Website:
ejournal.umm.ac.id/index.php/jrak

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DOI: 10.22219/jrak.v14i3.33925

Citation:
Samhadi, Roekhudin, Iqbal, S. (2024). The Moderating Role Of Good Corporate Governance In The Relationship Between Green Innovation, Environmental Disclosure And Firm Value. Jurnal Reviu Akuntansi Dan Keuangan, 14(3), 553-569.

Article Process
Submitted:
May 30, 2024

Reviewed:
Juni 6, 2024

Revised:
August 23, 2024

Accepted:
August 21, 2024

Published:
September 8, 2024

Office:
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University of Muhammadiyah Malang
GKB 2 Floor 3.
Jalan Raya Tlogomas 246, Malang, East Java, Indonesia

P-ISSN: 2615-2223
E-ISSN: 2088-0685

Article Type: Research Paper

THE MODERATING ROLE OF GOOD CORPORATE GOVERNANCE IN THE RELATIONSHIP BETWEEN GREEN INNOVATION, ENVIRONMENTAL DISCLOSURE AND FIRM VALUE

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ABSTRACT

Purpose: This research examines and analyses the effect of green innovation and environmental disclosure on firm value. This study also adds the role of good corporate governance as a moderating variable on the relationship between green innovation and environmental disclosure with firm value.

Methodology/approach: This research uses an explanatory method with a quantitative approach.

Findings: The results of this study indicate that environmental disclosure has a positive effect on firm value, while green innovation has no effect on firm value. Furthermore, the results of the moderation regression analysis show that the role of good governance can strengthen the relationship between green innovation and environmental disclosure with firm value.

Practical implications: This research is expected to be a consideration for investors so that companies can implement good corporate governance through green innovation and environmental disclosure as a form of concern for the environment and sustainability.

Originality/value: This study adds the moderating variable of good corporate governance, which is thought to have a combined influence in the relationship between green innovation and environmental disclosure on firm value which aims to answer the inconsistency of previous research findings. This study also uses a research sample with the latest year, thus providing research results that are relevant to current conditions.

Keywords: Environmental Disclosure; Firm Value; Good Corporate Governance; Green Innovation.

ABSTRAK

Tujuan penelitian: *Penelitian ini menguji dan menganalisis pengaruh inovasi hijau dan pengungkapan lingkungan terhadap nilai perusahaan. Penelitian ini juga menambahkan peran tata kelola perusahaan yang baik sebagai variabel pemoderasi pada hubungan inovasi hijau dan pengungkapan lingkungan dengan nilai perusahaan*

Metode/pendekatan: *Penelitian ini menggunakan metode eksplanatori dengan pendekatan kuantitatif.*

Hasil: *Hasil penelitian ini menunjukkan bahwa pengungkapan lingkungan berpengaruh positif terhadap nilai perusahaan, sedangkan inovasi hijau tidak berpengaruh terhadap nilai perusahaan. Selanjutnya, hasil analisis regresi moderasi menunjukkan bahwa peran good governance dapat memperkuat hubungan inovasi hijau dan pengungkapan lingkungan dengan nilai perusahaan.*

Implikasi praktik: *Penelitian ini diharapkan menjadi bahan pertimbangan investor agar perusahaan dapat menerapkan tata kelola perusahaan yang baik melalui inovasi hijau dan pengungkapan lingkungan sebagai bentuk kepedulian terhadap lingkungan dan keberlanjutan.*

Orisinalitas/kebaharuan: *Penelitian ini menambahkan variabel moderasi tata kelola perusahaan yang baik, yang diduga memiliki pengaruh gabungan dalam hubungan inovasi hijau dan pengungkapan lingkungan terhadap nilai perusahaan yang bertujuan untuk menjawab inkonsistensi temuan penelitian terdahulu. Penelitian ini juga menggunakan sampel penelitian dengan tahun terbaru, sehingga memberikan hasil penelitian yang relevan dengan kondisi saat ini.*

Kata kunci: Inovasi Hijau; Pengungkapan Lingkungan; Nilai Perusahaan; Tata Kelola Perusahaan yang Baik.

INTRODUCTION

Firm value reflects investors views and measurements of a corporate performance (Kawi and Natalylova, 2022; Indriastuti and Kartika, 2021). Investor perceptions of the corporate success are clearly reflected in the firm value (Dewantari et al., 2020; Fauziah et al., 2021). An increase in firm value is reflected through an increase in stock prices, which illustrates market confidence in the corporate performance and future prospects. Increasing corporate profitability and maximizing firm value are interrelated goals in an effort to improve shareholder welfare and maintain corporate survival (Damas et al., 2021 and Utomo et al., 2022).

