



BRIDGING FIRM VALUE: UNVEILING THE POWER OF CORPORATE REPUTATION IN ESG SCORE IMPACT

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ABSTRACT

This study examines the role of corporate reputation in strengthening the impact of ESG (Environmental, Social, and Governance) scores on firm value. Using statistical analysis, namely Hayes Process Macro SPSS, this study finds that ESG scores have a significant positive effect on firm value. Furthermore, corporate reputation is shown to have a marginal positive effect on firm value. Most importantly, the study revealed a significant moderating effect, where higher corporate reputation strengthens the positive relationship between ESG scores and firm value. These findings highlight the importance of effective ESG strategies and reputation management in enhancing firm value, providing valuable insights for managers and stakeholders in strategic decision-making.

INTRODUCTION

Throughout The World Commission on Environment and Development (WCED) has been promoting environmental development since 1987, and ESG is a non-monetary criteria used by investors to evaluate a company's performance in three main areas: environmental, social, and governance. ESG is crucial for companies in Indonesia and globally due to investor interest, risk management practices, reputation and branding, regulatory compliance, and operational efficiency, (Nurdiati et al., 2015). Regulations are implemented in many countries, such as Indonesia, to ensure compliance with ESG regulations. However, companies face challenges in implementing ESG practices, such as lack of committee commitment, overinvestment, lack of knowledge and skills, organizational culture resistance, and complex ESG practices, (Weber, 2014). Indonesian regulators are working to increase transparency and reporting, but the implementation of ESG in Indonesia is not optimal. To assess and report ESG performance, investors should prioritize quality data sources like Morningstar Sustainalytics and Morningstar Sustainalytics. The main challenges include the lack of global standards, the complexity of specific metrics, the need for significant investments in technology and human resources, the risk of greenwashing and over-reporting, the materiality and relevance of ESG metrics, and the regulation of ESG regulations, (Buniamin et al., 2015), (Sari et al., 2023). Companies must invest in comprehensive and accurate ESG data, especially from their operations, and implement a comprehensive ESG reporting system that requires significant investments in technology and human resources. Global standards for ESG reporting, such as Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and Task Force on Climate-related Financial Disclosures (TCFD), can lead investors to overlook ESG performance between companies. The complexity of metric measurement, particularly quantitative ones, can be subjective and quantitative. Companies must invest in comprehensive and accurate ESG data, especially from their operations. Implementing a comprehensive ESG reporting system requires significant investments in technology and human resources. Lastly, the relevance and materiality of ESG metrics for industries and companies can be a concern.

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For example, banks like PT Bank Mandiri Tbk, may find environmental metrics like air usage less relevant than their reporting practices.

The importance of ESG to firm value has been the focus of significant research in recent years. ESG has been proven to have a positive impact on the Company's financial performance. Some concrete examples and case studies that show how ESG affects the value of a Company include; Unilever, under the leadership of Paul Polman, launched the Unilever Sustainable Living Plan (USLP) in 2010. The plan aims to reduce the company's environmental impact while increasing its positive social impact. (Eccles et al., 2014) used Unilever as an example in their study of companies adopting sustainability practices. They found that companies like Unilever, which integrate ESG issues into their core business strategy, outperform their peers in the long run, both in stock market performance and accounting. Microsoft is committed to becoming "carbon negative" by 2030 and eliminating all its historical emissions by 2050. (Bolton and Kacperczyk, 2021) found that companies with lower carbon emissions and a strong commitment to emissions reduction, such as Microsoft, tend to have higher market valuations. BlackRock, the world's largest asset manager, has integrated ESG considerations into its investment decision-making process and encourages companies in its portfolio to improve their ESG practices. (Eccles et al., 2020) analyzed BlackRock's approach to ESG and found that ESG integration in investment decisions can positively affect firm value through reduced risk and improved long-term performance. Walmart launched a broad sustainability initiative, including efforts to reduce emissions and improve energy efficiency in its operations. (King and Lenox, 2001) found that pollution prevention and environmental efficiency, as practiced by Walmart, are positively related to firm value.

