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Nexus Between ESG Practices and Corporate Performance: The Moderating Role of Regulatory Environment in Emerging and Developed Markets

Lydia Badu Danquah

PhD Student: Doctor of Philosophy in Organizational Management

Carolina University, 420 S. Broad St, Winston-Salem, NC, USA

Tel: 1-336-972-7960 E-mail: danquahl@carolinau.edu

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Abstract

The study investigates the impact of Environmental, Social, and Governance practices on corporate performance and examines how regulatory environments moderate this relationship. A quantitative explanatory research design is employed, using secondary data from 70 publicly listed firms across both Emerging and Developed markets between 2010 and 2024. The study used Fixed Effects regression models, with robustness checks through Random Effects and diagnostic tests. This study finds that ESG practices significantly enhance corporate performance by helping firms manage risks, build stakeholder trust, and improve access to capital. The results show that ESG is most effective when supported by a strong regulatory environment, which enhances transparency, accountability, and alignment with stakeholder interests. Firms operating under robust regulations achieve better financial outcomes through more credible and strategic ESG implementation. The findings highlight that ESG is not merely a voluntary or symbolic effort but a value-creating strategy, especially when guided by institutional support. Thus, regulation and ESG together drive stronger, more sustainable corporate performance across diverse markets. Given these results, firms should embed ESG considerations at the board and executive levels, ensuring that ESG risks and opportunities are systematically integrated into decision-making processes.

Keywords: Corporate Performance, Regulatory Environment, Emerging Markets, Developed Markets, Sustainability Reporting

1. Introduction

In recent decades, the importance of Environmental, Social, and Governance (ESG) practices

has increased significantly, becoming a fundamental factor in stakeholder evaluations, investment decisions, and Corporate Strategy (Kong et al., 2023). Companies are increasingly acknowledging that the ability to manage environmental hazards, contribute to social well-being, and maintain robust governance structures is crucial for the creation of long-term value (Bukari et al., 2024). The incorporation of ESG into corporate agendas has been further accelerated by the proliferation of ESG reporting frameworks, such as the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI). Global sustainable investment assets have exceeded $35 trillion, as indicated by a 2023 report by the Global Sustainable Investment Alliance (Chouaibi et al., 2021). This development is indicative of the increasing stakeholder expectations for corporate accountability on ESG issues. This change is also evident in the behaviour of institutional investors, as ESG considerations are becoming more influential in the decisions made regarding asset allocation and capital flow (Al-Hiyari et al., 2023). The business case for ESG practices is frequently presented in terms of their potential to enhance reputation, foster innovation, mitigate risks, and ultimately improve financial performance (Lee & Mansor, 2024). Nevertheless, empirical results are inconsistent, a phenomenon that academicians have dubbed the "performance-ESG inconsistency" (Abdullah et al., 2024; Elamer & Boulhaga, 2024). Although certain studies indicate that ESG engagement results in superior financial outcomes (e.g., Al-Ahdal et al., 2023; Dua & Sharma, 2024), others contend that ESG investments can be expensive and may decrease short-term profitability, particularly when they are not following core business strategies (Mooneeapen et al., 2022). The effectiveness and impact of ESG practices varied considerably across various institutional and regulatory contexts, which is why these divergent findings are particularly pronounced (Nirino et al., 2021; Albitar et al., 2020).

ESG implementation is particularly challenging in emerging markets. The effective integration of ESG principles into corporate governance and operational strategies is frequently impeded by systemic challenges in these economies. Underdeveloped regulatory frameworks, fragmented legal enforcement, and ubiquitous institutional vacancies that compromise policy efficacy are among the key challenges (Singh et al., 2025; Mukhtar et al., 2024). In numerous emerging contexts, the absence of explicit ESG disclosure mandates and enforcement mechanisms weakens corporate incentives to meaningfully engage in sustainable practices, leading to superficial compliance or greenwashing (Kumar et al., 2024; Wan et al., 2024). Moreover, the challenges of integrating ESG into business models are further exacerbated by cultural barriers, inadequate investor pressure, and limited stakeholder activism (Cek & Ercantan, 2023; Mondal & Sahu, 2025). Comparability issues are also exacerbated by the absence of harmonised reporting standards in emerging markets, which complicates cross-firm and cross-country ESG assessments (Singh et al., 2025). Conversely, developed markets are generally distinguished by mature institutional infrastructures, well-established regulatory bodies, and a normative emphasis on transparency and sustainability (Duque-Grisales & Aguilera-Caracuel, 2021; Alahdal et al., 2024). The regulatory sophistication of these markets is enhanced by proactive investor communities, broader civil society engagement, and firmer legal enforcement (Siddiqui et al., 2024). In addition, developed economies are more likely to incorporate international sustainability benchmarks, including the EU Taxonomy and the Task Force on Climate-related Financial

Disclosures (TCFD), into their corporate practices (Bilyay-Erdogan, 2022). The implementation of ESG strategies is facilitated by these structural advantages, which also increase the probability that these practices will result in improved corporate performance. Consequently, stakeholder trust and long-term firm value are enhanced (Soschinski et al., 2024; Malik & Sharma, 2025).

This contextual divergence between developed and emergent markets highlights a substantial lacuna in ESG scholarship. A significant amount of empirical research has implemented an undifferentiated methodology, which neglects to consider the institutional and regulatory asymmetries that influence ESG outcomes across jurisdictions (Singhania et al., 2024; Kuo et al., 2022). The majority of studies either concentrate exclusively on developed markets, where ESG data are more readily accessible, or consider emerging markets as homogeneous entities, which obscures critical within-group variation (Albitar et al., 2024; Nirino et al., 2021). Consequently, it is frequently challenging to extrapolate the conclusions derived from these studies to a variety of institutional contexts. Although some scholars have acknowledged the influence of national institutions on the efficacy of ESG (Kumar et al., 2024; Wan et al., 2024), empirical research is scarce on how regulatory environments function as moderators in the link between ESG and performance. This omission is especially urgent in light of the ongoing regulatory changes that are occurring in global markets. For example, the European Union's Sustainable Finance Disclosure Regulation (SFDR) and the Corporate Sustainability Reporting Directive (CSRD) are increasing the standard of ESG transparency in Europe, while the Securities and Exchange Commission (SEC) of the United States has proposed mandatory climate risk disclosures (Bahadori et al., 2021; Shakil et al., 2021). Concurrently, countries such as Brazil and South Africa are implementing hybrid regulatory strategies that combine mandatory reporting with voluntary guidelines (Eissa et al., 2024). These trends indicate a global trend towards regulatory convergence; however, they also underscore the necessity of comprehending the impact of varying levels of regulatory maturity on the relationship between corporate performance and ESG practices. In the absence of such insights, firms and policymakers are at risk of implementing ESG strategies that are not in accordance with institutional realities, thereby undermining both sustainability objectives and financial outcomes.

In light of this, the objective of this study is to contribute to the existing body of literature by investigating the relationship between corporate performance and ESG practices, while also considering the moderating influence of regulatory environments in both developed and emerging markets. Consequently, it addresses two critical gaps: the inconsistent empirical evidence that surrounds the link between ESG and performance and the limited investigation of how regulatory strength and enforcement mediate this relationship across different market contexts. This comparative perspective is especially relevant in light of the global trend towards regulatory convergence in sustainability standards, as demonstrated by Handoyo and Anas (2024) and Kong et al. (2023). Addressing these gaps contributes to theoretical debates on institutional theory, stakeholder theory, and resource-based perspectives in academia by clarifying the impact of external regulatory environments on internal ESG practices and outcomes. The results provide policymakers with evidence-based insights into the ways in

which regulatory design and enforcement can be optimised to maximise the benefits of ESG integration in various economies. Corporate executives and investors can make more strategic decisions by comprehending the way in which ESG performance is influenced by regulatory context, particularly for multinational firms that are navigating cross-border sustainability mandates.

The remainder of the paper is organised as follows: the next section presents a review of related literature, followed by a discussion of the research methodology. Subsequent sections detail the data analysis and results, which are then discussed about existing scholarship and theoretical frameworks. The paper concludes with policy recommendations and suggestions for future research.

