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ESG performance metrics landscape: Examining sustainable leadership, stakeholder engagement and organizational characteristics

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Abstract

The present study investigates the influence of sustainability leadership, stakeholder engagement and organizational characteristics on Environmental, Social, and Governance (ESG) metrics within organizations. Structural Equational Modelling—partial least squares (SEM-PLS) was used as a statistical tool to demonstrate the study's landscape. A sample size of 382 was employed for the research. The results illustrate that sustainability leadership positively influences ESG performance metrics. The findings show that measures of ESG performance are enhanced by sustainability leadership. Stakeholder engagement similarly acts as a mediator to improve performance criteria. Conversely, organizational characteristics help moderate the relationship between sustainable leadership and stakeholder involvement influencing ESG performance indicators. Moreover, this research emphasises that organisations with strong sustainability leadership are not only more likely to get favourable ESG results but also encourage innovation, lower running risks, and enhance long-term financial success. Emphasising stakeholder involvement helps to improve organisational resilience and responsibility, hence promoting more open decision-making procedures. This paper also investigates the difficulties companies have including incorporating sustainability principles emphasizing the requirement of adaptable tactics and cultural transformation. In addition, it shows that although organisational characteristics decrease this relationship, additional research is required to thoroughly understand their contribution to improving ESG results. The knowledge acquired from this study guarantees that companies trying to remove obstacles to sustainability match worldwide ESG criteria and objectives, thereby offering valuable directions. These results will enable companies to raise ESG performance and strategically implement more sensible sustainability policies.

Keywords: Environmental metrics, Governance metrics, Social metrics, Stakeholder engagement, Sustainability leadership, Sustainability leadership.

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1. Introduction

ESG performance metrics have become a contemporary issue of debate in recent studies [1]. ESG performance has become crucial and a matter of concern with the increase in carbon prints. Many studies have embedded sustainable practices into business organizations improving ESG performance [2]. The ESG framework is a set of guidelines available to businesses against which they may provide information on their company activities connected to the environmental, social and governance (ESG) dimensions [1]. Hence, it is essential to emphasize ESG in the context of sustainable leadership. It is believed that organizations that structure ESG guidance can have a significant positive performance output [3]. Environmental, social and governance refers to ESG. In ESG models, these are known as pillars and comprise the three primary areas of interest that businesses are supposed to disclose. ESG aims to identify all the non-financial hazards and possibilities presented by the daily business operations of a company. Stakeholders play an essential role in achieving sustainable ESG practice. Organisations, groups, and people with a stake in the company encourage open communication and understanding and enable the inclusion of different points of view in decision-making procedures [4]. Size, industry, and historical context may influence the relationship between sustainable leadership and ESG performance measures. These moderating impacts must be acknowledged to understand the complicated dynamics.

The study's primary objective is to understand ESG performance metrics, sustainable leadership, stakeholder engagement, and organizational characteristics. This study also examines the relationship between the ESG performance matrix in the context of sustainable leadership and how stakeholders mediate the ties toward the attainment of the ESG performance matrix. Furthermore, this research aims to offer significant knowledge to policymakers, academics, and business leaders who are dedicated to promoting ethically sound and sustainable operations. By providing a rigorous empirical study, the study aims to assess the role of sustainable leadership and sustainable nosiness practice.

1.1. Research Gap

There are limited empirical studies on sustainable leadership, organizational features and stakeholder involvement. The mediating role of stakeholder involvement in sustainable leadership, stakeholder engagement, and ESG performance metrics needs further empirical research. This study provides empirical evidence and insights into the complex relationship between sustainable leadership, stakeholder involvement, and ESG performance metrics. The study explores how sustainable leadership practices, organizational characteristics, and stakeholder engagement interact to impact ESG outcomes providing valuable insights into corporate sustainability theory and practice.

To address the following research gap, the following research questions are formulated:

Research Question 1: How does sustainable leadership influence environmental, governance, and social metrics within organizations, and what are the mechanisms through which this influence operates?

Research Question 2: What role does stakeholder engagement play as a mediator in the relationship between sustainable leadership and ESG (Environmental, Social, and Governance) performance metrics?

Research Question 3: To what extent do organizational characteristics such as size, industry sector, and geographic location moderate the effects of sustainable leadership on ESG performance metrics?

Research Question 4: What are the distinct and combined impacts of sustainable leadership and organizational characteristics on stakeholder engagement and how do these interactions influence organizational outcomes?

Research Question 5: How robust and valid is the proposed PLS-SEM model in explaining variance in environmental, governance, and social metrics and what are the implications of the model's findings for organizational sustainability strategies?

2. Review Literature

2.1. Sustainability and Corporate Responsibility

The advent of the 21st century has brought about a significant transformation in the business environment characterized by a change in focus towards sustainability [5] and corporate responsibility as a crucial priority [6, 7]. There is a growing global recognition among organizations regarding the importance of ESG performance metrics in assessing their overall societal and environmental influence [8, 9]. Within the current context, there has been an increasing level of attention and discussion surrounding the significance of leadership in organizational settings [9].

2.2. Sustainable Leadership

Sustainable leadership has become a significant factor in determining an organization's ESG success since it is distinguished by its dedication to ethical, responsible, and sustainable business practices [10]. The literature review examines the existing body of research on sustainable leadership and its complex association with ESG performance metrics. It considers the moderating impact of organizational characteristics and the mediating role of stakeholder engagement. Out of the several proposed theories, the Triple Bottom Line (TBL) fits best to the present research. The TBL theory is proposed by and is further cited by Khan et al. [11]. The framework illustrated in Figure 1 is more suitable as it guides organizations seeking to balance their economic prosperity with social and environmental goals. The literature review examines the relationship between sustainability leadership, stakeholder engagement and the Triple Bottom Line (TBL) in the context of ESG to address the research objectives.

2.3. Triple Bottom Line

In the mid-1990s, Elkington [12] proposed the Triple Bottom Line (TBL) hypothesis to evaluate company performance on three interconnected dimensions: economic, social, and environmental sustainability. TBL theory has gained importance

over the past years. The theory advocates for a stakeholder-oriented approach that considers employees, communities, and the environment rather than just financial outcomes. The TBL is significantly influenced by sustainability leadership distinguishing ethical decision-making. It emphasizes the responsible behaviors of the individuals. The literature highlights the significance of sustainability-oriented leadership in businesses as demonstrated by the works of Fry and Egel [13]. Using the TBL, the studies underscore the positive influence of leadership on several dimensions of organization.

2.4. Stakeholder Engagement

Engagement of stakeholders is how businesses interact with and learn about their associates. Knowing them helps businesses better grasp their needs, when they arise, their level of engagement, and how the businesses' activities will impact their objectives.

Stakeholder engagement is widely acknowledged as a mediating mechanism that establishes a connection between sustainability leadership and the Triple Bottom Line (TBL) pillars. The literature has shown that involving stakeholders in decision-making promotes the adoption of ecologically responsible behaviors, facilitates the implementation of social initiatives, and guarantees the maintenance of ethical governance [14]. Environmental measurements with a "planet" dimension center on an organization's effect on natural resources including those pertaining to waste management, carbon footprint, general ecological sustainability, and energy consumption. It underlines the need for companies to reduce their environmental effect and help improve the earth's condition. These observations are consistent with the "planet" aspect of the Triple Bottom Line (TBL). Hence, sustainable leadership and stakeholder engagement promote practices that can reduce an organization's energy consumption [15]. An organization's activities have an impact on its stakeholders which include its employees, customers, communities and society as a whole. This is what is meant by the social dimension of TBL. These measures align with the "people" component of the TBL. Using real-time data and feedback, this method emphasizes the possibilities of technology in improving social indicators. Studies have identified that sustainable leadership and stakeholder engagement positively impact social metrics [16]. These metrics promote employee well-being and community development in society [17].

