (2002). Stakeholder theory: A libertarian defense. *Business Ethics Quarterly*, 12(3), 331–349.
- [18]. Freeman, R.E. (2010) *Strategic Management: A Stakeholder Approach*. Scientific Research



- An Academic Publisher, Cambridge University Press, Cambridge
- [19]. Gnanaweera, K. A. K., & Kunori, N. (2018). Corporate sustainability reporting: Linkage of corporate disclosure information and performance indicators. *Cogent Business and Management*, 5(1), 1–21. <http://doi.org/10.1080/23311975.2018.1423872>
- [20]. Gnanaweera, K. A., & Kunori, N. (2018). Drivers of sustainability reporting and its impact on corporate performance: A review of literature. *Journal of Sustainable Finance & Investment*, 8(4), 330-349.
- [21]. Gray, R., Kouhy, R., & Lavers, S. (2012). Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal*, 8(2), 47-77.
- [22]. Guthrie, J.T, Mcrar, A., & Klauda, S.L (2007). Contributions of Concept-Oriented Reading Instruction to Knowledge about Interventions for Motivations in Reading. *Educational Psychologist*, 42(4), 237-250.
- [23]. Guthrie, J., & Ward, P. (2006). Controlling irrigation: Lessons from the Lower Colorado River Valley. *Journal of Environmental Management*, 78(1), 1-13.
- [24]. Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production*, 59, 5-21.
- [25]. Handayani, Y.D., & Ibrani, E.Y. (2019). Corporate governance, Share ownership structure and tax avoidance. *International Journal of Commerce and Finance*, 5(2), 120-127.
- [26]. Hanlon, M. and Heitzman, S. (2010). A Review of Tax Research. *Journal of Accounting and Economics*, 50 (2), 127-178.
- [27]. Hanlon, M., & Heitzman, S. (2013). A Review of Tax Research. *The Journal of Accounting and Economics Conference*.
- [28]. Hashim, H. A., Ariff, A. M., & Amrah, M. R. (2016). Accounting irregularities and tax aggressiveness. *International Journal of Economics, Management and Accounting*, 24, 1-14.
- [29]. Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1-3), 405-440.
- [30]. Huang, W., Ying, T., & Shen, Y. (2018). Executive cash compensation and tax aggressiveness of Chinese firms. *Review of Quantitative Finance and Accounting*, 51, 1151-1180. <https://doi.org/10.1007/s11156-018-0700-2>
- [31]. Hlaing, K. P. (2012). Organizational architecture of multinationals and tax aggressiveness. *University of Waterloo. Canada Journal*.
- [32]. Ijeoma, N. B. (2015). Evaluation of companies' environmental practice based in Nigeria. *Social and Basic Sciences Research Review*, 3(7), 349-364.
- [33]. Lanis, R., & Richardson, G. (2013). Corporate social responsibility and tax aggressiveness: a test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, 26, 75-100.
- [34]. Mensah, J. (2019). The quality and impact of sustainability reporting in developing economies: A critical analysis. *Journal of Business Ethics*, 155(2), 555-573.
- [35]. Mensah, J., & Enu-Kwesi, F. (2018). Implication of environmental sanitation management in the catchment area of Benya Lagoon, Ghana. *Journal of Integrative Environmental Sciences*. <https://doi.org/10.1080/1943815x.2018.1554591>
- [36]. Mohammed, S., Hassan, A., & Bala, A. (2020). The determinants of corporate social and environmental disclosure in the Nigerian oil and gas industry: An empirical investigation. *International Journal of Auditing and Accounting Studies*, 2 (2), 129 – 153.
- [37]. Mukherjee, K., Sen, M., & Pattanayak, J. (2010). Firm characteristics and corporate environmental disclosure practices in India. *The IUP Journal of Accounting Research and Audit Practices*.
- [38]. Neifar, S., & Utz, S. (2018). The effect of earnings management and tax aggressiveness on shareholder wealth and stock price crash risk of German companies.