2. Theoretical Background of the Study

Institutional Theory, proposed by John Meyer and Brian Rowan in 1977, posits organisations are not only economically rational entities, but also socially embedded institutions that seek legitimacy by adhering to established practices that are regarded as acceptable by their external environment (Albitar et al., 2020). Three kinds of institutional pressures are fundamental to this framework: normative, coercive, and mimetic. Coercive pressures are the result of formal regulations that are enforced by governments and legal authorities, which compel firms to adopt specific behaviours (Singh et al., 2025). For example, organisations are obligated to comply with external demands, such as carbon reporting, ESG disclosures, or board diversity requirements, to maintain their legitimacy. In developed markets, these regulatory mechanisms are generally well-defined, consistently enforced, and supported by legal infrastructure (Mukhtar et al., 2024). This regulatory clarity reinforces the adoption of ESG, aligns it with strategic objectives, and fortifies its connection to performance outcomes. Nevertheless, regulatory environments in emerging markets frequently experience institutional voids, including fragmented policy frameworks, inconsistent enforcement, and feeble legal systems (Kumar et al., 2024). These conditions may lead to partial or symbolic ESG adoption, rather than full integration, and reduce the efficacy of coercive pressures. In developed markets, where ESG standards have become profoundly institutionalised, normative pressures, which are derived from professional associations, educational institutions, and industry norms, significantly influence organisational behaviour (Wan et al., 2024). Conversely, emerging economies may exhibit cultural and developmental diversity, which may result in normative expectations that are less uniform or weakened. Mimetic pressures also influence ESG practices when firms imitate the behaviours of successful or legitimate peers, particularly in uncertain environments (Cek & Ercantan, 2023). Nevertheless, the substantive performance benefits of ESG may be restricted in markets that lack enforcement and transparency, as such replication can be superficial (Albitar et al., 2020).

Furthermore, Institutional Theory is complemented by Stakeholder Theory, proposed by Edward Freeman in 1984, which presents a normative and strategic perspective on the firm, emphasising its obligation to serve the interests of all stakeholders involved in or impacted by its operations (Mondal & Sahu, 2025). This theory contends that long-term success is

contingent upon the maintenance of effective relationships with a diverse group of stakeholders, including employees, customers, suppliers, regulators, communities, and the natural environment, thereby challenging the traditional shareholder-centric model of corporate governance (Duque-Grisales & Aguilera-Caracuel, 2021). The principles of stakeholder theory are fundamentally aligned with ESG practices, as they function as mechanisms through which firms address stakeholder concerns, establish trust, and generate shared value. Firms demonstrate accountability and ethical responsibility by participating in ESG initiatives, which in turn increase stakeholder loyalty and reputational capital (Alahdal et al., 2024). In developed markets, stakeholders are generally more informed and empowered as a result of increased transparency, media freedom, regulatory activism, and civil society engagement (Siddiqui et al., 2024). Consequently, organisations that operate within these environments are considerably more susceptible to stakeholder-driven pressures that encourage the strategic implementation of ESG practices. Additionally, regulations in developed economies frequently institutionalise stakeholder expectations, guaranteeing that corporate conduct aligns with sustainability objectives (Kumar et al., 2024). The ESG-performance linkage is fortified by the convergence of regulatory standards and stakeholder expectations. In contrast, emergent markets are distinguished by their fragmented stakeholder landscapes, diminished public awareness of ESG issues, and weakened civic institutions. In such circumstances, organisations may implement ESG strategies primarily to meet the expectations of global investors or multinational partners, rather than as a genuine response to local stakeholder concerns (Bilyay-Erdogan, 2022). This strategic decoupling has the potential to reduce the long-term performance benefits associated with authentic ESG integration and diminish the profundity of stakeholder engagement. Consequently, stakeholder theory explains the variation in ESG efficacy across market contexts and emphasises the significance of stakeholder pressure in influencing corporate sustainability outcomes.

Institutional Theory and Stakeholder Theory provide a robust and integrative framework for analysing the nexus between ESG and performance and the moderating role of regulatory environments. Stakeholder Theory emphasises the strategic value that is derived from managing diverse stakeholder interests, whereas Institutional Theory emphasises legitimacy-seeking behaviours that are influenced by external regulatory and normative pressures (Albitar et al., 2020). The intersection of these theories provides a multidimensional comprehension of the reasons why firms adopt ESG practices and the conditions under which these efforts result in enhanced corporate performance. Typically, ESG initiatives are both legitimate and value-generating in developed markets, where stakeholder expectations are explicitly articulated and institutional pressures are strong (Soschinski et al., 2024). In contrast, the potential performance outcomes may be diminished in emerging markets due to symbolic ESG implementation, which can be the result of institutional voids and fragmented stakeholder demands (Malik & Sharma, 2025). This theoretical synthesis emphasises the significance of analysing the moderating influence of regulatory environments on the efficacy of ESGs. The combined framework provides a nuanced perspective on the impact of ESG on corporate performance across diverse economic contexts by integrating the concept of legitimacy through institutional conformity with the strategic pursuit of value through

stakeholder alignment.

2.1 Empirical Review and Hypothesis Development

2.1.1 ESG Practices and Corporate Performance

Corporate strategy has become increasingly reliant on ESG practices, reflecting a paradigm shift from shareholder-centric models toward broader value creation for diverse stakeholders (Malik & Sharma, 2025). A firm's commitment to environmental sustainability, social equity, and ethical governance structures, collectively represented by ESG, has been consistently associated with enhanced long-term performance (Eissa et al., 2024). A growing body of empirical evidence shows that firms with robust ESG engagement tend to outperform their counterparts in both financial and nonfinancial dimensions. For example, Bahadori et al. (2021) conducted a meta-analysis of over 2,000 studies and found that about 90% reported a nonnegative, often positive, link between ESG and financial performance. Similarly, Shakil et al. (2021) revealed that organisations with high ESG ratings demonstrate superior operational performance, lower capital costs, and stronger stock price performance over time. Mechanisms underlying this relationship include enhanced reputation, risk mitigation, stakeholder trust, and innovation capacity. Firms that proactively manage ESG risks are also more likely to avoid regulatory penalties, reputational crises, and supply chain disruptions that erode profitability. Despite this growing consensus, the ESG and performance relationship remains complex and context-dependent. In markets where ESG initiatives are inadequately embedded or largely symbolic, several studies have reported inconsistent or even negative outcomes. For instance, Singhania et al. (2024) observed that ESG enhances firm value only when sustainability awareness among consumers is high, suggesting that stakeholder perception acts as a moderating factor. Recent African-focused research, for instance, Bukari et al. (2024) and Mukhtar et al. (2024), highlights that region-specific constraints such as weak enforcement, fragmented disclosure frameworks, and limited institutional pressure undermine ESG implementation. These structural gaps foster what emerging market scholars describe as ESG decoupling, which is a divergence between reported ESG commitments and substantive corporate behaviour (Chouaibi et al., 2021; Elamer & Boulhaga, 2024). Addressing these region-specific dynamics provides critical insight into why firms in African markets, including Ghana and South Africa, often exhibit symbolic compliance rather than deep ESG integration. Therefore, this study hypothesises that:

H1: There is a positive relationship between ESG practices and corporate performance

2.1.2 Regulatory Environment and Corporate Performance

The regulatory environment plays a critical role in shaping corporate behaviour and performance outcomes. It encompasses the institutional mechanisms, rules, and laws that regulate business conduct, such as financial reporting, environmental standards, labour practices, and corporate governance codes (Albitar et al., 2024). A robust and transparent regulatory framework contributes to improved firm performance by reducing information asymmetry, enhancing investor confidence, and providing clarity (Mooneeapen et al., 2022).