The governance metrics concern ethical practices that adhere more to the nation's regulations. The measurements presented are by the governance aspect of the Triple Bottom Line (TBL). The development of a governance program is currently underway. It emphasizes the significance of sustainable leadership and stakeholder engagement in influencing governance metrics. It fosters ethical practices that can guarantee sustainable practices. Several factors, including organizational size, industry type, and organizational culture can influence sustainable leadership practice and stakeholders' engagement in the context of the TBL approach. Hence, these factors are considered to be a moderating factor in the relationship between sustainable leadership and ESG performance metrics [18].

The present study is significant because it thoroughly analyses the relationship between the independent variable, dependent variable, mediating variables and moderating variables (sustainable leadership, ESG metrics, stakeholder engagement, and organizational characteristics) in the context of the TBL approach. Prior studies have emphasized a specific dimension of sustainability whereas the present study adopts a comprehensive strategy that encompasses all the dimensions of ESG indicators.

Moreover, the present study highlights the significance of stakeholder engagement as a crucial mediating variable, elucidating how sustainable leadership impacts triple bottom line (TBL) outcomes through which sustainable leadership impacts triple bottom line (TBL) outcomes by means of efficient stakeholder engagement. The study also highlights the importance of organizational features as moderators within the Triple Bottom Line (TBL) paradigm, acknowledging their substantial impact on outcomes connected to sustainability. The study emphasizes its results in Saudi Arabia and its distinguished alignments to sustainability objectives as laid out by Vision 2030. The present research illustrates its results in the context of SDGs, extending its contribution to the TBL approach and presenting its valuable contribution to the field of sustainability research. To achieve sustainability in the organization, ESG performance metrics measure and monitor the practices of the organization in the context of sustainability. Hence, it sets a clear set of rules, defines performance indicators, collects and analyses data, evaluates performance and suggests improvement plans to the stakeholders. Sustainability practices can add long-term value and mitigate risks, boosting resilience [19]. Sustainability performance management includes indicators and reporting techniques. The present research is unique as it emphasizes sustainable leadership and ESG performance measurements in enterprises [20]. Previous research has examined the relationship between indicators and sustainability outcomes but the present study examines how sustainable leadership practices affect sustainability performance. The study enhances sustainability management by analyzing how sustainable leadership mediates organizational characteristics, stakeholder involvement, and ESG performance metrics. To align the study with the formulated objectives, the present research emphasizes the relationship between sustainable leadership, stakeholder engagement, and organizational characteristics in ESG success. The study provides avenues for the stakeholders to improve their sustainable practices towards the United Nations SDGs to meet stakeholders' expectations.

2.5. Framework of Study

The framework of the study investigates the interactions between sustainable leadership, stakeholder engagement, and organisational features focusing on their effects on Environmental, Social, and Governance (ESG) performance measures. With stakeholder involvement as a mediator and organisational traits modifying the impacts, the framework analyses how sustainability leadership directly influences ESG results using structural equation modelling (SEM-PLS). This framework enables a thorough investigation of elements influencing ESG performance in companies.

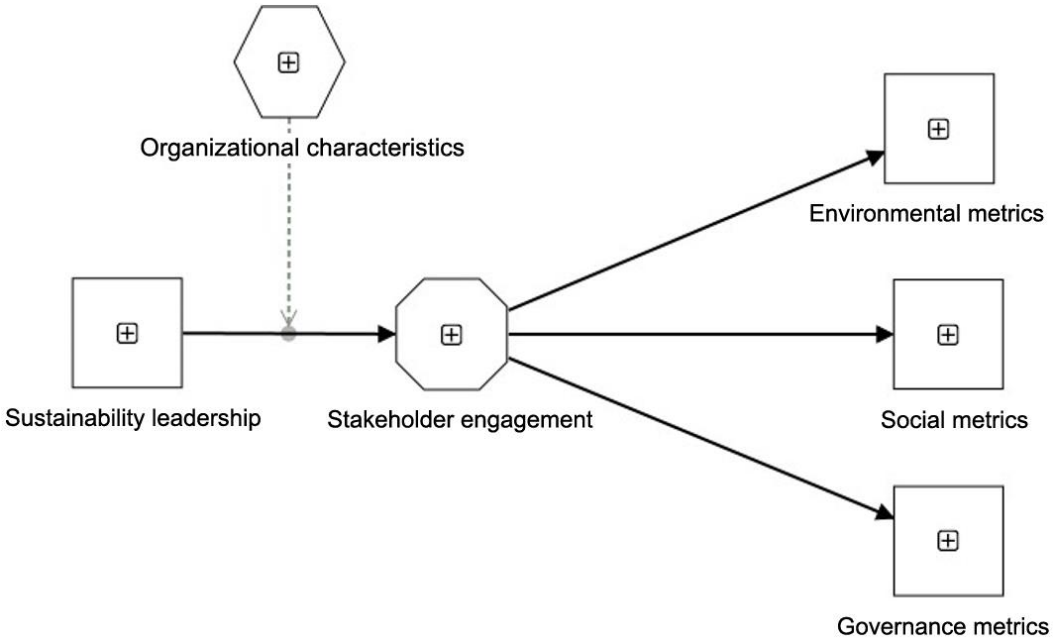

Figure 1.
Model of study.

2.6. Sustainable Leadership and ESG Performance Metrics

2.6.1. Sustainable Leadership as a Driver

A management style known as sustainable leadership offers solutions for global social, economic, and environmental problems. It analyses barriers to enable leaders to work cooperatively for change and transformation, therefore acknowledging leadership as an influence process. Sustainable leaders constantly consider sustainable values and can effectively handle social and environmental complexity. Sometimes, they challenge conventional business practices if needed [21, 22] including Corporate Social Responsibility (CSR) practices [23]. They also motivate their teams to synchronize their activities and decisions with ESG principles [10]. Organizations adopting sustainable leadership found a favourable impact on environmental measures like carbon emissions, energy efficiency, and sustainable resource management.

2.6.2. Positive Impact on Environmental Metrics

Sustainable leaders are committed to sustainability and establish a framework for mitigating environmental effects, advocating for energy efficiency and embracing sustainable practices, setting a precedent for these initiatives [24-28] Sustainable leadership can lead to decreased carbon emissions, improved resource management and mitigation of environmental hazards. It enhances organizational social metrics, employee welfare, community involvement, and ethical labour practices.

2.6.3. Enhanced Social Responsibility

Enhanced social responsibility refers to increased accountability and commitment to addressing societal issues and promoting positive social change [16, 29, 30]. It encompasses a broader understanding of sustainable leadership's impact on incorporating social responsibility measures. Leaders who highly emphasize social welfare projects, diversity and inclusion and ethical labour practices cultivate a corporate culture that aligns with ESG objectives [31, 32]. This can result in enhanced social responsibility outcomes that can increase community engagement, employee welfare, and ethical behavior. It can also improve governance measures and create structures that meet ESG standards, promoting ethical decision-making and regulatory compliance.