A company's reputation can strengthen or weaken the influence of ESG. Nike is an example of how a company can turn a negative reputation into a positive one through a commitment to ESG. In the 1990s, Nike faced harsh criticism for its labor practices. In response, the company made significant changes in its supply chain practices and became a leader in industry sustainability. (Zadek, 2004) analyzes Nike's transformation and shows how changes in ESG practices and effective reputation management can significantly increase a company's value. British Petroleum (BP) shows how a negative reputation can weaken ESG efforts. After the Deepwater Horizon oil spill in 2010, BP faced a major reputation crisis. Although the company increased its ESG efforts, negative reputation weakened the positive impact of these initiatives. (Barnett and Salomon, 2012) found that companies with a poor CSR reputation, such as BP after the oil spill, face greater challenges in converting CSR investments into better financial performance. Patagonia is well-known for its commitment to the environment, including the controversial "Don't Buy This Jacket" campaign and the decision to donate 100% of Black Friday sales to grassroots environmental groups. (O'Rourke and Strand, 2017) analyzed Patagonia's business model and found that the company's strong reputation in sustainability amplified the positive impact of its ESG initiatives on customer loyalty and brand value. Before the 2015 scandal, Volkswagen had a relatively good reputation for sustainability.

However, after it was revealed that the company manipulated emissions tests, the credibility of its ESG efforts was severely compromised. (Siano et al., 2017) analyzed the impact of the Volkswagen scandal and found that significant ethical violations can weaken the positive impact of ESG initiatives in the future, even after extensive remediation efforts. However, this relationship is not always linear or universal. Some studies show the importance of corporate reputation as a moderating factor. (Arouri and Pijourlet, 2017) found that the positive impact of ESG performance on firm value is stronger for firms with a good reputation. The study by (Nguyen et al., 2021) shows that corporate reputation strengthens the positive relationship between ESG disclosure and firm value. Corporate reputation may moderate this relationship through several mechanisms, such as credibility signaling; companies with a good reputation may be perceived as more credible in their ESG efforts, amplifying the positive impact on firm value, (Fombrun dan Shanley, 1990) at (Kanto, et al.,2016).

Theoretical and Conceptual Background

2.1 Stakeholder theory

Stakeholder theory, developed by R. Edward Freeman in 1984, states that companies should consider the interests of all stakeholders in their decision-making and operations, rather than just focusing on shareholders. These stakeholders include employees, customers, suppliers, local communities, governments, and the environment. The relevance of Stakeholder Theory to the topic can be explained through several aspects: (1) Environmental, the focus on environmental impacts reflects concern for environmental stakeholders and the wider community. (2) Social, social aspects consider the interests of employees, local communities, and customers. (3) Governance, good governance ensures a balance of interests between various stakeholders, (Eccles & Klimenko, 2019). Stakeholder theory argues that attending to the interests of all stakeholders will result in greater long-term value. This is in line with the ESG concept which aims for long-term sustainability, (Freeman, 2010). Companies that implement stakeholder theory well tend to have higher ESG scores, as they actively manage their impact on various stakeholders, (Lins & Tamayo, 2017). By meeting the needs of various stakeholders through good ESG practices, companies can increase customer loyalty, employee productivity, and community support, all of which contribute to increased Company value, (Fatemi, & Kaiser, 2018). Corporate reputation can be seen as a reflection of how well the company manages relationships with its stakeholders. A good reputation shows that the company has successfully balanced the interests of various stakeholders, which can strengthen the positive relationship between ESG scores and firm

value. By considering the interests of all stakeholders, the company can better identify and manage potential risks, which can increase the value of the company in the long run, (Jo & Na, 2012)