Countries with more evolved legal systems and stronger investor protections tend to exhibit superior corporate governance and higher firm valuations (Nirino et al., 2021). Similarly, Bushman, Albitar et al. (2020) discovered that regulatory environments that prioritise accountability and transparency are linked to increased market valuations and more effective capital allocation. In the long term, regulatory certainty also reduces compliance costs and promotes innovation by establishing clear rules of engagement. Additionally, firms are motivated to align with regulatory expectations in jurisdictions where enforcement is dependable, thereby reducing the likelihood of penalties, litigation, or reputational harm. This compliance not only reduces adverse risks but also enhances stakeholder trust, thereby promoting sustainable financial outcomes. Conversely, corporate performance may be compromised by regulatory environments that are inconsistent or inadequate. In countries with institutional voids, firms frequently encounter unclear regulations, limited enforcement, and high levels of corruption, which exacerbate the cost and complexity of conducting business (Singh et al., 2025). These environments can lead to regulatory uncertainty, which can discourage long-term investment and innovation. This assertion is corroborated by empirical research. Mukhtar et al. (2024), for instance, discovered that firms in countries with inadequate investor protection laws and inadequate legal enforcement exhibit lower firm-level governance scores and worse financial performance. Furthermore, Kumar et al. (2024) contended that inconsistent regulations in emergent markets can generate incentives for opportunistic behaviour, resulting in misaligned corporate priorities and agency issues. Navigating fragmented regulatory regimes can also exacerbate strategic ambiguity and compliance burdens for multinational firms. These results indicate that the efficacy of corporate initiatives, such as ESG practices, may be contingent upon the regulatory environment. Firms are more adept at incorporating long-term sustainability objectives into their strategies in regulatory contexts that are supportive, thereby improving their performance. Hence, the second hypothesis of this study is proposed as follows:

H2: A strong regulatory environment is positively associated with corporate performance.

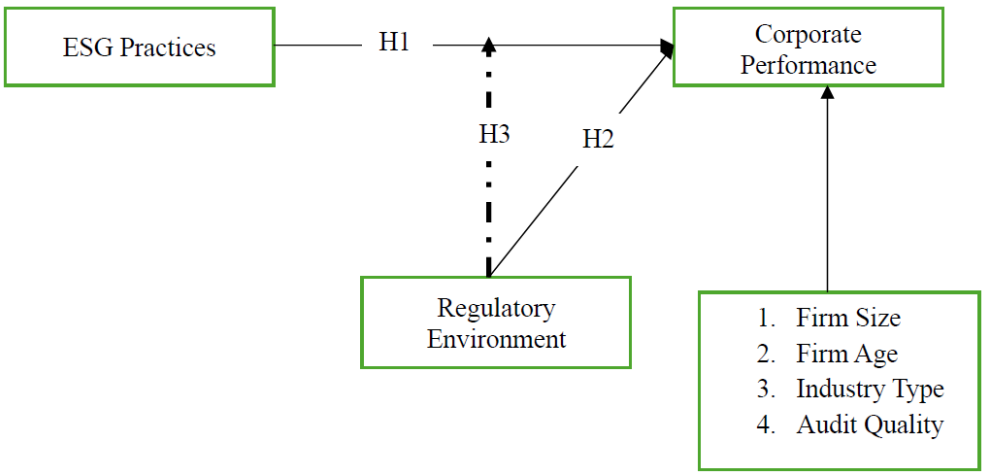

Figure 1. Conceptual Model

Source: Author Design (2025)

2.1.3 Moderating Role of Regulatory Environment

The regulatory environment is a critical moderating factor that defines the extent to which ESG practices materialise into tangible performance outcomes, in addition to serving as a direct influence on corporate performance. The credibility and enforcement of ESG frameworks are improved by the presence of robust regulatory institutions, which incentivise companies to participate in significant sustainability initiatives. ESG disclosures are more likely to be standardised, transparent, and comparable in such contexts, which reduces information asymmetries between firms and stakeholders (Cek & Ercantan, 2023). This perspective is corroborated by empirical research. For instance, Mondal and Sahu (2025) investigated the efficacy of mandatory ESG disclosure regimes and discovered that organisations that operate in jurisdictions with more stringent ESG regulations exhibited increased transparency, reduced cost of capital, and enhanced investor confidence. Similarly, Duque-Grisales and Aguilera-Caracuel (2021) noted that the relationship between financial performance and corporate social responsibility is considerably influenced by the robustness of a country's legal and institutional framework. These results indicate that firms are more inclined to internalise ESG principles in a manner that contributes to both compliance and value creation in countries with mature regulatory systems, which are typically developed economies. In contrast, the correlation between ESG and performance is weaker in countries with inadequate regulatory supervision, which is a common occurrence in numerous emerging markets (Alahdal et al., 2021). In these situations, the absence of effective enforcement mechanisms frequently leads to the superficial or symbolic adoption of ESG activities, with minimal incorporation into the core business strategy (Siddiqui et al., 2024). In low-regulation environments, Soschinski et al. (2024) discovered that firms may engage in ESG reporting primarily to placate international stakeholders or mitigate reputational risks, rather than to drive genuine sustainability performance. The outcome is a form of decoupling in which ESG disclosures do not accurately reflect actual operational improvements or financial benefits. Additionally, the absence of regulatory benchmarks complicates the consistent evaluation of ESG performance by investors, thereby eroding market discipline. These dynamics demonstrate that the regulatory environment not only coexists with ESG initiatives but also significantly impacts their efficacy. As a result, the performance impact of ESG practices is likely to fluctuate based on the regulatory context in which a firm operates. Hence, the third hypothesis of this study is proposed as follows:

H3: The regulatory environment positively moderates the relationship between ESG practices and corporate performance.

3. Research Methodology

This study employs a quantitative research methodology that is based on the explanatory research design. The quantitative approach is suitable because it enables the examination of predefined hypotheses and the discovery of causal relationships between variables through the use of structured data and statistical techniques (Eissa et al., 2024). Explanatory research is intended to evaluate cause-and-effect dynamics, rendering it appropriate for examining the extent to which ESG strategies affect firm performance and whether this relationship varies

across regulatory contexts. The explanatory design also assists in the derivation of conclusions from large, diverse datasets, thereby promoting objectivity and generalisability. Secondary data sources, including financial databases, global governance indexes, and ESG rating agencies, are employed to operationalise ESG performance indicators, firm financial metrics, and regulatory environment indices in this investigation. The proposed hypotheses can be rigorously examined due to the structured nature of the quantitative method, which enables the implementation of regression analysis and interaction terms to test moderation effects (Shakil et al., 2021). This methodological foundation is consistent with prior empirical research on ESG and performance (Singhania et al., 2024). The approach is designed to facilitate comparative, cross-market analysis.

3.1 Data Source and Sample

The target population for this study comprises publicly listed companies from both emerging and developed economies that have financial performance indicators and ESG data available. The study employs a purposive sampling technique, which enables the deliberate selection of firms that satisfy specific criteria that are consistent with the study's objectives. This method guarantees that all firms in the sample are relevant for the investigation of the link between ESG and performance in the context of changing regulatory conditions. The final sample consists of 70 firms from four countries from 2010 to 2024: 20 firms from the United States, 20 firms from the United Kingdom, 15 firms from Ghana, and 15 firms from South Africa. The selection of these countries is determined by the availability of structured ESG and financial data, their incorporation in the MSCI market classification system, and their unique regulatory environments, as classified by the World Bank's Worldwide Governance Indicators. By selecting these countries, a significant contrast is established between the relatively fragmented regulatory systems of emerging economies and the mature regulatory systems of developed economies. This cross-market representation enables the investigation of regulatory heterogeneity and its moderating impact on the efficacy of ESG. A diverse and representative dataset is guaranteed by the selected firms' operations in a variety of sectors, such as finance, energy, manufacturing, and technology (Kuo et al., 2022). Financial databases, WDI, and official company financial reports are employed to accumulate data. Bloomberg ESG, MSCI ESG Ratings, Thomson Reuters Eikon, and Refinitiv Datastream are the sources from which ESG scores and sustainability disclosures are obtained, while the Regulatory Environment is extracted from WDI. These sources provide consistent and comparable ESG indicators. Furthermore, financial performance metrics are extracted from audited financial statements and annual reports that are posted on each company's investor relations website. The inclusion criteria necessitate that a company (1) be publicly listed on a recognised stock exchange, (2) report ESG performance for a minimum of 15 consecutive years from 2010 to 2024, (3) provide financial reports that are both comprehensive and easily accessible, and (4) operate in an industry where ESG considerations are materially relevant. Firms are excluded if they (1) are state-owned or privately held without public disclosures, (2) have absent or incomplete ESG or financial data, or (3) are domiciled in countries that lack reliable regulatory quality data. The study's inclusion of only those firms with reliable data for assessing the link between ESG and performance across diverse regulatory environments

is guaranteed by this rigorous sampling approach.