2.6.4. Ethical Governance and Transparency

Ethical governance and transparency are essential in contemporary society [33]. Ethical governance also strives to reduce corruption and misconduct and enhance trust in public society [34]. The governance processes established by leaders significantly impact metrics. Sustainable leaders place a high emphasis on the principles of ethical governance, transparency and accountability [35]. The organization establishes governance frameworks that promote ethical decision-making [36] and adherence to ESG requirements [37, 38]. Some studies critiqued that sustainable leadership is exaggerated [39, 40] as there are different circumstances, including prevailing market conditions and alterations in legislative frameworks that can frame the sustainable system [41, 42]. The measurement and evaluation of ESG metrics can be a topic of debate and may have variations in the degree of impact depending on the organization and country of operation. Companies and industries may assign varying importance to distinct ESG characteristics [43]. Hence, it is essential to acknowledge the collection of measurements or standards in this regard. The variety poses challenges in comparing and generalizing findings across different enterprises.

Compared to the short-term and long-term impacts of sustainable leadership, there was observed a significant influence on ESG measures [44]. Certain critics contend that the emphasis on immediate financial outcomes can impede the capacity of leaders to implement sustainable practices effectively which often require a longer timeframe to manifest significant ESG enhancements [45-47]. Resource limitations considered barriers to adopting sustainable practices among small and medium firms operating in resource-intensive industries have been criticized by several authors [48]. The initial expenses associated with sustainability efforts might be high causing financial challenges for firms that lack the necessary resources [49-51]. Another challenge mentioned was behavioral alignment which effectively integrates sustainability ideas into the business culture and employee behaviors despite leaders advocating for such principles [52-54]. The resistance to change between the intentions of leadership and employees' actions might be effective for ESG indicators [55]. Leaders committed to sustainability must effectively manage the varied demands of stakeholders encompassing shareholders, employees, customers, communities and regulators. The task of reconciling these issues could be challenging in making decisions [56]. The phenomenon of "greenwashing" is a potential risk to convince people that a company's actions, objectives or policies are good for the environment [57]. This approach can potentially mislead the stakeholders towards the reliability of ESG measurement [58]. The influence of sustainable leadership can exhibit significant contextual variability in context to different organizational attributes, industry types and geographical contexts. The efficacy in one context may not necessarily be applied to another context [5]. Studies have identified that leaders may experience financial constraints in prioritizing long-term sustainability. This may give rise to conflicts between the objectives of sustainability and the imperative for primary financial outcomes [59]. Hence, sustainable leadership has the potential to have a positive influence on ESG performance metrics. However, critics have raised legitimate concerns regarding the intricate nature of causality, measurement techniques, resource limitations, alignment of behaviors, conflicts among stakeholders, challenges posed by regulations and the variability of contextual factors. It is important to enhance the validity and credibility of the research findings.

2.7. Mediation Effect by Stakeholder Engagement

Stakeholder engagement is the systematic approach of actively involving and communicating with diverse stakeholders, encompassing employees, customers, suppliers, communities and investors [4, 60, 61]. Stakeholder engagement is a mediating variable that connects sustainable leadership with organizational outcomes [62]. The translation of the ideas of sustainable leadership into actual actions and achievements is significantly facilitated by its pivotal role. The present discourse aims to undertake a comprehensive analysis of the subject matter at hand. Stakeholder engagement is one of the critical determinants of sustainable leadership and sustainable organizational outcomes [63-66]. Organisations that have been found to engage stakeholders are reported to gain insights towards the environment [67, 68] and social responsibility [69, 70]. Stakeholder engagement facilitates the integration of sustainability practices to promote leaders and sustainable culture and practices [71, 72]. In a study, it has been highlighted that sustainable leaders frequently advocate transparency and accountability as they are encouraged by stakeholders [65, 73-75]. Stakeholder engagement also creates an environment of transparency and trustworthiness, and hence, it improves governance metrics [76, 77]. A study has critiqued that reinforced hierarchies may hamper employee participation and sustainability [78]. The stakeholder engagement process also establishes a feedback mechanism and helps firms enhance their sustainability practices [19, 79]. Moreover, some studies have also mentioned that stakeholders foster innovation and facilitate the adaptation of new technology that can further contribute to ESG practice [80, 81]. In a study, stakeholders were also found to mitigate risk and enable leaders to implement proactive actions early [4, 82].

2.8. Moderation Effect by Organizational Characteristics

An effective organisation has well-defined roles and responsibilities, a clear chain of command, a streamlined workflow, well-documented procedures, a positive company culture, open lines of communication, the ability to pivot when necessary, careful management of resources, and a dedication to holding everyone accountable and always getting better. [83, 84]. Organizational characteristics play an important role in shaping ESG performance metrics [85]. Organizational characteristics can influence the relationship between sustainable leadership and organizational outcomes [86] particularly in the case where resources are not a matter of constraint. In the context of ESG performance metrics, organizational characteristics vary differently in different scenarios [87, 88]. Organizational characteristics have multi-dimension traits which may include the size of a business [89-91], the industry sector [92] and geographical location [93] may have a greater chance to embrace sustainable practices. Resource-rich organizations have a higher chance of enhancing ESG performance [94]. Moreover, it has been identified that giant corporations have a pool of stakeholders that can implement sustainable practices and have positive measures on ESG performance. In smaller firms, implementing sustainability practices may be found to have challenges as they need more resources and sustainable leadership [94]. Furthermore, the influence of organizational culture on stakeholder engagement [95] and sustainability practices within businesses especially in the context of the Triple Bottom Line (TBL) which comprises metrics related to the environment, society, and governance. An organization that has a culture of cooperation builds trust and enhances ESG performance. These cultures promote and foster the engagement of stakeholders in decision-making and develop sustainability [96]. Similarly, geographical locations also have a significantly differing impact on ESG performance [97]. Company environmental performance may be higher for firms with strict environmental regulations to comply with laws. At the same time, organisational structure affects employee engagement and ESG indicators. Centralized and decentralized organizations have significantly different impacts on ESG performance.

Hence, the influence of organizational characteristics on TBL outcomes, stakeholder engagement, and sustainable leadership is substantial. Companies can establish a favourable atmosphere for stakeholder collaboration and sustainable practices by cultivating a culture that places importance on inclusivity, ethical conduct, and sustainability. Nevertheless, additional investigation is required to delve into the mechanisms by which organizational culture impacts sustainability outcomes and formulate approaches for fostering a sustainable culture in various organizational settings.

The following hypotheses are postulated from the above literature review:

H_1: Sustainable leadership positively influences environmental metrics.

H_2: Sustainable leadership positively influences social metrics.

H_3: Sustainable leadership positively influences governance metrics.

2.9. Mediation Effect by Stakeholder Engagement

H_4: Stakeholder engagement mediates the relationship between sustainable leadership and environmental metrics.

H_5: Stakeholder engagement mediates the relationship between sustainable leadership and social metrics.

H_6: Stakeholder engagement mediates the relationship between sustainable leadership and governance metrics.

2.10. Moderation Effect by Organizational Characteristics

H_7: Organizational characteristics moderate the relationship between sustainable leadership and stakeholder engagement towards ESG performance metrics.