2.2 Signal Theory

Signal Theory, developed by Michael Spence in 1973, basically explains how one party (agent) credibly conveys information about itself to another party (principal) in a situation where there is information asymmetry. In the context of corporate finance, this theory explains how companies communicate information to the market and external stakeholders. ESG scores can serve as a strong signal about the quality of a company's management, long-term strategy, and ability to manage risk, (Fatemi et al., 2018). By disclosing ESG information, companies can reduce information asymmetry between management and investors, which can reduce uncertainty and increase firm value, (Dhaliwal et al., 2011). High ESG scores can signal a company's commitment to long-term sustainability, which can attract long-term investors and increase firm value, (Eccles et al., 2014). Companies can use high ESG scores as a signal to differentiate themselves from competitors, especially in industries where ESG practices are not yet the norm, (Porter & Kramer, 2011). A good ESG score can signal that the company's management is capable of managing complex risks and has a long-term vision, (Malik, 2015). A good corporate reputation can strengthen the credibility of ESG signals. Companies with a strong reputation are more likely to be perceived as sincere in their ESG efforts, (Brammer & Pavelin, 2006). During periods of crisis or economic uncertainty, a high ESG score can signal a firm's resilience, which can positively affect firm value, (Lins et al., 2017). A high ESG score can trigger a positive feedback effect, where positive signals enhance reputation, which in turn strengthens the credibility of future ESG signals, (Surroca et al., 2010). ESG scores signal not only to investors, but also to customers, employees, and regulators, all of which can affect firm value through various mechanisms, (Freeman et al., 2007). Corporate reputation may affect the quality of ESG signals. Companies with a good reputation may be perceived as providing more credible and high-quality ESG signals, (Connelly et al., 2011). As such, Signal Theory provides a robust framework for understanding how ESG scores can affect firm value, and how corporate reputation can moderate this relationship. The theory explains the mechanism by which firms can communicate their quality and commitment to the market through ESG practices, and how these signals can be influenced by ESG practices. As such, Signal Theory provides a robust framework for understanding how ESG scores can affect firm value, and how corporate reputation can moderate this relationship. The theory explains the mechanism by which companies can communicate their quality and commitment to the market through ESG practices, and how these signals can be strengthened or weakened by corporate reputation.

2.3 Impact of ESG performance on firm value

When assessing sustainability and ethical implications in investment decision-making, there are three key elements called ESG. An important component in evaluating how well ESG practices are implemented in a business is ESG assessment. Thus, by working with ESG assessment organizations and conducting ESG evaluations of Listed Companies on the IDX, the IDX remains dedicated to promoting long-term sustainable investment and raising ESG standards in the Indonesian capital market. To conduct ESG assessments, the IDX is currently working with Morningstar Sustainalytics. Only evaluations conducted by the assessment agency are displayed on the IDX. The impact of ESG on firm value has been investigated by examining overall ESG performance (Friede et al., 2015). Variations in this are evident, mainly including positive and negative correlations. ESG quality and firm value are positively correlated, according to a number of researchers; this correlation is stronger for non-state-owned, small, and environmentally conscious businesses than for state-owned, large, and polluting businesses (Velte, 2017), (Zhao et al., n.d.), (Dalal & Thaker, 2019), (Lucia & Paziienza, 2020), (Ahmad et al., 2021), (Naeem et al., 2022). On the contrary, the idea that ESG quality has a negative correlation with firm value (Garcia & Orsato, 2020), (Duque-Grisales & Paziienza, 2021), (Naeem et al., 2022), (Folger-Laronde et al., 2022). Consensus among scholars regarding the relationship between ESG quality and firm value has not been fully established. Such differences may be influenced by local policies in different countries. The impact of ESG on firm value is still a topic of debate. While some scholars argue that effective ESG initiatives can enhance firm value, others view ESG practices as a means for managers to pursue personal gains at the expense of firm value. Furthermore, a lack of correlation between ESG performance and firm value has been noted. Companies with strong ESG performance are more likely to disclose such information to foster comprehensive understanding among market participants. Therefore, this study is important to investigate the mechanism through which ESG quality affects firm value. Therefore, we propose the following hypotheses:

H1: ESG score will increase firm value.