3.2 Variable Description and Justification

The dependent variable, corporate performance, is measured using financial indicators such as Return on Assets, Return on Equity, and Tobin's Q, which are widely used in prior research to capture firm profitability, operational efficiency, and market valuation (Shakil et al., 2021). According to Singhania et al. (2024), the independent variable, ESG practices, is operationalised through the use of ESG composite scores from Bloomberg and MSCI, which are indicative of the level of engagement of firms in environmental sustainability, social responsibility, and governance quality. The regulatory quality dimension of the WGI is employed to capture the moderating variable, regulatory environment, which evaluates the capacity of governments to develop and execute sound policies (Kuo et al., 2022). Although the World Bank's Regulatory Quality Index (RQI) broadly measures government capacity to design and implement sound policies, it is also correlated with ESG-related regulations such as mandatory disclosure rules, environmental standards, and governance enforcement (Mooneeapen et al., 2022; Dua & Sharma, 2024). To enhance ESG specificity, the study triangulates RQI with MSCI's ESG Regulatory Framework indicators, ensuring that the moderating variable reflects both general governance quality and sustainability-specific oversight. To ensure robustness, the study includes four control variables. Firm size (log of total assets) accounts for the influence of scale on performance outcomes, as larger firms often have more resources for ESG investment (Albitar et al., 2024). Firm age (years since incorporation) controls for experience and organisational maturity, which may influence ESG integration and stability (Elamer & Boulhaga, 2024). Industry type is controlled using dummy variables, acknowledging sectoral differences in ESG relevance and performance norms. Audit quality, proxied by whether the firm is audited by a Big Four firm, controls financial transparency and reporting credibility (Dua & Sharma, 2024). These variables collectively ensure the validity of the regression model and account for potential confounding effects in the link between ESG and performance.

Table 1. Variable Description

Variable Type	Variable	Description / Measurement	References
Dependent Variable	Corporate Performance	Measured using ROA, ROE, and Tobin's Q	Shakil et al. (2024)
Independent Variable	ESG Practices	ESG composite scores from Bloomberg and MSCI	Singhania et al. (2024)
Moderating Variable	Regulatory Environment	Regulatory Quality Index from the World Bank's Worldwide Governance Indicators (WGI)	Kuo et al. (2022)
Control Variable	Firm Size	Log of total assets	Albitar et al. (2024)
	Firm Age	Years since incorporation	Elamer and Boulhaga (2024)
	Industry Type	Dummy variables based on sector classification (Financial and Non-Financial)	Shakil et al. (2024)
	Audit Quality	Whether the firm is audited by a Big Four firm	Dua and Sharma (2024)

Source: Author Compilation (2025)

3.3 Model Estimation and Diagnostic Test

The primary model employed in the study is Fixed Effects (FE) estimation, which was chosen to conduct a thorough investigation of the relationship between corporate performance and ESG practices in a variety of institutional contexts and firms. The FE model is particularly well-suited for panel data analysis because it accounts for unobserved, time-invariant heterogeneity within firms, including factors such as internal governance culture, managerial capability, or risk appetite, which, although unmeasurable, can systematically influence performance outcomes (Handoyo & Anas, 2024). FE estimation minimises omitted variable bias by concentrating on within-entity variation over time, thereby isolating the genuine impact of ESG practices on performance. This is particularly critical in ESG research, as firm-level characteristics frequently influence both the decision to implement ESG practices and the ability to achieve superior performance. The dataset encompasses a variety of firms from both developed and emerging markets, spanning the years 2010 to 2024. Consequently, FE is well-suited to addressing structural and contextual variations between countries and firms (Bukari et al., 2024). The study also employs Random Effects (RE) estimation to verify the robustness of the results, which presupposes that firm-specific effects are uncorrelated with explanatory variables. To explicitly compare the two models, a Hausman test is implemented; a substantial outcome validates the preference for FE over RE, thereby bolstering the methodological rigour (Chouaibi et al., 2021). Particularly when assessing the nuanced influence of ESG on firm outcomes in a variety of regulatory and institutional environments, this dual estimation strategy guarantees that the conclusions derived are both credible and consistent.

The regression results are further validated through the implementation of numerous diagnostic tests, in addition to model estimation. To prevent the model from being distorted by highly correlated regressors, a variance inflation factor (VIF) test is conducted to assess for multicollinearity among the independent variables (Al-Hiyari et al., 2023). The Wooldridge test is employed to identify autocorrelation in panel data, while the Breusch–Pagan and White tests evaluate the presence of heteroskedasticity (Luo et al., 2024). Additionally, clustered robust standard errors are implemented to account for any heteroskedasticity or autocorrelation that may exist within firms over time (Lee & Mansor, 2024). To verify the relevance of panel modelling over pooled OLS, the study also implements model specification tests, including the F-test for fixed effects and the Lagrange Multiplier (LM) test for random effects. The reliability, validity, and generalisability of the study's findings are improved by these diagnostic procedures and robustness tests, rendering the results appropriate for informing strategic ESG decisions, investment, and policy.

3.4 Model Speciation

To empirically test the relationship between ESG practices and corporate performance, as well as the moderating effect of the regulatory environment, the study specifies the following panel data regression models:

Baseline Fixed Effects Model

$$CP_{it} = \alpha_i + \beta_1 ESG_{it} + \beta_2 RE_{it} + \gamma X_{it} + \in_{it}$$

Where;

CP_{it}=Corporate performance for firm *i* at time *t*

α_i=Firm-specific intercept (controls for unobserved heterogeneity)

ESG_{it}=ESG performance score for firm *i* at time *t*

RE_{it}=Regulatory Environment index for the country of firm *i* at time *t*

X_{it}= Vector of control variables (Firm Size, Firm Age, Industry Type, Audit Quality)

Moderated Fixed Effects Model (Interaction Term Included)

$$CP_{it} = \alpha_i + \beta_1 ESG_{it} + \beta_2 RE_{it} + \beta_3 (ESG_{it} \times RE_{it}) + + \gamma X_{it} + \in_{it}$$

Note

This model includes the interaction term to test whether the effect of ESG on corporate performance is contingent upon the quality of the regulatory environment.

4. Results and Discussion

The descriptive statistics provide a comprehensive overview of the variables used in the analysis. The mean ROA is 0.072, with a standard deviation of 0.056, indicating moderate variability in firms' ability to generate profit from assets. The average ROE is 0.143, which indicates a slightly higher profitability from shareholders' investments, despite the fact that it has a greater degree of dispersion (0.109). The mean of Tobin's Q, a market performance metric, is 1.684, indicating that firms are typically valued at a premium to their asset replacement cost.

Table 1. Descriptive Statistics

Variable	Mean	Std. Dev	Min	Max
ROA	0.072	0.056	-0.031	0.198
ROE	0.143	0.109	-0.054	0.387
Tobin's Q	1.684	0.592	0.742	3.218
ESG	52.431	15.872	21.300	89.700
RE	0.472	0.151	0.121	0.812
FS	15.238	1.269	12.304	18.641
FA	24.581	12.473	3.000	67.000
IT	0.431	0.496	0.000	1.000
AQ	0.619	0.487	0.000	1.000

Where ROA is the return on Assets, ROE is the return on equity, Tobin's Q is the market performance, ESG is the ESG practices score, RE is the Regulatory Environment, FS is the firm size, FA is the firm age, IT is Industry Type, and Audit Quality.

The mean ESG score is 52.431, with a standard deviation of 15.872, which underscores the variance in the environmental, social, and governance practices of the firms. The regulatory environment has an average score of 0.472, which suggests that firms are moderately

influenced by regulatory factors. Firm Age averages 24.581 years, with a range of 3 to 67 years, while Firm Size has a mean of 15.238. Industry Type and Audit Quality are binary variables with mean values of 0.431 and 0.619, respectively. This suggests that 43.1% of firms are classified as non-financial sector, and 61.9% employ high-quality auditors.