3. Research Methodology

3.1. Research Design

In the present study, quantitative research is used. This research design is used because it can provide greater knowledge and understanding of the ESG performance metrics. The present research gathers from December 2023- March 2024. The research design was chosen because it is cost-effective because of generalizability in nature [98]. The research factors were identified using a Scopus and Web of Science database and more than 500 research papers in a similar domain were explored. The research variables related to sustainable leadership, ESG performance metrics, stakeholder engagement, and organizational characteristics were identified from the previous research mentioned above. The conceptual framework of the study was based on the research gap that had been identified in earlier research [99]. The research question items have been adapted and revised to address the research objectives. Three items on sustainability leadership [100] and five items have been adapted to organisational characteristics from Burney et al. [101]. Three items have been taken from environmental metrics [102]. Three items on social metrics have been adapted from Krasnopolskaya and Korneeva [103]. Three items have been taken from the governance metric [104] and three items have been adapted to stakeholder engagement from Gutterman [105].

3.2. Sampling

In the present study, multi-level sampling was used. In the first phase, purposive sampling [106] was used to identify the targeted firm. In the second phase, simple random sampling was used to ensure that the study was free from bias. Moreover, the sample selection criteria were designed to provide complete coverage of the population. In the first phase, data was collected from five leading firms: the education sector, retail, small and medium industrial units, telecommunications and hospitality. The number of samples was determined by multiplying the number of items by the number of questions yielding a total of 20 items. Upon multiplying these items by 20, a projected sample size of 400 was obtained to further strengthen the sample size; 500 samples were proposed for collection. Since the study targeted 500 respondents, only 382 responses were considered appropriate for data analysis.

3.3. Data Collection

The study employed Google Forms as the primary data collection tool. Item items were incorporated into the data collection instrument to assess constructs associated with ESG performance metrics, stakeholder engagement, sustainable leadership, and organizational characteristics based on a 5-point Likert scale. The Google form was forwarded to the organization's communication channel to reach the niche.

3.4. Data Analysis

Recent studies have made use of modelling using Partial Least Squares Structural Equations (PLS-SEM) [107] SMARTPLS 4. The SEM-PLS was employed for data analysis. It is far superior to regression analysis due to its ability to examine research models with several variables, including those that are not directly observable, measurement errors, and complex econometric models such as confirmatory factor analysis. Additionally, it is capable of processing data from a wide variety of sources [108].

The analysis was structured to provide a robust and reliable output. The study used discriminant validity through analysis of the Average Variance Extracted (AVE) [109]. Cronbach's alpha test was used to validate the reliability of the items. After the items were validated and the variables were reliable, the next step was to examine the hypothesis using bootstrapping.5000 responses have been executed in the PLS-SEM by employing bootstrapping to ascertain the statistical significance of route coefficients; valuable insights were obtained regarding the characteristics and magnitude of these interactions with the bootstrapping approach [110]. Furthermore, a deeper understanding of the interrelationships among variables was obtained through the slope analysis [111].

3.5. Ethical Consideration

The studies have followed ethical guidelines covering informed consent, data security and confidentiality. Participants offer informed consent before data collection. Secure online data collection and storage systems ensured data security.

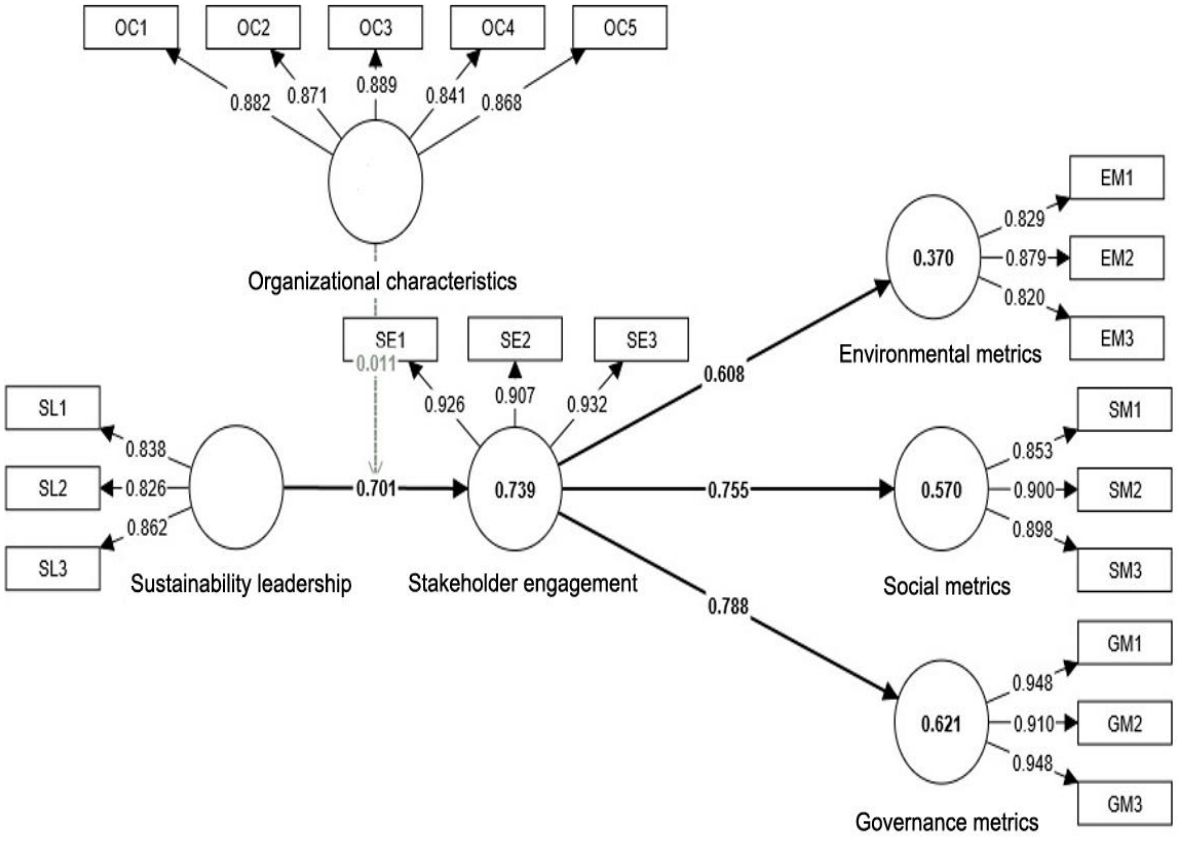

Figure 2.
Structure equational model.

Table 1.
Construct reliability.

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Environmental metrics	0.805	0.870	0.881	0.711
Governance metrics	0.928	0.928	0.954	0.875
Organizational characteristics	0.920	0.920	0.940	0.758
Social metrics	0.860	0.867	0.915	0.782
Stakeholder engagement	0.911	0.915	0.944	0.849
Sustainability leadership	0.795	0.800	0.880	0.709

3.6. Data Analysis

Table 1 and Figure 2 represent the reliability and consistency of constructs obtained by the software. It is evident that all constructs exhibit robust and reliable metrics. Commencing with Cronbach's alpha, a measure of internal consistency, all constructs ranging from environmental metrics to sustainability leadership exhibit values surpassing the acceptable threshold of 0.7 [112]. Notably, governance metrics and organizational characteristics demonstrate values nearing 0.93 indicating an exceptionally high level of internal consistency. The aforementioned elevated values support the assertion that a persistent and robust association exists among the elements encompassed within each construct. This argument is further supported by the consistently high composite reliability values (rho_a and rho_c) which exceed 0.7 for all constructs. Including the Average Variance Extracted (AVE) enhances the model's resilience. Each construct demonstrates average variance extracted (AVE) values over 0.5 indicating that they account for more than 50% of the variability in their respective indicators. The governance metrics construct which has an Average Variance Extracted (AVE) value of 0.875 has a high level of variance explanation. This indicates that the construct is well-defined by the observed measures.

