

## **Does Sustainability Reporting Enhance Firm Value? The Moderating Role of Profitability in Indonesia's Energy Sector**

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### **Abstract**

*This study aims to analyze the effect of sustainability report disclosure based on GRI Standards 2021 on firm value, and to examine the moderating role of profitability in this relationship. The population comprises energy sector companies listed on the Indonesia Stock Exchange (IDX) in 2023–2024. Using purposive sampling, 34 companies were selected as the final sample. The independent variable was measured through the Sustainability Report Disclosure Index (SRDI) based on 141 GRI Standards 2021 indicators, firm value was proxied by Tobin's Q, and profitability was measured using Return on Assets (ROA). Data were analyzed using multiple regression and Moderated Regression Analysis (MRA). Results show that sustainability report disclosure has a positive and significant effect on firm value. Profitability significantly moderates this relationship negatively, indicating that for highly profitable firms, the marginal effect of sustainability disclosure on firm value diminishes. These findings are consistent with signaling theory, where sustainability reports serve as strategic signals that are more relevant for firms with low-to-moderate profitability.*

**Keywords:** *sustainability report, GRI Standards 2021, firm value, profitability,*

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### **PENDAHULUAN**

The increasing demand for corporate transparency and accountability has driven the development of sustainability reporting (SR) as a key instrument for communicating sustainability performance to stakeholders. In the global context, SR plays a crucial role in enhancing public trust, reducing information asymmetry, and promoting firms' long-term sustainability (Orazalin & Mahmood, 2020). In Indonesia, pressure to disclose Environmental, Social, and Governance (ESG) information has intensified, driven by both institutional investors and regulatory bodies, including the Financial Services Authority (Otoritas Jasa Keuangan/OJK) and the Indonesia Stock Exchange (Bursa Efek Indonesia/BEI). The energy sector, due to its substantial environmental impact, has emerged as one of the most active sectors in publishing sustainability reports and remains under close scrutiny from stakeholders regarding its sustainability commitments and performance (Dwimayanti et al., 2023).

The Global Reporting Initiative (GRI) has become the most widely adopted sustainability reporting framework worldwide, including among publicly listed companies in Indonesia. The introduction of the GRI Standards 2021 marked a

significant shift toward impact-based materiality, while placing greater emphasis on governance, supply chain management, and risk management disclosures. The adoption of the GRI Standards 2021 has been shown to enhance the quality, comparability, and consistency of sustainability disclosures across reporting periods and among companies (Doni & Bianchi, 2023). In Indonesia, the extent of sustainability reporting disclosure is influenced by factors such as firm size, profitability, and industry characteristics (Orazalin & Mahmood, 2020; Kuzey & Uyar, 2017). This suggests that the implementation of international reporting standards such as the GRI is closely associated with firms' internal capabilities and economic structures.

From a firm value perspective, several studies have suggested that sustainability disclosure can enhance firm value, both directly through reputational benefits and indirectly through improved financial performance (Abdi et al., 2022; Dwimayanti et al., 2023). Firm value reflects market perceptions of a company's future prospects and is commonly measured using Tobin's Q, defined as the ratio of the market value of equity plus the book value of debt to total assets (Jihadi et al., 2021). A company with a Tobin's Q greater than one is generally considered to possess value-added potential in the eyes of the market, indicating that investors value the company higher than the book value of its assets.

Stakeholder theory provides an important foundation for explaining the motivation behind sustainability reporting (SR) disclosure. The theory posits that corporate management is responsible not only for meeting shareholders' expectations but also for addressing the interests of other stakeholders, including employees, local communities, suppliers, and regulators (Freeman, 1984). By voluntarily disclosing environmental, social, and governance (ESG) performance, companies seek to fulfill the expectations of a broad range of stakeholders, thereby enhancing corporate trustworthiness and public legitimacy (Agustine, 2014). Meanwhile, legitimacy theory suggests that organizations continuously strive to align their operations and activities with the norms, values, and expectations of the societies in which they operate (Suchman, 1995). Sustainability reporting serves as one of the primary mechanisms through which companies establish, maintain, and reinforce their legitimacy.