2.4 The moderating role of corporate reputation

There has been a detailed examination of the impact of ESG elements on firm value. Empirical findings suggest that various pathways may exist in shaping the ESG-value relationship. Companies with a strong reputation are more likely to gain investor confidence, as investors perceive such companies as having lower risks and more consistent returns (Linthicum et al., 2010). In addition, ESG engagement is considered key in enhancing corporate

reputation. This has led to a growing number of CEOs and senior executives viewing investment in social responsibility programs as a means to maintain and enhance their corporate reputation (Pharoah, 2003). A good corporate reputation is an invaluable asset that comes from long-term dedication. It serves as an important resource for attracting consumer loyalty, increasing investor confidence, and enhancing competitiveness, which in turn increases firm value (Porter & Kramer, 2011.). Social responsibility is considered an important driver of reputation as companies are encouraged to integrate economic, social, and environmental factors in their efforts to gain competitive advantage (Marcellis-Warin & Canada, 2012). The dedication to social responsibility is also based on the principle that organizations should responsibly utilize resources, both natural and natural. Dedication to social responsibility is also based on the principle that organizations should responsibly utilize resources, whether natural, human, or community-related (Larkin et al., 2012). Companies that prioritize social responsibility anticipate fewer labor issues, community complaints, and environmental challenges from regulatory agencies. Such socially responsible companies tend to enjoy better relationships with stakeholders, including investors, lenders, and government authorities (Sun, 2011). Therefore, we propose our second hypothesis: H2: Corporate reputation acts as a moderator in the ESG score relationship, indicating that effective ESG performance can increase firm value by enhancing corporate reputation.

2.5 Industry type and size

Industry type needs to be controlled for as different industries face different ESG pressures and have varying environmental and social impacts. In addition, firm valuations may also differ systematically across industries (Eccles et al., 2014), the impact of sustainability practices on firm performance varies across industries. (Fernandez-Feijoo et al., 2014), stakeholder pressure for sustainability reporting varies by industry type. (Cai et al., 2016), the relationship between corporate environmental responsibility and corporate risk varies across industries. Likewise, firm size is important to control for because it can affect both ESG practices and firm value. Larger firms tend to have more resources for investment in ESG initiatives and may also face greater public pressure to do so, (Artiach et al., 2010), firm size is positively associated with corporate sustainability performance. (Dang et al., 2018), firm size affects a variety of firm outcomes, including performance and valuation. (Wickert et al., 2016), Firm size affects the implementation and communication of corporate social responsibility practices.

By controlling for firm size and industry type, the study can more accurately isolate the effect of ESG scores on firm value. These two variables can reduce potential bias in the estimation of the relationship between ESG, reputation, and firm value. These controls increase the internal validity of the study by accounting for important factors that may affect the dependent variable. Allows for a fairer comparison between firms with different characteristics. Helps capture heterogeneity in the sample that may affect the main relationship under study. (Orlitzky et al., 2003), meta-analysis shows the importance of controlling for firm size and industry in corporate social performance studies. (Waddock & Graves 1997), firm size and industry type are important control variables in examining the relationship between corporate social performance and financial performance. By controlling for firm size and industry type, research can provide a more accurate and nuanced understanding of how ESG scores affect firm value, and how corporate reputation moderates this relationship, while accounting for important structural differences between firms.

RESEARCH AND METHODOLOGY

3.1 Sample selection and data collection

Detailed information of variables consists; a dependent variable (corporate value), an independent variable (ESG score), a moderating variable (corporate reputation), two control variables for firm size and industrial types.