Table 2.
Discriminant validity – Fornell Larker.

Constructs	Environmental metrics	Governance metrics	Organizational characteristics	Social metrics	Stakeholder engagement	Sustainability leadership
Environmental metrics	0.843					
Governance metrics	0.556	0.935				
Organizational characteristics	0.615	0.710	0.870			
Social metrics	0.641	0.901	0.659	0.884		
Stakeholder engagement	0.608	0.788	0.704	0.755	0.921	
Sustainability leadership	0.608	0.703	0.709	0.676	0.847	0.842

Table 2 (A).
HTMT criterion.

Constructs	Environmental metrics	Governance metrics	Organizational characteristics	Social metrics	Stakeholder engagement	Sustainability leadership
Environmental metrics						
Governance metrics	0.509					
Organizational characteristics	0.715	0.715				
Social metrics	0.756	0.890	0.739			
Stakeholder engagement	0.698	0.562	0.629	0.69		
Sustainability leadership	0.604	0.652	0.683	0.616	0.718	
Organizational characteristics x sustainability leadership	0.149	0.101	0.211	0.211	0.012	0.081

Table 2 illustrates the relationship between environmental metrics, governance metrics, organizational characteristics, social metrics , stakeholder engagement, and sustainability leadership. Examining the diagonal elements corresponding to each construct's square root (AVE) is crucial in assessing discriminant validity. In Fornell Larker, it is suggested that the diagonal values should surpass the corresponding off-diagonal correlations to establish clear differentiation across constructs as shown in Table 2. However, the constructs show distinguishing scores among the variables. Moreover, it is also important to carefully examine the areas of overlap to ensure the model's strength and reliability [113].

Table 2 (A) represents the Heterotrait-Monotrait (HTMT) criterion analysis which evaluates the research model construct discriminant validity as shown in Table 2(A). The square root of each construct's average variance extracted (AVE) in the diagonal shows discriminant validity. These values should be higher than the correlations between constructs and indicate the average variance captured by each construct's elements. The off-diagonal elements have lower construct correlations than the diagonal elements showing discriminant validity. In some instances, correlations reach 0.9 which may imply discriminant validity concerns. Social and governance metrics have a 0.89 correlation, and social metrics and organisational characteristics have 0.756. Strong correlations between constructs may indicate overlap and require more measurement model analysis. In the last row of the table, "Organisational characteristics x sustainability leadership" is correlated with the other constructs. These poor correlations indicate that the interaction term is separate from the components and adds model variance. While most correlations fit the HTMT requirement, strong correlations across certain constructs suggest that the measuring model may need to be refined to provide robust discriminant validity.

Table 2 (B).
Variance and effect size matrix (R^2 & f^2).

Constructs Details	f - square matrix	Constructs	Constructs	Constructs	R-square	R-square adjusted
Constructs	**Environmental metrics**	**Governance metrics**	**Social metrics**	**Stakeholder engagement**	-	-
Environmental metrics	-	-	-	-	0.386	0.384
Governance metrics	-	-	-	-	0.63	0.629
Organizational characteristics	-	-	-	0.066	-	-
Social metrics	-	-	-	-	0.572	0.571
Stakeholder engagement	0.629	1.704	1.338	-	0.737	0.734
Sustainability leadership	-	-	-	0.949	-	-
Organizational characteristics x sustainability leadership	-	-	-	0.000	-	-

Table 2 (B) represents the regression models' explanatory power for each dependent variable which is shown by R-square and modified R-square values. The models' independent factors explain 38.4% of environmental, 63% of governance, and 57.1% of social measures. The independent variables explain 73.4% of stakeholder engagement variance. The models' explanatory power suggests that the independent factors predict the dependent variables. This indicates that the models are well-fitted and not overfitting the data because the corrected R-square values are similar to the R-square values. These findings suggest that the regression models are resilient since the selected independent factors explain the dependent variable fluctuations.

F-square values reveal the effect sizes of regression model independent-dependent variable relationships. This analysis uses f-square values to show how much each independent variable explains the variance in the dependent variables. Stakeholder engagement has significant effects on environmental, governance, and social metrics with f-square values of 0.629, 1.704, and 1.338. Engagement significantly impacts these ESG performance factors.

Sustainability leadership also drives stakeholder involvement as seen by the f-square value of 0.949. Significantly, organisational characteristics and sustainability leadership have little effect on stakeholder engagement according to f-square analysis. These findings emphasize the relevance of sustainable leadership in stakeholder engagement techniques and their impact on ESG outcomes.

Table 2 (C).
Model fit.

Indices value	Saturated model	Estimated model
SRMR	0.083	0.117
d_ULS	1.453	2.871
d_G	1.533	1.918
Chi-square	2274.789	2586.158
NFI	0.684	0.641

Comparisons between saturated and estimated models reveal model performance and goodness-of-fit as represented in Table 2 (C). The saturated model perfectly fits estimated parameters while the estimated model approximates variable relationships. The average difference between observed and estimated covariance matrices is shown by Standardized Root Mean Square Residual (SRMR) values. Low SRMR indicates a better fit. With an SRMR of 0.083, the saturated model has a lower difference between observed and estimated values than the estimated model (0.117). Smaller d_ULS (Squared Euclidean) Distance and d_G (Geodesic Distance) values indicate greater model fit. Compared to the saturated model, the estimated model has higher measurements indicating a poorer match. A non-significant Chi-square statistic between the observed and expected covariance matrices shows a satisfactory match. The calculated model fits worse than the saturated model (2274.789) because its Chi-square value is larger (2586.158). The Normed Fit Index (NFI) measures model fit with values closer to 1 suggesting a better match. The saturated model (0.684) fits better than the estimated model (0.641) due to its greater NFI. The saturated model fits better across fit indices than the estimated model while both models reveal varying associations. These findings must be interpreted in light of theoretical importance and practical ramifications.

Table 2 (D).
Collinearity statistics.

Path	VIF
Organizational characteristics -> Stakeholder engagement	1.828
Stakeholder engagement -> Environmental metrics	1.000
Stakeholder engagement -> Governance metrics	1.000
Stakeholder engagement -> Social metrics	1.000
Sustainability leadership -> Stakeholder engagement	1.764
Organizational characteristics x sustainability leadership -> Stakeholder engagement	1.048

Variance Inflation Factor (VIF) statistics measure model predictor variable multicollinearity. In Table 2 (D), all VIF values are below 2 indicating low multicollinearity. The relationships between organisational characteristics and stakeholder engagement, stakeholder engagement and each outcome variable (environmental, governance, and social metrics), sustainability leadership and stakeholder engagement, and the interaction term all have low VIF values. The predictor variables are relatively independent which improves regression coefficient reliability and model predictive validity. Since the model has no significant multicollinearity, its credibility and variable relationships are stronger.