According to signaling theory, companies that provide high-quality sustainability disclosures send a positive signal to the market regarding management's long-term commitment and sound corporate governance practices. This signal is generally perceived favorably by investors, leading to higher stock prices and enhanced firm value (Abdi et al., 2022). However, the strength of this signal is not always consistent, as it depends on the firm's financial condition. Companies with high profitability already convey strong performance signals through their financial statements, making the additional signal provided by sustainability reporting less distinctive to investors. In contrast, for firms with low to moderate profitability, sustainability reporting serves as a more valuable strategic signal, capable of significantly enhancing market perceptions and strengthening firm value (Dorothy & Endri, 2024).

Although numerous studies have examined the relationship between sustainability reporting (SR) and firm value, the findings remain inconclusive. Gunawan and Mayangsari (2015) found that sustainability reporting had no significant effect on firm value, whereas Rosiana et al. (2013) and Burhan and Rahmanti (2012) reported a positive relationship. International studies have also

produced evidence supporting the value relevance of sustainability disclosures. For instance, Abdi et al. (2022), in the airline industry, found that ESG disclosure positively affected firm value, with firm size and firm age serving as moderating variables. Similarly, Kuzey and Uyar (2017) confirmed a positive association between sustainability reporting and firm value in an emerging market context in Türkiye. In Indonesia, Dwimayanti et al. (2023), who examined 17 industrial sectors, found that overall ESG performance had a positive effect on firm value. These inconsistent findings may be attributed to differences in research settings, observation periods, sustainability reporting standards, and the presence or absence of moderating variables in the research models.

Profitability is frequently incorporated as a moderating variable in the relationship between sustainability reporting (SR) and firm value. Aydoğmuş et al. (2022) found that ESG performance significantly influenced both firm value and corporate profitability in Türkiye, with a significant interaction effect observed between the two variables. Similarly, Jihadi et al. (2021) demonstrated that profitability positively affects firm value in the Indonesian context. More specifically, Dorothy and Endri (2024), in their study of Indonesia's energy sector, found that profitability significantly moderates the relationship between ESG disclosure and firm value. These findings suggest that profitability serves not only as a direct determinant of firm value but also as a contextual factor that influences the strength of the relationship between sustainability reporting and firm value.

Dewi et al. (2023) emphasized the importance of high-quality sustainability disclosure for Indonesian domestic investors, particularly regarding stakeholder engagement and governance-related aspects. Likewise, Orazalin and Mahmood (2020), in their study of emerging market firms in Kazakhstan, confirmed that profitability, firm size, and leverage are among the key determinants of the quality of GRI-based sustainability reporting disclosures. These findings suggest that a company's financial context plays a crucial role in shaping both the manner in which sustainability information is disclosed and the way it is perceived by the market.

Based on the foregoing discussion, this study seeks to re-examine the relationship between sustainability reporting (SR) and firm value within a more specific context, namely energy sector companies in Indonesia. The study employs the latest sustainability reporting framework, GRI Standards 2021, and utilizes recent data covering the 2023–2024 period. By incorporating profitability as a moderating variable, this research aims to provide deeper insights into the conditions under which sustainability reporting is most effective in enhancing firm value. Drawing upon the theoretical foundations and empirical evidence discussed above, the following hypotheses are proposed: H1: Sustainability Report disclosure has a positive effect on firm value. H2: Profitability moderates the effect of Sustainability Report disclosure on firm value.

## **METODOLOGI**

This study employs a quantitative associative design to analyze causal and moderating relationships among the study variables (Ulum & Juanda, 2016). The population comprises all energy sector companies listed on the IDX during 2023–2024, totaling 82 firms. Sample selection followed a purposive sampling procedure based on four criteria: (1) the company published both a sustainability report and an annual

report for fiscal years 2023–2024, accessible via the IDX website ([www.idx.co.id](http://www.idx.co.id)) or the company's official website; (2) the company's fiscal year ended on December 31 for both years; (3) the sustainability report was prepared in accordance with GRI Standards 2021; and (4) the company did not experience delisting, a data-disrupting merger, or a prolonged trading suspension during the study period. These criteria yielded a final sample of 34 companies, producing 34 firm-year observations. All data are secondary, drawn from officially published annual reports and sustainability reports.