4.1 Correlation Analysis

The findings indicate that there are statistically significant correlations between corporate financial performance indicators and ESG practices. More specifically, ESG is positively correlated with Tobin's Q ($r = 0.459$, $p < 0.01$), ROA ($r = 0.391$, $p < 0.01$), and ROE ($r = 0.374$, $p < 0.01$). This suggests that companies with greater levels of environmental, social, and governance engagement tend to achieve superior market valuation and accounting-based performance. These results corroborate the notion that ESG practices are not only ethically motivated but also contribute to enhanced corporate outcomes. The correlation between financial performance and the regulatory environment is also noteworthy. RE is positively correlated with ROA ($r = 0.512$, $p < 0.05$), ROE ($r = 0.289$, $p < 0.05$), and Tobin's Q ($r = 0.333$, $p < 0.01$), indicating that firms that operate in more structured and stringent regulatory environments perform better. Furthermore, RE exhibits a robust positive correlation with ESG ($r = 0.538$, $p < 0.01$), which illustrates the potential of regulatory supervision to encourage the implementation of sustainable practices. These patterns suggest that institutional environments that prioritise ESG compliance can increase the value of a firm. The results also reveal a significant relationship with the control variables.

Firm size is positively correlated with ESG ($r = 0.462$, $p < 0.01$), ROE ($r = 0.411$, $p < 0.01$), and ROA ($r = 0.352$, $p < 0.01$), demonstrating that larger firms are more likely to adopt ESG practices and experience higher profitability. This suggests that larger firms are more likely to implement ESG practices and achieve higher profitability. This may be because larger firms have a greater amount of resources and public visibility, which in turn increases the pressure to adhere to sustainable practices and ensures more effective financial monitoring. Although the effect is insignificant, firm age exhibits weakened but still positive relationships with ROA and ESG. This suggests that older firms have a slightly greater level of experience in sustainability and performance efficiency. Additionally, audit quality exhibits substantial positive correlations with ESG ($r = 0.333$, $p < 0.01$), ROE ($r = 0.298$, $p < 0.05$), and FS ($r = 0.289$, $p < 0.05$), indicating that organisations that employ high-quality auditors are more likely to exhibit superior performance and maintain robust ESG governance. The influence of sectoral characteristics on market-based performance resulted in the significant correlation between industry type and Tobin's Q ($r = 0.116$, $p < 0.01$). The Variance Inflation Factor values, which range from 1.435 to 3.201, are significantly below the critical threshold, thereby verifying the absence of multicollinearity and guaranteeing the validity of regression interpretations.

Table 2. Correlation Results

Variable	ROA	ROE	Tobin's Q	ESG	RE	FS	FA	IT	AQ	VIF
ROA	1									
ROE	0.282***	1								
Tobin's Q	0.413***	0.488***	1							
ESG	0.391***	0.374***	0.459***	1						3.201
RE	0.512**	0.289**	0.333***	0.538***	1					2.493
FS	0.352***	0.411***	0.312**	0.462***	0.398***	1				2.786
FA	0.215*	0.192*	0.147	0.189*	0.327	0.372***	1			1.724
IT	0.534	0.167	0.116***	0.151	0.593	0.166	0.201*	1		1.435
AQ	0.241*	0.298**	0.188*	0.333***	0.211*	0.289**	0.279	0.542	1	1.983

Source: Author Computation (2025)

4.2 Cross-Sectional Dependence Results

The Breusch-Pagan LM statistic and the Pesaran (2004) CD test were used to evaluate the cross-sectional dependence tests, and the results indicate that there is no statistically significant cross-sectional dependence among the variables being examined. The conventional threshold of 0.05 is exceeded by the p-values associated with both the Pesaran and LM tests for all variables, including InROA, InROE, InTobin's Q, InESG, InRE, InFS, InFA, InIT, and InAQ. For example, the null hypothesis of cross-sectional independence cannot be rejected, as the Pesaran CD test values range from 0.589 to 1.268, with corresponding p-values of 0.205 to 0.556. Similarly, the Breusch-Pagan LM statistics are consistently greater than 0.24, with p-values ranging from 4.998 to 6.874. This pattern indicates that the panel data do not exhibit significant interdependencies across cross-sectional units, which implies that disturbances or variations in one entity do not systematically influence others within the firms.

Table 3. Results of cross-sectional dependence results

Variables	Pesaran (2004) CD Test	P-value (CD Test)	Breusch-Pagan LM Statistic	P-value (LM Test)
InROA	0.871	0.384	5.726	0.331
InROE	0.942	0.346	5.998	0.308
InTobin's Q	1.183	0.237	6.231	0.271
InESG	1.032	0.302	6.113	0.291
InRE	0.745	0.456	4.998	0.389
InFS	1.268	0.205	6.874	0.240
InFA	0.693	0.488	5.152	0.372
InIT	0.589	0.556	5.003	0.387
InAQ	0.951	0.342	5.891	0.315

Source: Author Computation (2025)

Table 4. Panel unit root results

Breitung (2001)			IPS *Im et al.* (2003)		Pesaran (2007) CIPS	
Variables	level	First difference	level	First difference	level	First difference
InROA	1.847	-4.329***	1.426	-3.879***	-1.214	-2.687***
InROE	0.776	-3.743***	-0.505	-3.412***	-1.637	-2.985***
InTobin's Q	1.041	-3.998***	-0.781	-3.719***	-1.789	-3.258***
InESG	2.103	-3.991***	1.582	-3.743***	-1.038	-2.534***
InRE	1.694	-3.612***	1.221	-3.416***	-0.948	-2.481***
InFS	2.004	-4.120***	1.503	-3.682***	-1.187	-2.598***
InFA	1.328	-3.429***	0.967	-3.205***	-0.803	-2.445***
InIT	1.472	-3.674***	1.114	-3.337***	-0.910	-2.501***
InAQ	1.763	-3.887***	1.356	-3.598***	-1.074	-2.610***

Source: Author Computation (2025)

The panel unit root test results, which are derived from Breitung (2001), Im-Pesaran-Shin (IPS, 2003), and Pesaran's (2007) CIPS tests, collectively suggest that all variables are non-stationary at their respective levels. However, they become stationary after the initial differencing. The level test statistics from all three methods are statistically insignificant for each variable, including InROA, InROE, InTobin's Q, InESG, InRE, InFS, InFA, InIT, and InAQ, as they fail to reject the null hypothesis of a unit root. Nevertheless, the test statistics for all methods are highly significant at the 1% level at the initial difference, thereby confirming the rejection of the null hypothesis of non-stationarity in favour of stationarity. For instance, InROA has a Breitung statistic of -4.329, an IPS statistic of -3.879, and a CIPS statistic of -2.687 at the initial difference, all of which are statistically significant. This pattern is consistently observed across all other variables, indicating that the dataset contains integrated variables of order one, I(1).

4.3 Regression Analysis

The findings indicate that all three performance indicators of the firm are significantly and positively impacted by ESG practices. There is a significant positive correlation between ESG and ROA (B = 0.134, SE = 0.031). This implies that companies that implement more robust environmental, social, and governance policies are more likely to optimise their asset utilisation, which leads to increased profitability. In Model 2, ESG exhibits a positive impact on ROE (B = 0.158, SE = 0.042), which is also significant at the 1% level. This suggests that companies that prioritise ESG generate higher returns for their shareholders. In Model 3, ESG is once again positively correlated with Tobin's Q (B = 0.192, SE = 0.049), indicating that the market places a higher value on firms with superior ESG performance, presumably as a result of perceived sustainability and long-term value creation. The results indicate that the Regulatory Environment has a substantial positive impact on all models. RE (B = 0.226, SE = 0.054) for Model 1 (ROA) indicates that firms that operate in more regulated environments are more profitable, potentially as a result of the increased compliance and governance standards. In Model 2, RE (B = 0.197, SE = 0.061) is considerably correlated with higher ROE, indicating that regulations may serve to safeguard investor interests and increase shareholder value. In Model 3, RE (B = 0.243, SE = 0.067) suggests that regulatory structures

contribute to a higher market valuation of firms. The results indicate that the firm's performance is significantly positively influenced by the interaction term ESG*RE in all models. In Model 1, ESGRE (B = 0.087, SE = 0.038) indicates that the impact of ESG on ROA is exacerbated by the presence of a robust regulatory environment.