3.2 Measurement and Conceptual Framework

Tobin's Q is the most suitable proxy for firm value in the context of research on the effect of ESG on firm value moderated by reputation. However, the use of additional proxies for sensitivity analysis may increase the robustness of the research findings. Tobin's Q is the ratio of the market value of a company's assets divided by the book value of its assets. Mathematically, it can be formulated as:

$$\text{Tobin's Q} = (\text{Market Value of Equity} + \text{Book Value of Debt}) / \text{Book Value of Total Assets}$$

Tobin's Q incorporates the market valuation of the company, reflecting investors' expectations about future performance, including the benefits of ESG practices. Tobin's Q indirectly captures the value of intangible assets, which are highly relevant to ESG and corporate reputation. As a ratio, Tobin's Q allows for easier comparison between companies across different industries and sizes. (Lins et al., 2017), using Tobin's Q to assess the relationship between CSR and firm value during the financial crisis. (GarcíaSánchez & Noguera-Gámez 2017), using Tobin's Q to assess the impact of integrated reporting and stakeholder engagement on firm value. (Velte, 2017), using Tobin's Q as a proxy for firm value in examining the impact of ESG performance in Germany. (Fatemi et al., 2018), using Tobin's Q to assess the relationship between ESG performance and firm value, considering the moderating role of

disclosure. (Li et al., 2018), Using Tobin's Q to assess the impact of ESG disclosure on firm value, considering the role of CEO power.

Market-to-Book ratio (MtB) can be considered as a suitable proxy for corporate reputation in the context of the effect of ESG scores on firm value. (Fang, 2005), MtB reflects market expectations of the company's future performance, which is strongly influenced by the company's reputation. (Surroca et al., 2010), MtB is relatively easy to calculate and available for most public companies, allowing comparisons across companies and industries. (Dhaliwalet al., 2011), MtB has been shown to be sensitive to the disclosure of ESG information, suggesting a link between ESG practices, reputation, and market valuation. (Kang & Gray, 2011), a high MtB indicates that the market values the firm higher than its book value, which is often associated with intangible assets such as reputation, brand, and intellectual capital. Although MtB has some limitations (such as sensitivity to short-term market fluctuations), it remains a valid and widely used proxy for corporate reputation in the context of EE research. Although MtB has some limitations (such as sensitivity to short-term market fluctuations), it remains a valid and widely used proxy for corporate reputation in the context of ESG and firm value research.

PROCESS is a macro for SPSS and SAS that facilitates mediation, moderation, and conditional process analysis, (Hayes, 2017). PROCESS macro supports a variety of mediation and moderation models, including multiple moderation and moderated mediation. For this study on the effect of ESG scores on firm value moderated by corporate reputation, PROCESS v4.0 will be very useful in testing the moderating effect of corporate reputation. Researchers used Model 1 for simple moderation, with ESG scores as the independent variable (X), firm value as the dependent variable (Y), and corporate reputation as the moderator (W). The following is the conceptual diagram of PROCESS v4.0 model 1

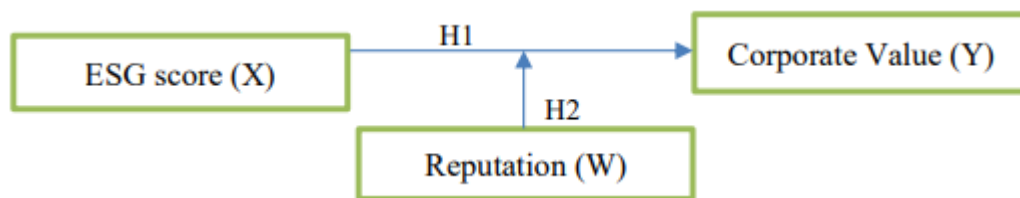


Figure 1. Conceptual Diagram
Source: Authors (2024)

3.3 Econometric Model

The following regression mediation or moderation model is presented by Hayes (2013). For a model in which the independent variable is X=ESG score and the dependent variable is Y=(MV i,t).

$$CV_i = a_0 + a_1 ESG_i + a_2 REP_i + a_3 *(ESG_i*REP_i) + e_i \dots\dots\dots (1)$$

CV= Corporate value as measured by Market Value (MV)

For testing H1 (main effect test), we investigate the impact of ESG performance on corporate value (MV) and build a panel data regression model, where the subscript *i* denotes corporations; The regression coefficient *a*₁ captures the effect of ESG performance on corporate value. If *a*₁ is positive and statistically significant, H1 is then supported; Otherwise, H1 cannot be empirically supported.