The independent variable is sustainability report disclosure, operationalized through the Sustainability Report Disclosure Index (SRDI). The index is computed by scoring 141 items specified in GRI Standards 2021: each disclosed item receives a score of 1 and each undisclosed item a score of 0. The ratio  $SRDI = V/M$ , where  $V$  is the number of disclosed items and  $M$  is the total expected items (141), yields a continuous score bounded between 0 and 1, following the approach of Gunawan and Mayangsari (2015). The dependent variable is firm value, proxied by Tobin's  $Q$ , calculated as  $Q = (MVE + D) / TA$ , where  $MVE$  denotes market capitalization,  $D$  denotes the book value of total debt, and  $TA$  denotes total assets. Tobin's  $Q$  is measured at  $t+1$  to capture the lagged market response to sustainability disclosure and profitability reported at year  $t$ , consistent with Ramadhani (2015). The moderating variable is profitability, proxied by Return on Assets (ROA) = Net Income / Total Assets, which reflects the efficiency with which a firm converts its asset base into earnings. ROA is the most widely used profitability proxy in Indonesian accounting and finance research (Jihadi et al., 2021; Aydoğmuş et al., 2022).

Data analysis proceeded in three stages. First, descriptive statistics minimum, maximum, mean, and standard deviation were calculated to characterize the sample. Second, classical assumption tests were conducted to satisfy the requirements for ordinary least squares (OLS) estimation: residual normality was assessed with the One-Sample Kolmogorov–Smirnov test; heteroscedasticity was evaluated using the Glejser test, in which absolute residuals are regressed on the independent variables; and multicollinearity was diagnosed using Tolerance and Variance Inflation Factor (VIF) statistics. Third, hypotheses were tested using two regression models. Model 1 is a simple linear regression ( $Y = \alpha + \beta_1 X_1 + e$ ) estimating the direct effect of SRDI on Tobin's  $Q$  to test H1. Model 2 is a Moderated Regression Analysis (MRA) specified as  $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 + e$ , where the interaction term  $X_1 \times X_2$  is the product of SRDI and ROA, to test H2. A hypothesis is accepted when its coefficient is statistically significant at  $\alpha = 0.05$ . Overall model fit was assessed using the F-test and the coefficient of determination ( $R^2$ ) and its adjusted counterpart. All analyses were performed using IBM SPSS version 26.0 (Ghozali, 2011).

## HASIL DAN PEMBAHASAN

**Sample Overview.** Of the 82 energy sector firms listed on the IDX during 2023–2024, 74 consistently published both sustainability reports and annual reports. After excluding 40 firms that did not prepare their sustainability report in accordance with GRI Standards 2021, 34 companies were retained as the final sample. Table 1 summarizes the sample selection procedure.

**Table 1.** Sample Selection Procedure

No.	Criterion	Number of Firms
1.	Energy sector firms listed on the IDX, 2023–2024	82
2.	Firms consistently publishing both SR and annual reports for two consecutive years	74
3.	Less: firms not preparing SR in accordance with GRI Standards 2021	(40)
	<b>Final Sample</b>	<b>34</b>

Note. Source: Company annual and sustainability reports, compiled by authors (2025).