Table 5. Fixed Effect Estimation Results

Variable	**Model 1 (ROA)**	**Model 2 (ROE)**	**Model 3** (Tobin's Q)
ESG	0.134*** (0.031)	0.158*** (0.042)	0.192*** (0.049)
RE	0.226*** (0.054)	0.197** (0.061)	0.243*** (0.067)
ESG*RE	0.087** (0.038)	0.062* (0.034)	0.119** (0.045)
FS	0.045* (0.026)	0.051* (0.030)	-0.032 (0.037)
FA	0.016 (0.022)	-0.008 (0.027)	0.041* (0.025)
IT	0.024 (0.018)	0.017 (0.020)	0.066** (0.029)
AQ	0.097** (0.041)	0.113*** (0.038)	0.154*** (0.047)
R Square	0.438	0.417	0.462
Adjusted R Square	0.404	0.381	0.429
Durbin-Watson stat	2.038	2.121	1.954
Breusch-Pagan Test (Prob.)	0.213	0.269	0.184
Hausman Test (Prob.)	0.021	0.009	0.004

Source: Author Computation (2025). Note, the **values in parentheses** represent the **standard errors** of the estimated coefficient

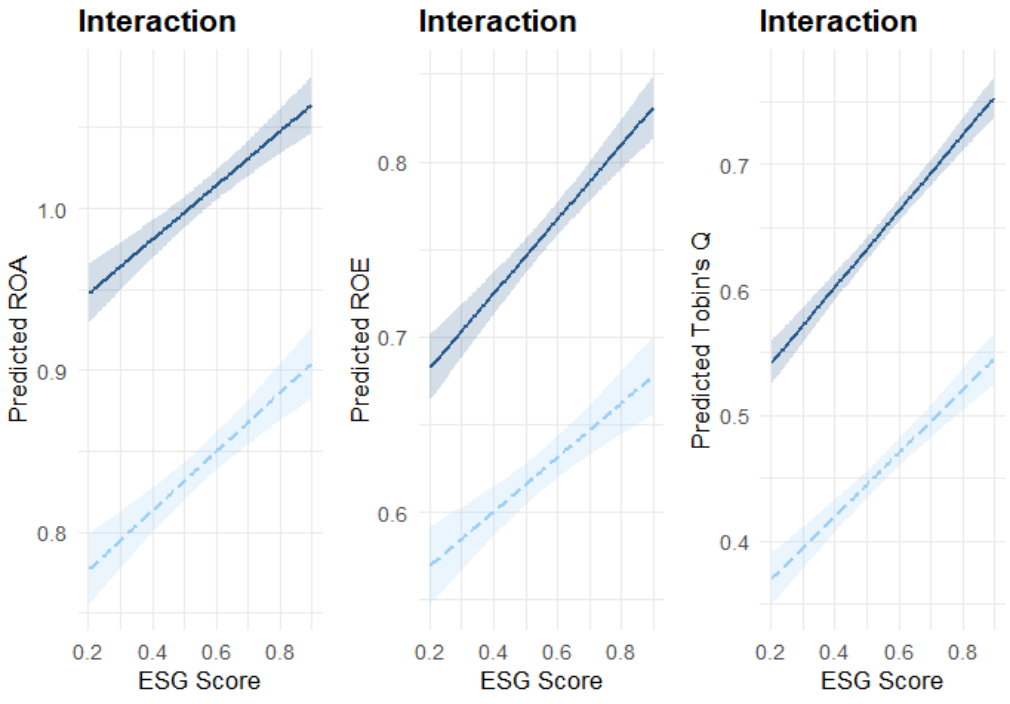

Figure 2. Interaction Plot for the Moderation Analysis

In Model 2, ESGRE (B = 0.062, SE = 0.034) indicates a moderate but still substantial positive impact on ROE. In Model 3, ESG*RE (B = 0.119, SE = 0.045) suggests that the combination of rigorous regulation and high ESG practices substantially increases market

valuation, thereby reinforcing the notion that regulation enhances the benefits of ESG initiatives. The findings indicate that financial performance is positively influenced by Firm Size, but is statistically insignificant. In Model 1, FS (B = 0.045, SE = 0.026) indicates that larger firms are marginally more profitable in terms of ROA. In Model 2, FS (B = 0.051, SE = 0.030) suggests that firm size has a modest impact on ROE. Nevertheless, in Model 3, FS (B = -0.032, SE = 0.037) exhibits a negligible and negative correlation with Tobin's Q, indicating that larger firms may not necessarily receive higher market valuations. The findings indicate that Firm Age is not significantly correlated with ROA or ROE. However, in Model 3, FA (B = 0.041, SE = 0.025) exhibits a substantial positive impact on Tobin's Q. This implies that the market may perceive older firms as more stable and reliable, which could result in a higher market valuation. The findings indicate that ROA and ROE are not significantly influenced by Industry Type. Nevertheless, in Model 3, IT (B = 0.066, SE = 0.029) is substantially and positively correlated with Tobin's Q, indicating that the market places a higher value on firms in specific industries, potentially growth-oriented or innovative sectors. The findings indicate that Audit Quality maintains a consistent and substantial positive correlation with all three performance indicators. Model 1 indicates that firms that are audited by high-quality auditors are more profitable (AQ, B = 0.097, SE = 0.041). In Model 2, AQ (B = 0.113, SE = 0.038) suggests that shareholder returns will be enhanced, whereas in Model 3, AQ (B = 0.154, SE = 0.047) suggests that the market valuation will be firmer, reflecting increased transparency and credibility. Model diagnostics further validate the robustness of these fixed-effect models. The R-squared values are reasonably high (Model 1 = 0.438, Model 2 = 0.417, Model 3 = 0.462), indicating a good explanatory power of the independent variables. The adjusted R-squared values confirm that the models remain reliable after accounting for degrees of freedom. The Durbin-Watson statistics are close to 2, suggesting no serious autocorrelation. The Breusch-Pagan tests show no evidence of heteroscedasticity (all p-values > 0.1), and the Hausman tests yield p-values less than 0.05 across models, justifying the use of fixed effects over random effects.

4.4 Robustness Test- Random Effect Estimation Results

The results reveal that ESG practices have a significant and positive effect on firm performance. Model 1 demonstrates a significant positive correlation between ESG and ROA (B = 0.108, SE = 0.029) at the 1% level. This suggests that firms with a higher level of ESG engagement experience enhanced internal profitability and asset efficiency. In Model 2, ESG also exhibits a positive and significant relationship with ROE (B = 0.132, SE = 0.035), indicating that sustainable practices improve shareholder returns by promoting operational efficiency and responsible management. In Model 3, ESG continues to have a substantial positive impact on Tobin's Q (B = 0.177, SE = 0.042). This suggests that investors in both developed and emerging markets prefer to place a higher value on firms with superior ESG performance, associating a larger long-term value with their responsible business models. The results indicate that the Regulatory Environment also substantially improves the performance of firms across all models. In Model 1, ROA is positively influenced by RE (B = 0.189, SE = 0.050), a significant result at the 5% level. This suggests that a structured regulatory framework enhances operational outcomes. In Model 2, RE (B = 0.173, SE = 0.056) is

significant at the 5% level, suggesting a positive impact on shareholder value. In Model 3, RE exhibits an even stronger relationship with Tobin's Q (B = 0.198, SE = 0.061), which is significant at the 1% level. This suggests that effective regulatory environments increase investor confidence, thereby raising market valuation.

The findings indicate that the ESG-performance relationship is further bolstered by the interaction between ESG and the Regulatory Environment. In Model 1, ES*GRE (B = 0.058, SE = 0.032) is statistically significant at the 10% level, indicating that regulatory frameworks exacerbate the beneficial impact of ESG on profitability. The positive coefficient in Model 2 suggests a potentially supportive moderation effect, although ESG*RE (B = 0.047, SE = 0.031) is statistically insignificant. In Model 3, ESG*RE (B = 0.092, SE = 0.039) is significant at the 5% level, suggesting that firms with robust ESG practices that operate in well-regulated environments receive even higher market valuations. This underscores the significance of the synergy between corporate responsibility and regulatory oversight. The control variables yielded inconsistent results. In Model 1, Firm Size is not statistically significant (B = 0.038, SE = 0.024). However, in Model 2, FS has a modest positive effect on ROE (B = 0.044, SE = 0.028), which is significant at the 10% level. This suggests that larger organisations may have a minor advantage in terms of generating shareholder returns as a result of economies of scale and resource access. In Model 3, FS is, although insignificantly, negatively associated with Tobin's Q (B = -0.025, SE = 0.034), indicating that scale alone does not guarantee a higher market value.