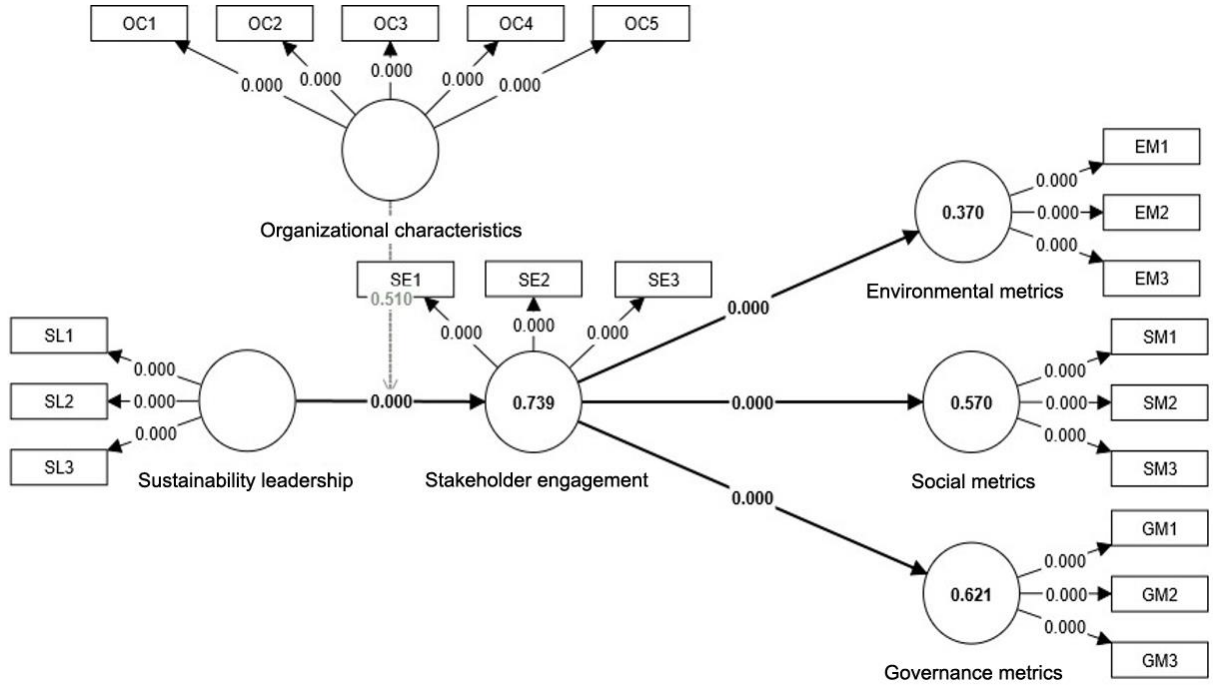

Figure 3.
Measurement model.

Table 3A.
Testing direct hypothesis between sustainable leadership and ESG performance metrics.

Hypotheses	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P value
H1	Sustainability leadership -> Environmental metrics	0.426	0.428	0.03	14.28	0.000
H2	Sustainability leadership -> Governance metrics	0.552	0.552	0.034	16.051	0.000
H3	Sustainability leadership -> Social metrics	0.529	0.53	0.035	15.081	0.000

Table 3B.
Mediation effect by stakeholder engagement.

Hypotheses	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P value
H4	Sustainability leadership -> Stakeholder engagement -> Environmental metrics	0.444	0.444	0.032	13.818	0.000
H5	Sustainability leadership -> Stakeholder engagement -> Governance metrics	0.567	0.566	0.038	15.055	0.000
H6	Sustainability leadership -> Stakeholder engagement -> Social metrics	0.541	0.540	0.039	14.012	0.000

Table 3C.
Moderation effect of organizational characteristics.

Hypothesis	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P value
H7	Organizational characteristics x Sustainability leadership -> Stakeholder engagement	0.011	0.012	0.017	0.658	0.51

3.7. Hypothesis Testing

Table 3A extracted from Figure 3 illustrates findings that provide significant insights into the correlation between sustainability leadership and several measures. A robust and statistically significant positive correlation exists between sustainability leadership and environmental measures, governance metrics, and social metrics. The results indicate a strong correlation between environmental measures and sustainability leadership as demonstrated by the correlation coefficient value of 0.426 and a highly significant t-statistic of 14.28. The governance measures and social metrics exhibit a comparable pattern as indicated by the correlation coefficient values of 0.552 and 0.529, respectively. Notably, both values demonstrate statistical significance, with p-values of 0.000.

Table 3B notes that the introduction of stakeholder engagement as a mediator maintains the strength and statistical significance of the correlations between sustainable leadership and the three indicators. The measures about environmental,

governance, and social dimensions with correlation coefficient values of 0.444, 0.567, and 0.541, respectively, collectively validate the significant influence of stakeholder involvement on the effectiveness of sustainable leadership.

Table 3C depicts the correlation between organizational features and sustainable leadership concerning stakeholder engagement giving an alternative perspective. The statistical analysis reveals that the observed association characterized by a correlation coefficient value of 0.011 and a t-statistic of 0.658, lacks statistical significance as evidenced by a p-value of 0.51. This implies that although sustainable leadership has a vital impact on influencing several indicators, the influence of organizational features on stakeholder engagement may be somewhat affected by sustainability leadership. This finding provides a foundation for future scholarly investigations to study this interaction's intricacies further and examine additional organizational variables that may impact the relationship.

Table 4.
Path-coefficient.

Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Remarks
Organisational characteristics -> Stakeholder engagement	0.207	0.208	0.043	4.784	0.000	Supported
Stakeholder engagement -> Environmental metrics	0.608	0.61	0.03	20.082	0.000	Supported
Stakeholder engagement -> Governance metrics	0.788	0.788	0.025	31.388	0.000	Supported
Stakeholder engagement -> Social metrics	0.755	0.756	0.026	28.925	0.000	Supported
Sustainability leadership -> Stakeholder engagement	0.701	0.701	0.034	20.666	0.000	Supported
Organisational characteristics x sustainability leadership -> Stakeholder engagement	0.011	0.012	0.017	0.658	0.510	Rejected

3.8. ESG Performance Metric Landscape

Table 4 presents a complete analysis of the interactions within a specific structural model. It is worth mentioning that there is a noteworthy relationship between organizational characteristics and stakeholder engagement as evidenced by a coefficient of 0.207 and a statistically significant P value of less than 0.05. This implies a positive relationship between improvements in organizational characteristics and increased stakeholder engagement. The significance of stakeholder engagement is emphasized by its substantial influence on environmental metrics, governance metrics, and social metrics as evidenced by notable path coefficients ranging from 0.608 to 0.788 and statistically significant P values close to zero. Moreover, the effectiveness of sustainability leadership is evident in its strong influence on stakeholder engagement as indicated by a coefficient of 0.701. However, a deviation from this pattern emerges when considering the interplay between organizational characteristics and sustainability leadership. The collective impact of these factors on stakeholder engagement results in a non-significant P value of 0.510. This indicates that their interconnected effect is less crucial than their separate contributions. The findings presented collectively shed light on the independent effectiveness of constructs such as organizational characteristics and sustainability leadership while also underscoring the significant influence of stakeholder engagement on diverse organizational indicators. However, the combined effect of certain variables like the interaction above term may not consistently result in increased influence. This highlights the intricate and nuanced characteristics of such associations.

Table 5.
Total indirect effect.