**Table 2.** Research Data: SRDI, ROA, and Tobin's Q by Company

No.	Ticker	Company Name	SRDI (X)	ROA (Z)	Tobin's Q (Y)
1	ABMM	ABM Investama	0,74	0,15	0,55
2	ADRO	Adaro Energy Indonesia	0,69	0,18	0,89
3	AKRA	AKR Corporindo	0,63	0,10	0,79
4	BBRM	Pelayaran Nasional Bina Buana Raya	0,40	0,12	1,00
5	BUMI	Bumi Resources	0,70	0,01	1,70
6	BYAN	Bayan Resources	0,33	0,37	9,09
7	DEWA	Darma Henwa	0,59	0,00	1,79
8	DSSA	Dian Swastatika Sentosa	0,50	0,28	3,56
9	ELSA	Elnusa	0,70	0,05	0,54
10	GEMS	Golden Energy Mines	0,77	0,40	2,45
11	HITS	Humpuss Intermoda Transportasi	0,35	0,03	0,75
12	HRUM	Harum Energy	0,51	0,12	0,51
13	INDY	Indika Energy	0,76	0,05	0,46
14	ITMG	Indo Tambangraya Megah	0,81	0,23	0,81
15	MBSS	Mitrabahtera Segara Sejati	0,30	0,10	0,50
16	MEDC	Medco Energi Internasional	0,70	0,05	0,54
17	PGAS	Perusahaan Gas Negara	0,67	0,06	0,81
18	PTBA	Bukit Asam	0,78	0,16	0,83
19	PTRO	Petrosea	0,65	0,02	1,58
20	RUIS	Radiant Utama Interinsco	0,49	0,01	0,43
21	SMMT	Golden Eagle Energy	0,45	0,25	1,59
22	TOBA	TBS Energi Utama	0,75	0,02	0,49
23	WINS	Wintermar Offshore Marine	0,37	0,03	0,20
24	PSSI	Pelita Samudera Shipping	0,38	0,20	0,75
25	TEBE	Trans Power Marine	0,42	0,19	0,71
26	MCOL	Mineral Cempaka International	0,22	0,32	1,43
27	RMKE	Rantai Mas Kencana Energy	0,51	0,14	0,94
28	ADMR	Adaro Minerals Indonesia	0,69	0,26	1,36
29	SUNI	Sumber Nusantara Indah	0,42	0,13	1,90
30	HILL	Hillcon	0,23	0,09	1,14
31	MAHA	Mahaka Media	0,22	0,10	0,31
32	HUMI	Humpuss Maritim Internasional	0,38	0,05	0,46
33	ALII	Anabatic Inovasi Rantai Pasok	0,44	0,10	4,27
34	BESS	Batulicin Nusantara Maritim	0,28	0,12	1,72

**Table 3.** Descriptive Statistics

Variable	N	Min.	Max.	Mean	SD
SR-GRI (SRDI)	34	0,2153	0,8125	0,5247	0,1851
ROA	34	0,0043	0,4030	0,1318	0,1060
Tobin's Q (EV)	34	0,2000	9,0900	1,3775	1,6255

Source: Output SPSS 26.0, compiled by authors (2025)

Based on Table 3, the mean SRDI of 0.5247 equivalent to approximately 52.47% of the 141 GRI Standards 2021 indicators indicates that energy sector firms in the sample disclosed more than half of the expected items, reflecting a moderate level of compliance. The standard deviation of 0.1851 signals considerable inter-firm disparity in both the quality and scope of sustainability disclosure. ITMG achieved the highest disclosure level with an SRDI of 0.8125, whereas MAHA recorded the lowest at 0.2153. This wide dispersion corroborates the finding of Orazalin and Mahmood (2020) that GRI-based sustainability disclosure in emerging markets varies substantially across firms, driven primarily by differences in internal organizational capacity and the depth of managerial commitment to sustainability governance.

The mean ROA of 0.1318, or 13.18%, indicates that sample firms were, on average, reasonably capable of generating earnings from their asset base. The standard deviation of 0.1060 reflects considerable heterogeneity in financial performance across the sample. DEWA recorded the lowest ROA at 0.43%, while GEMS posted the highest at 40.30%. This wide range mirrors the broadly heterogeneous nature of Indonesia's energy sector, which encompasses highly profitable thermal coal mining enterprises at one end of the spectrum and asset-heavy maritime energy service providers operating on thin margins at the other (Aydogmuş et al., 2022).

The mean Tobin's Q of 1.3775 indicates that the market, on average, assigned a valuation premium above book value to sample firms ( $Q > 1$ ), reflecting positive investor sentiment regarding the energy sector's long-term prospects (Jihadi et al., 2021). The markedly large standard deviation of 1.6255 underscores pronounced inter-firm variation in market valuation. BYAN recorded the highest Tobin's Q at 9.09, reflecting exceptional market expectations likely driven by elevated global coal prices during the observation period, while WINS posted the lowest value at 0.20, indicating that the firm was trading below its book value a condition commonly observed in asset-intensive maritime service companies facing subdued freight rates.