Table 6. Random Effect Estimation Results

Variable	**Model 1 (ROA)**	**Model 2 (ROE)**	**Model 3 (**Tobin's Q)
ESG	0.108*** (0.029)	0.132*** (0.035)	0.177*** (0.042)
RE	0.189** (0.050)	0.173** (0.056)	0.198*** (0.061)
ESG*RE	0.058* (0.032)	0.047 (0.031)	0.092** (0.039)
FS	0.038 (0.024)	0.044* (0.028)	-0.025 (0.034)
FA	0.019 (0.021)	-0.006 (0.023)	0.033 (0.021)
IT	0.021 (0.016)	0.015 (0.018)	0.049* (0.025)
AQ	0.081* (0.039)	0.095** (0.037)	0.131*** (0.042)
R Square	0.391	0.374	0.429
Adjusted R Square	0.359	0.340	0.395
Durbin-Watson stat	2.026	2.110	2.003
Breusch-Pagan Test (Prob.)	0.032	0.019	0.011
Hausman Test (Prob.)	0.283	0.417	0.362

Source: Author Computation (2025) Note: the **values in parentheses** represent the **standard errors** of the estimated coefficient

Firm Age does not exhibit a significant effect in any of the three models: Model 1 (B = 0.019, SE = 0.021), Model 2 (B = -0.006, SE = 0.023), and Model 3 (B = 0.033, SE = 0.021). This suggests that financial performance, shareholder returns, and market valuation are not consistently influenced by maturity or the number of years a firm has been in operation under the random effects assumption. The results indicate that Industry Type is not statistically significant in Models 1 and 2, but it becomes significant in Model 3 (B = 0.049, SE = 0.025) at the 10% level. This implies that investors may hold certain industries in higher regard,

potentially as a result of sector-specific advantages or growth potential. Performance across all models is consistently and positively impacted by Audit Quality. In Model 1, AQ (B = 0.081, SE = 0.039) is statistically significant at the 10% level, indicating that firms with superior audit quality are more profitable. In Model 2, AQ (B = 0.095, SE = 0.037) is statistically significant at the 5% level, suggesting that equity returns are higher. In Model 3, AQ (B = 0.131, SE = 0.042) is significant at the 1% level, indicating that firms with credible auditors establish investor trust, which in turn results in an increase in market valuation. The R-squared values (ROA = 0.391, ROE = 0.374, Tobin's Q = 0.429) in the model diagnostics suggest a moderate level of explanatory power. The model's reliability is also confirmed by the adjusted R-squared values. The Durbin-Watson statistics for all models are nearly 2, which implies that there is no autocorrelation in the residuals.

4.5 Cross-Market Variation Analysis from Emerging and Developed Economies

The results indicate that firms that are located in countries with mandatory ESG frameworks and robust enforcement mechanisms exhibit a more consistent and positive correlation between ESG engagement and firm performance. In Ghana, ESG reporting is primarily regulated by non-binding guidelines from the Ghana Stock Exchange and is voluntary. Consequently, ESG adoption is frequently symbolic and lacks comprehensive disclosure. Investors and regulators encounter challenges in assessing genuine sustainability performance due to the inadequate enforcement mechanisms, which lead to inconsistent or feeble ESG-performance relationships (Kong et al., 2023). In South Africa, the King IV Corporate Governance Framework and the Johannesburg Stock Exchange listing regulations have established more stringent compliance incentives by mandating ESG disclosure. ESG has a substantial positive impact on corporate performance, as it enhances transparency and accountability through regular monitoring and third-party substantiation. For the United Kingdom, ESG regulation is embedded within the Companies Act and supervised by the Financial Conduct Authority (Nirino et al., 2021). The requirement for firms to submit audited and comprehensive sustainability reports has led to the establishment of highly consistent ESG practices that enhance the financial performance and reputation of corporations. Similarly, the Securities and Exchange Commission and the Sustainability Accounting Standards Board in the United States have established robust reporting standards. Nevertheless, there are still moderate differences in ESG–performance outcomes due to the fact that enforcement and implementation are still in the process of evolving, with variations reported across states and industries (Albitar et al., 2020). Overall, these findings serve as confirmation that the efficacy of ESG initiatives is contingent upon the quality of regulatory design and the severity of enforcement, rather than the mere appearance of compliance. South Africa can continue to consolidate its integrated reporting system, while emerging markets such as Ghana would benefit from a phased transition to mandatory ESG reporting and increased regulatory supervision. To preserve global consistency and credibility, developed economies, including the United Kingdom and the United States, can concentrate on harmonising the evolving ESG disclosure standards.

Table 7. ESG Regulatory Context and Performance Across Countries

Country	Regulatory Type	Enforcement Strength	ESG Disclosure Practice	ESG–Performance Relationship
Ghana	Voluntary guidelines under the Ghana Stock Exchange	Weak; limited monitoring	Basic, qualitative reporting	Weak and inconsistent
South Africa	Mandatory reporting under King IV and JSE rules	Strong, regular oversight	Detailed, verified reports	Strong positive
United Kingdom	Mandatory under FCA and Companies Act	Strong, consistent enforcement	Comprehensive audited reports	Strong positive
United States	Mandatory under SEC and SASB standards	Moderate; evolving rules	Standardised quantitative reporting	Positive varies by sector

Source: Document Review (2025)

This cross-market comparison highlights that institutional maturity, enforcement capacity, and policy clarity are key determinants of ESG effectiveness. Countries with established regulatory systems (United Kingdom, South Africa) achieve stronger and more stable ESG outcomes, while those with weaker enforcement structures (Ghana) face symbolic compliance challenges. The United States illustrates a transitional stage where ESG regulation is growing rapidly but remains uneven across industries. These differences provide valuable guidance for policymakers seeking to strengthen ESG frameworks, particularly in emerging markets that aim to link sustainability with long-term corporate growth.

4.6 Discussion of Findings

The findings of this study reveal that ESG practices significantly enhance corporate performance. This suggests that organisations which prioritise environmental, social, and governance considerations are more strategically positioned, adaptable, and resilient in their pursuit of long-term value creation and sustained profitability. By embedding ESG principles into their strategic operations, firms are better able to manage risks, strengthen stakeholder trust, and gain access to capital on more favourable terms, all of which contribute to improved financial outcomes. These results are consistent with the Institutional Theory, which argues that firms must respond to both formal institutional pressures, such as regulatory frameworks, and informal ones, such as social expectations, to remain competitive and legitimate (Elamer & Boulhaga, 2024). In settings where environmental governance is robust, ESG practices become deeply institutionalised, compelling firms not only to comply with standards but also to demonstrate leadership in sustainability (Abdullah et al., 2024; Nirino et al., 2021; Albitar et al., 2020). In such contexts, ESG investment is no longer a voluntary commitment but a strategic necessity, further reinforcing its positive impact on financial performance. Therefore, the findings affirm that ESG performance is not merely an internal managerial choice but is significantly shaped and strengthened by the institutional environment in which firms operate.

The results further observe that the regulatory environment moderates the relationship between ESG practices and corporate performance, underscoring the crucial influence of institutional context in shaping firm-level outcomes. The interaction between regulatory strength and ESG practices considerably enhances corporate performance, indicating that

regulations serve a purpose beyond mere compliance; they also facilitate improved stakeholder alignment, standardisation, and decision-making. This discovery is consistent with the fundamental principles of Stakeholder Theory, which contends that organisations must acknowledge and incorporate the interests of a variety of stakeholders, such as investors, employees, governments, and communities, to preserve legitimacy and generate sustainable value (Mukhtar et al., 2024; Soschinski et al., 2024; Malik & Sharma, 2025). Firms are more likely to be credible, transparent, and efficacious in their ESG efforts when they operate within a strong regulatory environment. This fosters stakeholder trust and reduces the perceived risks associated with opportunistic behaviour. Handoyo and Anas (2024) discovered that firms located in countries with robust legal systems and high social standards are more inclined to implement substantive ESG practices than symbolic ones. Similarly, Cek and Ercantan (2023) underscored that organisations that integrate ESG considerations with robust governance mechanisms are more likely to outperform their counterparts financially. In this study, the interaction between regulation and ESG indicates that a dual emphasis on stakeholder accountability and institutional enforcement results in a more efficient allocation of resources and enhanced firm-level outcomes. Therefore, these results confirm that the financial and reputational benefits of sustainability initiatives are amplified when stakeholder interests are protected by transparent and enforceable regulatory frameworks, which in turn enhances the effectiveness of ESG implementation.