To examine the moderating role of corporate reputation (REP) in H2, we further design data regression models. *REP* is the moderating variable, ϵ is the error term. Hayes (2013) advocates for the utilization of the bootstrapping technique for the computation of indirect effects (which are available in the PROCESS tool) as it overcomes the limitations associated with Sobel tests and causal effects models. An alternative approach to examining mediator variables will be presented in this paper, utilizing a macro developed by Andrew F. Hayes known as PROCESS. The key benefit of utilizing PROCESS is the ability to conduct a single analysis to observe the mediation effects. Furthermore, PROCESS enables the construction of intricate models incorporating multiple mediator variables. Information:

MV: Corporate value as measured by the Logarithm of Natural Market Value

ESG: Environment, Social, and Governance as measured by the ESG Score

REP: Reputation measured by Market to Book Value (MBV)

SIZE: Firm size as measured by the Natural Logarithm of Total Assets

Type: Industrials type as measured by dummy; 0= Energy sector; 1= Non-energy sector

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Table 1. The Percentage Analysis of Feasibility Criteria

No	Percentages	Description
1.	81.00% - 100.00%	Very valid, very effective, very good, can be used without improvement.
2.	61.00% - 80.00%	Fair, quite effective, good enough, can be used but needs minor repairs.
3.	41.00% - 60.00%	Less valid, less effective, or less good, need major repairs, it is recommended not to be used.
4.	21.00% - 40.00%	Invalid, ineffective, not good, cannot be used.
5.	00.00% - 20.00%	Very invalid, very ineffective, very bad, unusable

Source: Authors (2023)

RESULT AND DISCUSSION

4.1 Descriptive statistic

The amount of data for each variable is 79, for the dependent variable (corp.value) minimum 0, maximum 218, average 60.24, standard deviation 32.53, variance 1058.13, skewness std. Error 0.271 and kurtosis 0.535. For independent variables (ESG score) minimum 110, maximum 347, average 146.86, standard deviation 27.05, variance 731.68. Then for the moderation variable (Company reputation) minimum 0, maximum 299, average 15.13, standard deviation 41.14, variance 2037.88.

Table 4.1 Statistic Descriptive

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CORP.VALUE	79	0,00	218,00	60,2405	32,52897	1058,134	1,313	,271	5,808	,535
ESG.SCORE	79	110,00	347,00	146,8608	27,04969	731,685	5,213	,271	38,634	,535
REPUTATION	79	0,00	299,00	15,1266	45,14290	2037,881	4,665	,271	24,277	,535
SIZE	79	302,00	667,00	514,5063	82,92611	6876,740	-,443	,271	-,239	,535
DUMMY	79	0,00	1,00	,2278	,42212	,178	1,323	,271	-,257	,535
Valid N (listwise)	79									

Note: This table reports the descriptive statistics for the study variables using 79 firm-year observations 2023.

Source: Output SPSS v.23 create by author (2024)

Normality test through One-Sample Kolmogrov-Smirnov, the results show that the regression model is normally distributed. (Asymp. Sig (2-tailed); $0,2 > \alpha$)

Table 4.2 One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		79
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	32.15631133
Most Extreme Differences	Absolute	.067
	Positive	.063
	Negative	-.067
Test Statistic		.067
Asymp. Sig. (2-tailed)		.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Source: Output SPSS v.23 create by author (2024)

If the Durbin-Watson value is between du and $4-du$, then there are no symptoms of autocorrelation. The test results state that there are no symptoms of autocorrelation ($1,6867 < 2,041$)

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.151 ^a	.023	-.016	32.79313	2.041

- a. Predictors: (Constant), DUMMY, SIZE, ESG.SCORE
- b. Dependent Variable: CORP.VALUE

Source: Output SPSS v.23 create by author (2024)

Multicollinearity test if $Tolerance > 0.1$ and $VIF < 10$ means that there are no symptoms of multicollinearity. The test result state that there is no multicollinearity.