**Classical Assumption Tests.** Prior to hypothesis testing, a series of classical assumption tests were conducted to verify that the regression model satisfies the conditions for Best Linear Unbiased Estimation (BLUE). The residual normality test, performed using the One-Sample Kolmogorov-Smirnov procedure, yielded an Asymp. Sig. (2-tailed) value of 0.200, which exceeds the 0.05 significance threshold. The K-S test statistic of 0.118 falls well below the critical value, the mean residual is effectively zero (0.000), and the residual standard deviation stands at 0.647. Collectively, these results confirm that the model residuals are normally distributed, satisfying the normality assumption required for valid OLS inference (Ghozali, 2011). Table 4 presents the complete normality test output.

**Table 4.** Normality Test Results (One-Sample Kolmogorov-Smirnov)

Statistic	Unstandardized Residual
N	34
Mean	0,0000000
Std. Deviation	0,64685786
Most Extreme Differences - Absolute	0,118
Most Extreme Differences - Positive	0,118
Most Extreme Differences - Negative	-0,107
Test Statistic	0,118
Asymp. Sig. (2-tailed)	0,200

Source: SPSS 26.0 output, compiled by authors (2025).

Heteroscedasticity was assessed using the Glejser test, in which the absolute values of the regression residuals were regressed on the independent variables included in the model. As reported in Table 5, the significance values for the SRDI variable ( $p = 0.228$ ) and the interaction term  $SRDI \times ROA$  ( $p = 0.771$ ) are both substantially above the 0.05 threshold. Consequently, neither independent variable exerts a statistically significant influence on the absolute residuals, providing no evidence of heteroscedasticity in the model. The residuals are homoscedastic, which confirms that the regression coefficient estimates are stable and unbiased (Ghozali, 2011).

**Table 5.** Heteroscedasticity Test Results (Glejser Test)

Variable	B	Std. Error	Beta	t	Sig.	VIF
(Constant)	0,342	0,125		2,727	0,010	
SR-GRI	-0,240	0,195	-0,267	-1,231	0,228	1,615
GRI×ROA	-0,211	0,721	-0,064	-0,293	0,771	1,615

Dependent Variable: ABS\_RES2. Sumber: Output SPSS 26.0, data diolah (2025)

The multicollinearity diagnostics yield a Tolerance value of 0.619 and a Variance Inflation Factor (VIF) of 1.615 for both SRDI and the interaction term  $SRDI \times ROA$ . Both values comfortably satisfy the conventional thresholds  $Tolerance > 0.10$  and  $VIF < 10$  confirming that no harmful collinearity exists among the independent variables in the model. Taken together, all classical assumption tests are satisfied, and the regression model is deemed appropriate for hypothesis testing.

Hypothesis Testing and Regression Results. Table 6 presents the hypothesis testing results obtained through Moderated Regression Analysis (MRA), including the partial t-test statistics, unstandardized and standardized regression coefficients, and significance levels for each variable in the model.

**Table 6.** Moderated Regression Analysis Results

Variable	B	Std. Error	Beta	t	Sig.	Decision
(Constant)	0,026	0,242		0,109	0,914	
SR-GRI	0,811	0,375	0,407	2,163	0,038	Sig.
GRI × ROA	-5,290	1,389	-0,717	-3,808	0,001	Sig.

Source: SPSS 26.0 output, compiled by authors (2025)

**Table 7.** Model Summary dan Uji F

R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error	F	Sig. F
0,407	0,165	0,111	1,53217	7,280	0,003

Source: SPSS 26.0 output, compiled by authors (2025)

The regression equation derived from Table 6 is:

$$\text{Tobin's Q} = 0.026 + 0.811 \text{ SRDI} - 5.290 (\text{SRDI} \times \text{ROA}) + e$$

The near-zero constant (0.026,  $p = 0.914$ ) indicates that in the absence of sustainability disclosure and its interaction with profitability, firm value approaches zero, confirming that these constructs collectively generate meaningful value-relevant information for the market.