- [39]. Ngwakwe, C. (2018). Environmental responsibility and firm performance: Evidence from Nigeria,
- [40]. *World Academy of Science, Engineering and Technology*, 46, 22-29.



- [41]. Obi, C. K. (2018). Revenue generation in Nigeria: Diversifying from primary sectors to non-primary sectors. *ACTA Universitatis Danubius*, 14(1), 168-178.
- [42]. Octaviana, N. E. (2014). Pengaruh agresivitas pajak terhadap corporate social responsibility: Untuk Menguji Teori Legitimasi. *Diponegoro Journal of Accounting*, 1-58.
- [43]. Ogbeide, S.O., & Ayunku, P.E. (2020). Empirical assessment of female director effect on tax aggressiveness of listed insurance firms in Nigeria. *International Journal of Research and Scientific Innovation*, 7(1), 33-42.
- [44]. Olaoye, C. O., & Ekundayo, A. T. (2019). Effects of tax audit on tax compliance and remittance of tax revenue in Ekiti State. *Open Journal of Accounting*, 8, 1-17. <https://doi.org/10.4236/ojacct.2019.81001>
- [45]. Oshadare, W.A. (2021). Effect of ownership structure on corporate tax aggressiveness of quoted deposit money banks in Nigeria (Doctoral dissertation). School of Postgraduate Studies, Nasarawa State University, Keffi, Nigeria.
- [46]. Purwanggono, E. A. (2015). Pengaruh corporate social responsibility dan kepemilikan mayoritas terhadap agresivitas pajak. *diponegoro Journal of Accounting*, 36.
- [47]. Plorensia, W., & Hardiningsih, P. (2015). pengaruh agresivitas pajak dan media eksplosure terhadap corporate social responsibility. *Dinamika Akuntansi, Keuangan dan Perbankan*, 4, (2), 136-151.
- [48]. Pradipta, D. H., & Supriyadi. (2016). Pengaruh corporate social responsibility (CSR), profitabilitas, leverage, dan Komisaris Independen Terhadap Praktik Penghindaran Pajak. *UGM Journal*, 1-25.
- [49]. Rachmawati, N. A., Utama, S., Martani, D., & Wardhani, R. (2020). Do country characteristics affect the complementary level of financial and tax aggressiveness? *Asian Academy of Management Journal of Accounting and Finance (AAMJAF)*, 16(1), 45-62.
- [50]. Rajha, S., K., & Alslehat, F., A., Z. (2014). The effect of capital structure on the performance of islamic banks. *Interdisciplinary Journal of Contemporary Research in Business*.
- [51]. Ridha, R., & Martani, D. (2014). Tax aggressiveness and its impact on corporate governance and firm performance. *Journal of Indonesian Economy and Business*, 29(1), 1-14.
- [52]. Smith, W., & Lewis, M. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of Management Review*, 36(2), 381-403.
- [53]. Saraswati, N. O., Rahmiati, A., & Isnalita, I. (2020). Environmental Disclosure and Tax Aggressiveness of Property and Real Estate Sector Companies: Evidence from Indonesia. *International Journal of Psychosocial Rehabilitation*, 24(7), 760-766. DOI:10.37200/IJPR/V24I7/PR270069
- [54]. Shumway, T. (2001). Forecasting bankruptcy more accurately: A simple hazard model. *Journal of Business* 74, 101-124.
- [55]. Weng, H., Chen, J. & Chen (2015). Effects of green innovation on environmental and corporate performance: A stakeholder perspective. *Sustainability*, 7(1), 4997-5026
- [56]. Yoon, B., Lee, J. H., & Cho, J. H. (2021). The effect of ESG performance on tax avoidance—Evidence from Korea. *Sustainability*, 13(12), 6729.
- [57]. Yusuf, M., Utami, W., & Mulyani, S. D. (2019). Effect of good corporate governance on Tax Aggressiveness. *International Journal of Business, Economics and Law*, 20