Table 4.4 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	59.607	33.291		1.790	.077		
	ESG.SCORE			.088	.695	.048	.815	1.227
	SIZE	.106	.152					
	DUMMY	-.025	.047	-.063	.520	.045	.899	1.112
		-9.896	10.225	-.128	.678	.036	.740	1.351

- a. Dependent Variable: CORP.VALUE

Source: Output SPSS v.23 create by author (2024)

The results of the statistical analysis showed some significant findings. The Glejser test indicates no symptoms of heteroscedasticity, with a significance value of 0.383 which exceeds the value of α . This indicates that the assumption of homoscedasticity in the regression model is met. Furthermore, the t-test on ESG scores yielded a significance value of 0.048, which is smaller than the significance level of 0.05. This finding indicates a significant effect of ESG score on Firm Value at the 95% confidence level. Further analysis shows that the t-count value (0.695) is smaller than the t-table value (2.645). Nonetheless, based on the decision-making criteria in the two-way hypothesis test, this result still confirms the effect of ESG scores on Firm Value. In conclusion, the statistical evidence supports the hypothesis that there is a causal relationship between ESG scores and Firm Value, although the magnitude and direction of the relationship require further investigation for a more comprehensive interpretation.

4.2 Effects of ESG score on Reputation

The presentation of the outcome regarding the impact ESG score (IV) on

Reputation (MV) can be observed in table 4.4. $R = 0.6372$: This indicates a moderate to strong correlation between the predictor variables (including interactions) and the dependent variable. $R-sq = 0.4061$: The model explains 40.61% of the variation in the dependent variable, and $F(3, 75) = 17.0926$, $p = 0.000$: The overall model is statistically significant. The calculated coefficient Constant (36.3977, $p = 0.0301$): Significant, indicates the value of the dependent variable when all predictors = 0. Coefficient for path-a stands at 0.1121 with a corresponding statistical coefficient test-t 1,0205, and a p-value of 0.00318 ($p < 0.05$), For every unit increase in ESG score, firm value increases by 0.1121 units, when reputation = 0. Moreover, the confidence interval values are determined with the lower limit being 0.1068 and the upper limit at 0.331. The results, in conjunction with the significance level set at $p < 0.05$, and both LLCI and ULCI values being unequal to 0, suggest a substantial relationship between ESG score and Reputation, thereby fulfilling the initial condition for mediation as proposed by Hayes (2013) (1986). Reputation (W) (0.1595, $p = 0.0497$), Marginally significant ($p \approx 0.05$), means for every unit increase in reputation, firm value increases by 0.1595 units, when ESG score = 0. Next for Int_1 (X*W interaction) (0.0084, $p = 0.0323$) while Significant ($p < 0.05$), this Indicates a significant moderating effect. Interpretation of moderation effect, that the effect of ESG scores on firm value depends on the level of corporate reputation. The positive interaction coefficient (0.0084) indicates that the positive effect of ESG scores on firm value becomes stronger as firm reputation increases.

Table 4.4 Coefficients

Model Summary						
R	R-sq	MSE	F	df1	df2	p
0,6372	0,4061	653,5943	17,0926	3	75	0,000

Model						
	coeff	se	t	p	LLCI	ULCI
constant	36,3977	16,4618	2,211	0,0301	3,604	69,1914
ESG score (X)	0,1121	0,1099	1,0205	0,0318	0,1068	0,331
Reputation (W)	0,1595	1,1257	0,1858	0,0497	-,0021	1,5831
Int_1	0,0084	0,0084	0,9943	0,0323	-,0084	0,0252

Source: create by author (2024)