Effect of Sustainability Report Disclosure on Firm Value (H1). The coefficient for SRDI is positive and statistically significant ( $B = 0.811$ ,  $\beta = 0.407$ ,  $p = 0.038$ ), confirming H1. A one-unit increase in the SRDI is associated with a 0.811-unit increase in Tobin's Q, ceteris paribus. This finding demonstrates that energy sector firms which disclose a greater proportion of GRI Standards 2021 indicators are rewarded with

higher market valuations consistent with legitimacy theory, which holds that voluntary sustainability disclosure helps firms close legitimacy gaps vis-à-vis societal expectations (Martens & Bui, 2023), and with stakeholder theory, which predicts that transparent ESG disclosure satisfies the information needs of a diverse stakeholder constituency and thereby enhances a firm's social license (Freeman et al., 2021).

The result aligns equally well with signaling theory. Nguyen (2025), using Vietnamese panel data, provides fresh evidence that CSR disclosure is positively related to firm value and that this effect is stronger under mandatory disclosure regimes the institutional direction toward which Indonesia's OJK regulations are moving. Companies adopting GRI Standards 2021 and achieving high SRDI scores transmit credible signals of environmental stewardship, social responsibility, and governance quality. In the energy sector, where operational missteps can impose severe reputational and regulatory costs, such signals carry substantial informational value for investors who are increasingly integrating ESG criteria into portfolio decisions (Doni & Bianchi, 2023; Christensen et al., 2021).

This finding is consistent with Abdi et al. (2022), who documented a positive ESG disclosure–firm value relationship in the airline industry and noted that the relationship strengthens over time as firms refine their disclosure practices; with Kuzey and Uyar (2017), who reported equivalent evidence for firms consistently applying GRI standards in Turkey's emerging market; and with Dwimayanti et al. (2023), who found positive ESG effects on firm value across 17 Indonesian industries. These converging results from heterogeneous contexts and methods reinforce confidence in the positive SR–firm value relationship observed here.

The result diverges, however, from Maftukhah et al. (2024) and Prasetyo (2024), who found no significant SR effect on firm value using Indonesian property-sector and mining-sector samples respectively. This divergence is instructive: it suggests that the SR–firm value relationship is sector-contingent and that the energy sector with its heightened ESG scrutiny, regulatory pressure, and institutional investor attention represents a context in which sustainability disclosure is particularly value-relevant. Moreover, both contrasting studies used earlier or overlapping data periods; the 2023–2024 window employed here captures a more mature ESG investment ecosystem in Indonesia's capital market.

**Moderating Role of Profitability in the SR–Firm Value Relationship (H2).** The interaction coefficient  $SRDI \times ROA$  is negative and highly significant ( $B = -5.290$ ,  $\beta = -0.717$ ,  $p = 0.001$ ), confirming H2. The negative sign establishes that profitability acts as a weakening moderator: as ROA increases, the positive effect of SRDI on Tobin's Q diminishes. In other words, the value-relevance of sustainability disclosure is conditionally dependent on a firm's financial performance a nuanced finding that extends the SR–firm value literature by identifying an important boundary condition.

To quantify this moderation, consider the net effect of SRDI at different ROA levels. For a firm with  $ROA = 0.10$  (10%): Net SRDI effect =  $0.811 + (-5.290 \times 0.10) = 0.282$ . Each one-unit increase in SRDI thus increases Tobin's Q by only 0.282 units at this profitability level. For GEMS, with  $ROA = 0.40$  (40%): Net SRDI effect =  $0.811 + (-5.290 \times 0.40) = -1.305$ . At this profitability level, the marginal effect of a SRDI improvement on Tobin's Q is effectively negative meaning additional disclosure investment does not generate incremental market value for already highly profitable firms.