Constructs	Environmental metrics	Governance metrics	Organizational characteristics	Social metrics
Environmental metrics	-	-	-	-
Governance metrics	-	-	-	-
Organizational characteristics	0.126	0.164	-	0.157
Social metrics	-	-	-	-
Stakeholder engagement	-	-	-	-
sustainability leadership	0.426	0.552	-	0.529
Organizational characteristics x sustainability leadership	0.007	0.009	-	0.009

Table 5 illustrates the comprehensive indirect association between the dependent and independent variables. The matrix presented in this context depicts the path coefficients or correlations between different constructs. The data was obtained through the SEM-PLS using the algorithm technique. The following discussion is predicated on the data that has been supplied. This study uses the algorithm method to examine the complex interconnections between different constructs. These constructs encompassed environmental metrics, governance metrics, organizational characteristics, social metrics,

stakeholder engagement, sustainability leadership and the interaction term of organizational characteristics multiplied by sustainability leadership. After careful analysis, it is evident that organizational characteristics significantly correlate with several constructs. Specifically, there is a coefficient of 0.126 with environmental metrics, 0.164 with governance metrics and 0.157 with social metrics. The data suggests a positive correlation exists between the improvement or evolution of organizational characteristics and the associated impact on these measures. However, these impacts may be deemed very small in magnitude.

In contrast, sustainability leadership demonstrates more robust associations with the previously listed measures, exhibiting a coefficient of 0.426 with environmental measures, 0.552 with governance metrics and 0.529 with social metrics. The significance of these coefficients highlights the crucial role that sustainability leadership plays in influencing various organizational indicators. Sustainability leadership's influence on these indicators is more pronounced than the impact of organizational characteristics alone.

Nevertheless, upon further examination of the impact of the interaction between organizational characteristics and sustainability leadership, it becomes apparent that the coefficients associated with this interaction are negligible. Specifically, the coefficients are 0.007 in environmental metrics, 0.009 in governance metrics, and 0.009 in social metrics. Although organizational characteristics and sustainability leadership possess distinct strengths, their combined interaction does not substantially amplify their influence on these indicators. The limited impact shown in this study may indicate that the combined effect of these two factors does not significantly enhance their separate influences. Hence, both organizational characteristics and sustainability leadership favourably impact the metrics under consideration. However, sustainability leadership has a more significant and noticeable influence. Moreover, these dimensions' collective or synergistic impact appears to lack significant additional influence underscoring the need to comprehend both direct and interacting effects inside a structural model. The insights obtained hold substantial value for decision-makers and strategists who seek to enhance organizational outcomes by leveraging these structures.

The path coefficient, commonly known as the beta coefficient signifies the magnitude and direction of the association between the independent variable(s) and the dependent variable. The observed route coefficient in this context is 0.011. This implies that a one-unit rise in the combined impact of "organizational characteristics" and "sustainability leadership" is associated with an expected increase of 0.011 units in "stakeholder engagement" while holding all other variables in the model constant. The above number is derived from the division of the route coefficient by its corresponding standard error (β/SE). The t-value quantifies the number of standard deviations the coefficient deviates from zero. A greater magnitude of t signifies more compelling evidence against the null hypothesis. The calculated t-value is 0.658.

Based on the obtained findings, it can be shown that the interaction between "organizational characteristics" and "sustainability leadership" exhibits a marginal, nevertheless positive effect on the variable of "stakeholder engagement." Nonetheless, the observed effect does not demonstrate statistical significance according to traditional thresholds of significance (e.g., $\alpha = 0.05$) as indicated by the p-value of 0.510. The provided sample and model specification findings indicate a lack of sufficient evidence to support the conclusion that the combined impact of organizational characteristics and sustainability leadership substantially influences stakeholder engagement.

Table 6.
Explanatory power of the independent variables.

Constructs	R-square	R-square adjusted
Environmental metrics	0.386	0.384
Governance metrics	0.630	0.629
Social metrics	0.572	0.571
Stakeholder engagement	0.737	0.734

The R-square and adjusted R-square values for all the critical metrics investigated in our research are displayed in Table 6. The environmental metrics exhibit an R-square value of 0.386 which signifies that the predictors incorporated in the model account for roughly 38.6% of the variability observed in environmental performance. Following consideration of the sample size and number of predictors, the adjusted R-square value remains comparatively stable at 0.384. Similarly, the R-square value for governance metrics is significantly higher at 0.630 indicating that the predictors account for roughly 63.0% of the variability observed in governance performance. At 0.629, the adjusted R-square value remains virtually unchanged. The R-square value for social metrics is 0.572 which signifies that the predictors explain around 57.2% of the variability observed in social performance. At 0.571, the adjusted R-square value remains unchanged. In a nutshell, the R-square value is most significant for stakeholder engagement at 0.737 signifying that the predictors account for roughly 73.7% of the variability observed in stakeholder engagement. Despite this, the adjusted R-square value decreases marginally to 0.734 when the model's complexity is accounted for.

4. Discussion

After conducting an extensive review of the literature and employing empirical analysis, it becomes indisputable that sustainable leadership significantly influences the implementation of ESG performance metrics in businesses. The previous reviews illustrate relationships between organizational geography, size, culture, structure and performance to outcome measures: stakeholder engagement and Manifest Variables (MV) performance. Organizational performance has the most substantial positive contribution to stakeholder engagement and manifest variable performance demonstrating that organizational success and effectiveness are crucial to stakeholder engagement and market value. This highlights the

importance of organizational performance in determining results. Organisational geography also positively correlates with stakeholder engagement and market value performance, though less than organisational performance. Geographic location may affect stakeholder participation and market value through regulatory regimes, commercial opportunities, and cultural contexts. According to the low correlation coefficients, geographic location is merely one of several factors influencing these outcomes. Organisational size, culture, and structure also positively affect stakeholder engagement and market value to varied degrees. Positive cultures, efficient structures and larger organizations are likely to have more stakeholder engagement and market value. These findings support research that organizational features shape behavior and performance. The associations are statistically significant but weak. Some factors not explored in this study may also affect stakeholder engagement and market value in organizations. Future research could add factors and investigate how organizational traits affect these outcomes. The findings demonstrate the complicated relationship between organizational characteristics and outcomes. Organizational success drives stakeholder engagement and market value, but geography, size, culture, and structure also matter. Organizations trying to improve performance and stakeholder value must understand this relationship.

Furthermore, the research validates the notion that organizations that implement robust, sustainable leadership practices exhibit exceptional performance in the domains of social responsibility, ethical governance, and environmental conservation. Furthermore, the study highlights the significance of involving stakeholders in the decision-making process placing particular emphasis on the relationship between ESG performance metrics and sustainable leadership. However, the relationship between sustainable leadership, stakeholder involvement and ESG performance measures may be moderated by organizational characteristics such as size, industry sector and corporate culture. On the other hand, the hypothesis is found to be insignificant which further opens avenues for future research. The study emphasizes the role of sustainable leadership in embracing organizational success. Additionally, the study uncovers stakeholders' roles in building the sustainability landscape in the organization. The empirical results obtained from SEM-PLS show the relationship between sustainable leadership, stakeholder engagement, and organizational characteristics in influencing ESG success. This study enhances the understanding of these essential principles. Hence, organizations must improve their resilience, competitiveness and long-term sustainability in the contemporary, interconnected global environment by utilizing sustainable leadership and stakeholder engagement.

5. Outcome of the Study

The study provides a thorough investigation to understand better the relationships between environmental, governance, and social ESG performance metrics, organizational characteristics, and sustainable leadership. The empirical results illustrate the magnitude of the impact upon independent and dependent variables and the effect of moderators and mediators in the study.