The moderating effect of the reputation can especially be seen at high values of the moderator, where the effect of the ESG score tends to be stronger or even increased. This interpretation suggests that under conditions or situations where the value of the moderator (W or Int_1) is high, attention to the ESG score may be particularly relevant and effective in explaining variations in the corporate value. There are high values of the moderator, more specific or focused research or strategies may be required to understand the stronger impact of the ESG score on corporate value. Thus, the interpretation for high values of moderator emphasizes that at high values of moderator, the effect of the ESG score on corporate value tends to be stronger or even increased, and the impact is amplified by the high value of the reputation. By relating the model results to the concept of moderators in Hayes Process Model 1, we can understand how reputation can moderate the relationship between ESG score and corporate value in regression analysis.

$$CV_i = a_0 + a_1 ESG_i + a_2 REP_i + a_3 *(ESG_i*REP_i) + e_i \dots\dots\dots (1)$$

$$\text{Corporate value} = 36,3977+0,1121 \text{ ESG} +0,1595 \text{ Rep}+ \varepsilon(i,t)$$

The model is significant and explains a substantial proportion (40.61%) of the variation in firm value. In the coeff. column, here the sign is positive (0.1595), so the higher value of the moderator is associated with a mathematically smaller effect of the independent variable (ESG score) on the dependent variable (corporate value). The magnitude of the moderating effect will change, this is the additional variance explained by including the

interaction (0.0084). In the results of Process Hayes, the interaction (slope) is significant ($0.0323 > \alpha$). While the effect size for moderation is 0.2878, this explains the additional variable of 0.7122. We may connect the discussion of the model's results to the idea of moderators in the context of the study conducted using Process Hayes Model 1, a regression analysis with moderators. Variables that influence the direction and/or intensity of the association between the independent variable (X) and the dependent variable (Y) are known as moderators in regression analysis. We may determine whether the independent variable's influence on the dependent variable varies based on the moderator's value using the Hayes procedure.

CONCLUSION

5.1 Conclusion

Based on the analysis results you provided, it can be concluded that there are several relationships between the variables studied in the model. Here is a summary of the results:

- ESG score has a significant positive effect on corporate value, as indicated by the statistically significant coefficient values and p values that are less than 0.05 and the hypothesis (H1) is accepted.
- Corporate reputation has a marginally significant positive effect on firm value. Both a statistically significant coefficient for the moderator and a substantial interaction between the independent variable and the moderator point to this, and the hypothesis (H2) is accepted. There is a significant moderating effect: the effect of ESG score on firm value is amplified by higher corporate reputation. All effects (including moderation) are significant at the $\alpha = 0.05$ level.

5.2 Suggestions may include:

- Deepen the Analysis: Further conduct analysis to understand the mechanism behind the observed moderating effect. This may include additional hypothesis testing or further analysis to explain the complex relationships between the variables involved.
- Consider Context: Understand the specific context in which the relationship is observed and how it may affect the results. Context may include industry, geographic, or social characteristics that may moderate the relationship between the variables.
- Practical Implications: Identifies the practical implications of the results for relevant stakeholders. This might include recommendations for policies, business plans, or other doable steps that can be done in light of knowledge of the relationships between the variables being investigated.
- Clear Reporting: Presenting the results in a clear and detailed manner, including proper interpretation of the findings and their implications. This is important to ensure proper understanding and effective use of the research results by stakeholders.

5.3 The managerial implications of the Hayes model results above are:

- Understanding of moderation effects: these results provide an understanding of how the relationship between the independent and dependent variables may vary depending on the value of the moderator. This allows managers to make more appropriate decisions according to different environmental conditions.
- Strategy development based on moderator variables: managers can design more effective business strategies by considering the role of moderator variables. These strategies can be tailored to optimize firm performance in various moderator value contexts.
- Risk and opportunity identification: by understanding the moderating effects of moderator variables, managers can identify risks and opportunities associated with certain factors in the business environment. This enables managers to plan risk mitigation and opportunity exploitation actions more effectively.
- These managerial implications can assist managers in making more informed and effective decisions, as well as designing business strategies that can improve the performance and long-term sustainability of the firm.

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