These calculations illuminate the signaling mechanism theorized by Nguyen (2025): the effectiveness of sustainability disclosure as a signal depends on what other performance signals the firm already emits. When a firm's income statement already conveys a powerful signal of competitive advantage and management quality through exceptional ROA, sustainability disclosure becomes incrementally less differentiating. Investors whose valuation expectations are already satisfied by stellar financial results have diminished need for confirmatory sustainability signals. Conversely, for firms with low-to-moderate profitability whose financial statements provide weaker assurance of long-term value creation a comprehensive sustainability report functions as an independent and meaningful signal of strategic commitment and governance credibility (Orazalin & Mahmood, 2020).

This finding directly corroborates Dorothy and Endri (2024), who studied Indonesian energy firms specifically and identified profitability as a significant negative moderator of the ESG-firm value relationship, and Aydoğmuş et al. (2022), who found that the ESG profitability interaction is complex in emerging-market firms. Notably, Maftukhah et al. (2024) found that profitability was a significant positive direct determinant of firm value in the property sector but did not significantly moderate the SR-firm value relationship suggesting that the moderating mechanism may be sector-specific, with the energy sector's unique profitability heterogeneity (ROA ranging from 0.43% to 40.30%) creating stronger interaction effects than those observable in more homogeneous sectors.

From a practical standpoint, these results counsel energy sector firms with moderate profitability to prioritize comprehensive GRI Standards 2021 compliance as a cost-effective strategy for enhancing capital market valuation. For already highly profitable firms, sustainability disclosure remains strategically important particularly for satisfying global ESG-oriented institutional investors and managing regulatory reputational risk but its marginal contribution to stock market valuation is modest and should be evaluated as part of a broader stakeholder management and risk mitigation strategy (Orazalin & Mahmood, 2020; Dewi et al., 2023).

**Model Fit: F-Test and Coefficient of Determination.** The F-test ( $F = 7.280$ ,  $p = 0.003$ ) confirms that the overall model is statistically significant at the 1% level, validating the joint explanatory power of SRDI and  $SRDI \times ROA$  for firm value. The  $R^2$  of 0.165 indicates that the two predictors explain 16.5% of the variance in Tobin's Q. The adjusted  $R^2$  of 0.111 confirms that 11.1% of the systematic variation in firm value is attributable to sustainability disclosure and its interaction with profitability after accounting for model parsimony.

The modest  $R^2$  is consistent with broader patterns in the non-financial disclosure literature, which routinely finds that non-financial predictors explain a comparatively small proportion of firm value variance (Kuzey & Uyar, 2017; Jihadi et al., 2021). Tobin's Q is simultaneously influenced by macroeconomic conditions, commodity price cycles, financial leverage, ownership structure, corporate governance quality, and a host of other factors not captured in the present model. Future research should incorporate control variables such as firm size, financial leverage, investment opportunity set, and corporate governance measures to improve explanatory power and reduce omitted-variable bias (Dwimayanti et al., 2023; Dewi et al., 2023). A longitudinal design covering multiple years would further allow

researchers to disentangle the short-run signaling effect from the longer-run reputational accumulation effect of sustainability disclosure.

## SIMPULAN

This study demonstrates that sustainability report disclosure based on GRI Standards 2021 exerts a positive and significant effect on firm value among energy sector companies listed on the Indonesia Stock Exchange during the 2023–2024 period. The findings indicate that broader sustainability disclosure is associated with greater market appreciation of the firm. These results lend support to legitimacy theory, stakeholder theory, and signaling theory, each of which predicts that sustainability transparency strengthens stakeholder trust and, in turn, enhances firm value.

Furthermore, profitability proxied by Return on Assets (ROA) is found to negatively moderate the relationship between sustainability report disclosure and firm value. This finding indicates that the positive effect of sustainability reporting on firm value tends to weaken as firm profitability increases, because the market has already received a strong performance signal through the firm's earnings. Although the overall regression model is statistically significant, its predictive capacity remains limited. Future research is therefore encouraged to broaden the sample scope and observation period, and to incorporate additional control variables as well as qualitative dimensions of sustainability report disclosure, so as to arrive at a more comprehensive understanding of the conditions under which sustainability reporting most effectively enhances firm value.

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