6. Key Findings

6.1. Sustainable Leadership Significantly Influences ESG Performance Metrics

The study discovered a strong and statistically significant positive association between ESG performance metrics' (environmental, governance, and social) and sustainable leadership.

6.2. Stakeholder Engagement Mediates the Relationship

The study confirmed the statistical significance of the relationships between sustainable leadership and the ESG performance metrics upon incorporating stakeholder engagement as a mediator. This research emphasizes how important stakeholder engagement is in converting sustainable leadership ideas into real actions and accomplishments inside a company, improving ESG results.

6.3. Moderation Effect by Organizational Characteristics

It has been discovered that organizational characteristics, including size, industrial sector and geography affect how sustainable leadership and stakeholder engagement interact. A more noticeable effect of sustainable leadership was typically seen in larger organizations with more significant resources and authority. However, the study also showed that the interaction between organizations characteristics and sustainable leadership did not considerably increase either factor's individual effects on ESG performance metrics.

7. Theoretical Contribution

The study also illustrates how sustainable leadership, stakeholder involvement, and organizational features are linked, adding to corporate sustainability literature. The research shows that sustainability concepts must be integrated into organizational culture and operations to meet stakeholder expectations and sustainability goals. This enhanced understanding of the complicated relationship between sustainable leadership and organizational results advances corporate sustainability theory.

The research also helps practitioners and policymakers increase organizational sustainability. The study suggests improving ESG performance and promoting responsible business decision-making by prioritizing stakeholder involvement and sustainable leadership. Theories can inform strategic initiatives and policies to promote sustainable business practices and reduce environmental and social hazards.

Hence, the research deepens our understanding of sustainable leadership and organizational sustainability. The study promotes academic discourse and gives practical advice for 21st-century enterprises navigating corporate sustainability by combining theoretical concepts and empirical facts.

8. Conclusion

The present study thoroughly examines the interconnections within the structural framework. The analysis of the data reveals several significant findings in the study. Sustainability leadership has a significant impact on a range of business KPIs, including environmental KPIs, governance metrics, and social metrics. Organizations can improve their abilities to line up with the sustainable goals of the United Nations and Vision 2030. It may involve investment in renewable energy, eco-friendly production techniques, supply chain logistics optimization to reduce carbon footprint, and sustainability concepts in business culture and governance. Moreover, organizations might cooperate with local communities, governments and non-governmental organizations to solve regional environmental and socioeconomic issues. Organizations can use their strengths to achieve sustainable goals and improve environmental and social well-being by proactively addressing these concerns and integrating sustainability into their core operations.

The significance of sustainability-focused leadership practices in influencing an organization's trajectory in these crucial domains is highlighted by its influence. On the other hand, it should be noted that organisational characteristics also hold importance lower than sustainability leadership. This statement underscores the significance of inherent organizational characteristics while simultaneously indicating that leadership when directed toward sustainability can bring about transformative outcomes. Stakeholder engagement is a crucial component inside the intricate network of relationships. The significance of stakeholder engagement and its function in moderating organizational outcomes should be considered. Since more organizations operate in stakeholder-oriented contexts, efficient and forward-thinking stakeholder engagement approaches are crucial. Organizational characteristics and sustainability leadership did not synergize on stakeholder engagement as expected. This suggests that both concepts are important, their combined effect may still need to be improved.

The SEM-PLS model demonstrates the strong robustness of the study in building the framework for it adding significant credibility to the research findings. However, the model's limited explanatory capacity in the field of environmental metrics indicates that this domain remains intricate and opens avenues for future research. The study reveals how sustainable leadership drives ESG performance measures in firms advancing our understanding of it. The present research strengthens the sustainable leadership hypothesis by showing that sustainable leadership approaches improve organizational outcomes, including environmental conservation, social responsibility, and ethical governance.

8.1. Practical Implications of the Study

The study shows the importance of several key factors in achieving sustainability and increasing stakeholder involvement in businesses. The priority is to create and advance people who are deeply committed to sustainability. Leadership training programs must incorporate sustainability ideals into their curriculum to equip future leaders to promote positive results in this industry. Comprehensive engagement programs are also crucial since stakeholder involvement mediates organizational effects. This includes frequent talks, clear communications, and long-term stakeholder collaborations.

The research also suggests that organizations should review their organizational traits to attain sustainable goals. Sustainable leadership and organizational attributes may benefit stakeholder involvement individually, but their combined effect may not be amplified. Be cautious when estimating the cumulative impact of multiple approaches.

The report also underlines the need for a comprehensive approach to environmental issues. Organizations must go beyond traditional metrics and include sustainability analytics to manage ecological problems comprehensively. A data-driven strategy formulation technique involving consistent data gathering and analysis can help organizations dynamically improve their sustainability initiatives.

The research concludes that firms should integrate sustainable leadership, organizational features and stakeholder involvement rather than treating them separately. Comprehensive approaches can boost the effectiveness and importance of sustainability programs. This study concludes that organizations must adopt a proactive, data-driven, and coherent sustainability and stakeholder engagement approach. This strategy is essential for sustained growth and stakeholder value.

8.2. Limitation of the Research

Research limitations have affected results or interpretations. The small sample size limits the scope of this study. The study used data from five organizations in different industries. These firms provided essential data regarding the relationships being researched but the limited sample size may restrict the possibility of generalization. In other words, the results may only apply to some organizations or settings. This limitation emphasizes that the study's findings should be used cautiously in different contexts and larger and more diverse samples would increase the validity and application of the conclusions.

8.3. Future Avenues for Research

A comprehensive examination of interactions: The absence of a substantial effect of interaction between organizational characteristics and sustainability leadership necessitates additional investigation. Further investigation into the dynamics of this interaction and examination of additional moderating or mediating factors that could impact this association could be pursued by researchers.

The Environmental Metrics Model: Future study requires refinement as it accounts for just 37% of the variance in environmental metrics. To enhance the model's explanatory power, future research could investigate supplementary variables or pathways that could provide further insight into this construct.

Cross-Cultural and Industry-Specific Studies: The current analysis has the potential to be duplicated in various cultural contexts or industry sectors to determine the extent to which the findings can be generalized. Cultural or industry-specific nuances could influence the interactions between the components.

Role of External Factors: The impact of external elements in determining organizational outcomes could be further investigated through research. This exploration may encompass external variables such as regulatory settings, technology breakthroughs, or macroeconomic considerations.

8.4. Public Interest Statement

The study explores the essential role of sustainable leadership in influencing ESG performance measures in firms. The research examines the complex connection between sustainable leadership, stakeholder engagement, and organizational characteristics. It provides insights on how businesses can improve their sustainability practices to meet stakeholders' changing expectations and positively impact society and the environment. The results of this study have significant consequences for businesses, policymakers, and society as a whole. They provide valuable knowledge on how sustainable leadership can promote a responsible and ethical decision-making culture, ultimately resulting in better ESG performance and long-term sustainability. This research offers practical guidelines for firms seeking to incorporate sustainability into their core business processes by highlighting the significance of stakeholder engagement and organizational features in achieving sustainability goals. This study emphasizes the importance of businesses adopting sustainable leadership as a crucial catalyst for promoting good transformation. This benefits their prosperity and contributes to the welfare of future generations and the environment.

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