Additionally, the findings of this study are consistent with and expand upon previous empirical research that posits the value-creating potential of ESG, particularly when it is bolstered by institutional infrastructure. Albitar et al. (2020) discovered that firms that invest in financially material ESG issues experience superior future performance and risk-adjusted returns. This underscores the significance of prioritising sector-relevant sustainability strategies. This study expands upon that foundation by underscoring the conditional impact of the regulatory environment on the efficacy of ESG. It provides a layer of complexity to the argument by demonstrating that, although ESG investment is advantageous, its influence is substantially amplified in the presence of robust, coherent regulatory frameworks. These findings also corroborate the conclusions reached by Mondal and Sahu (2025), who underscored the critical role of legal institutions in determining the efficacy of corporate governance frameworks. This perspective is further bolstered by Soschinski et al. (2024), who propose that national governance systems influence how firms internalise external expectations and translate them into corporate actions. In countries where accountability and transparency are enforced by institutions, ESG practices are more likely to result in tangible performance gains and are less likely to be superficial. The results argue against the notion that ESG is solely a symbolic or cost-effective instrument, instead presenting it as a strategic driver that thrives with regulatory support. Consequently, this study not only supports the empirical and theoretical research that has been conducted previously, but it also contributes to the ongoing discourse regarding ESG by promoting the integration of legal and regulatory frameworks in the pursuit of sustainability outcomes in a variety of market environments.

5. Theoretical Implications

This study makes a significant theoretical contribution by reinforcing and extending both

Institutional Theory and Stakeholder Theory within the context of ESG practices and corporate performance, particularly across diverse regulatory environments. The results indicate that ESG engagement is not merely an internal strategic decision, but rather one that is significantly influenced by external institutional conditions. Consequently, the central tenets of Institutional Theory are validated, which posits that firm behaviour is influenced by formal institutions such as laws and regulations, as well as informal norms and societal expectations (Elamer & Boulhaga, 2024). This study empirically supports the assertion that institutional robustness facilitates the transition from symbolic to substantive ESG practices by demonstrating that regulatory environments enhance the effectiveness of ESG on firm performance (Nirino et al., 2021; Abdullah et al., 2024). Simultaneously, it corroborates the fundamental principles of Stakeholder Theory by demonstrating that organisations that operate within well-regulated environments are more effectively able to meet the expectations of a diverse array of stakeholders, including investors, employees, governments, and civil society. Consequently, this enhances legitimacy and long-term value creation (Malik & Sharma, 2025; Soschinski et al., 2024). The existing theoretical discourse is further complicated by the interactive effect of ESG and regulation, which emphasises that performance outcomes are a function of both internal sustainability orientation and external enforcement mechanisms. This contribution is particularly significant in underexplored regions such as Africa, where institutional diversity is high and ESG research is scarce. The research not only substantiates the validity of current theoretical frameworks but also advocates for their contextualisation, positing that the synergy between ESG and regulation is a critical factor in the success of corporations in both developed and emerging markets.

5.1 Knowledge Contribution

This study makes a novel and substantial contribution to the growing body of ESG literature, particularly within the African context, where such empirical inquiries remain sparse. It is the first to substantially examine the moderating role of the regulatory environment on the ESG-performance relationship across both emerging and developed markets. This investigation distinguishes itself from existing research that emphasises single-market contexts or general global trends (Eissa et al., 2024; Handoyo & Anas, 2024) by juxtaposing institutional differences across multiple economies. Consequently, it improves comprehension of how ESG practices are exhibited under diverse regulatory frameworks. The focus on African markets, which frequently experience insufficient regulatory supervision, inadequate ESG disclosures, and institutional vacancies, provides novel perspectives on the extent to which governance quality can either amplify or limit the effects of ESG on firm outcomes (Chouaibi et al., 2021; Elamer & Boulhaga, 2024). Handoyo and Anas (2024) have noted that this contributes to the literature on institutional voids and the distinctive obstacles that firms encounter in developing regions. Additionally, the study addresses prior concerns regarding endogeneity and omitted variable bias by employing fixed and random effects estimations, which provide methodological rigour and empirical robustness (Cek & Ercantan, 2023). The significance of context-sensitive policy interventions to promote corporate sustainability is emphasised by the evidence that regulatory frameworks substantially moderate ESG-performance relationships. This study not only broadens the

geographical scope of ESG research but also connects theory with empirical practice in underexplored regions, particularly in Africa, where the policy implications could promote more inclusive, sustainable, and responsible corporate growth.

5.2 Managerial and Practical

The results of this study have substantial managerial and practical implications, particularly for corporate executives, ESG strategists, and regulatory authorities in both developed and emerging markets. Managers who prioritise environmental, social, and governance initiatives can improve both accounting-based and market-based performance indicators, as evidenced by the statistically significant and positive correlation between ESG practices and firm performance. This emphasises the significance of incorporating sustainability into the core of business strategies, rather than considering it as a peripheral issue. Managers should proactively incorporate ESG considerations into risk management frameworks, stakeholder engagement strategies, and innovation processes to foster long-term value creation. Additionally, the regulatory environment's moderating role suggests that organisations that operate within well-defined and enforced regulatory frameworks are more likely to derive value from their ESG initiatives. As a result, business executives in emerging markets must promote more robust ESG-related policies and compliance frameworks, thereby ensuring that internal corporate governance is consistent with external institutional expectations. In practice, this necessitates targeted investments in ESG training, transparent sustainability reporting, and collaborations with regulatory authorities to align corporate ESG objectives with national development objectives. Additionally, regulatory institutions are encouraged to enhance their monitoring of ESG compliance and offer incentives to companies that surpass sustainability benchmarks.

5.3 Conclusion

This study offers a comprehensive analysis of the nexus between ESG practices and corporate performance, while accounting for the moderating effect of the regulatory environment in both emerging and developed markets. By employing robust fixed and random effect panel regression techniques, the study establishes that ESG practices significantly and positively influence corporate performance across both market contexts. Furthermore, the interaction between ESG practices and the regulatory environment revealed an amplifying effect, highlighting that sound regulatory frameworks can strengthen the impact of ESG initiatives on firm performance. These findings emphasise that firms embedded in supportive institutional contexts are better positioned to translate ESG investments into tangible value creation. The study reinforces the principles of institutional theory and stakeholder theory by advancing a critical understanding of the impact of contextual factors, such as regulatory environments, on the efficacy of ESG strategies. It addresses a substantial lacuna in African scholarship by offering empirical evidence from a multi-market perspective, a context that is relatively understudied in the field of ESG literature. In practical terms, the study emphasises the necessity for managers, investors, and policymakers to prioritise ESG integration as a strategic instrument for sustainable performance enhancement.

5.4 Suggestion for Future Research

Future studies could explore the longitudinal effects of ESG practices on corporate performance over extended periods across various African countries to assess consistency and causality in different regulatory environments. Comparative studies between firm-level ESG disclosures and national ESG policy implementation could offer deeper insights into alignment gaps. Moreover, incorporating qualitative approaches, such as interviews with ESG officers and regulators, would enrich the understanding of institutional dynamics. Future research could also examine the role of digital transformation and technological innovation in enhancing ESG outcomes. Finally, sector-specific investigations could reveal nuanced ESG-performance relationships, particularly in high-impact industries like energy and manufacturing.

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Authors contributions

The author solely contributed to all components of this research

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Informed consent

This study relied solely on secondary data from publicly listed firms; therefore, informed consent from human participants was not required..

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The Publication Ethics Committee of the Macrothink Institute.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

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Data availability statement

The data that support the findings of this study are available on request from the

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Data sharing statement

No additional data are available.

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