The issue of declining firm value is currently occurring in various sectors, including manufacturing. According to data from the Financial Services Authority (FSA) from Nur Qolbi coverage in April 2020, there was a significant decline in the daily transaction value of shares on the Indonesia Stock Exchange (IDX) in the manufacturing sector throughout 2020, reaching Rp 6.96 trillion, down 28 percent from Rp 9.67 trillion in April 2019. Daily transaction volume also fell 49 percent, from 14.5 billion units of shares to 7.39 billion units of shares. After that, according to data on the Indonesia Stock Exchange (IDX), in early 2021 until mid-May 2021, the manufacturing sector stock index rose again in line with rising commodity prices in the global market (liputan6 2021). After triumphing in the previous year, at the beginning of 2022, manufacturing sector companies again experienced a decline in share value and were listed as the worst performing sector (CNBC Indonesia, 2023). Firm value is the result of capital market activity and is often associated with stock prices. Its highly volatile movement gives investors perception of the company.

For investors, firm value reflects the extent to which a company is successful in optimizing the use of its resources, reflected in the corporate share price at the end of the year. Market value or share price is formed from the interaction between demand and supply in the stock market or stock exchange. An increase in share price may indicate an increase in firm value. Therefore, optimizing the stock price is a very strategic thing for the company to increase the firm value, which in turn the company also effectively achieves the main goal of increasing profits and the welfare of shareholders (Indrawati et al., 2023 and Putri et al., 2023).

Alongside the shift from traditional to green economic models in recent decades and the global economic crisis in 2008-2009, there has been a shift from traditional to green economic models, it was a trigger to realize the vision of a green economy in real terms (Söderholm, 2020 and Heshmati, 2018). The implementation of pro-environmental policies that cut pollution and minimize pollution is one that attracts the attention of investors (Ismiyatun et al., 2021; Mar'ati and Darsono, 2023). One important component in this shift in global economic patterns, for example, is the development of sustainable technology by minimizing negative impacts on the environment (Söderholm, 2020). Following this shift, pro-environmental policies have begun to be widely implemented in global business schemes, including the implementation of green innovation and environmental disclosure in business schemes.

Implementation of green innovation and environmental disclosure that commit to environmentally friendly practices to gain support from society and improve corporate reputation (Liu, 2023; Sila and Cek, 2017; Li et al., 2020). Legitimacy theory explains that it's important for companies to operate in accordance with social norms and expectations to maintain their social legitimacy. Implementation of green innovation and environment disclosure, companies demonstrate responsibility for the environment and sustainability, which in turn can increase investor confidence. In addition, with adding role of good corporate governance, it is expected that the practice of green innovation and environmental disclosure can run more effectively within the company (Amalya et al., 2023; Zulfia and Widijoko, 2019). Stakeholder theory emphasized that companies should consider the interests of all stakeholders, including investors, employees, customers and society. Thus, with the role of good corporate governance, companies can ensure that they manage and utilized green innovation and environmental disclosure more effectively, which increases trust and support from stakeholders, and ultimately contributes to an increase in firm value.

Research conducted Pan (2022), related to the effect of green innovation on firm value, shows that companies that implement green innovation listed on the Shanghai and Shenzhen Stock Exchange A-Share have a positive influence on firm value. Companies with an ability of green innovation have a higher firm value. Research findings in similar countries show different results Hsu et al. (2021) and Yao et al. (2019), proving that companies listed in China that adopt green innovation show an influence on firm value, but the effect tends to be temporary or short-term (Xie et al., 2022). Meanwhile, research conducted Fabiola and Khusnah (2022); Mulyadi and Maulana (2022), shows that green innovation has no effect on firm value.

Research Aboud and Diab (2018), examining environmental disclosure has a higher value for companies, and both have a positive relationship. In addition, implementation of environmental disclosures, companies can create an environment in which they can maximize their positive impact on the environment, society, and the economy, while strengthening their market position and long-term value (Agustia et al., 2019; Wu and Li, 2023). Research Fatemi et al. (2018) and Safitri et al. (2019), states that the disclosure of environmental information has a negative effect on firm value. Companies that disclose information about the environment are getting higher, so the firm value actually decreases. In contrast to research conducted Sumarno et al. (2023); Jeanice and Kim (2023), state that the disclosure of environmental information has no effect on firm value.

The description of the above studies has tested and discussed the relationship between the application of green innovation and the disclosure of environmental information as a form of pro-environmental policy on firm value, but shows varying results or inconsistencies in previous research findings (Aboud and Diab, 2018; Fatemi et al., 2018; Agustia et al., 2019; Yao et al., 2019; Safitri et al., 2019; Hsu et al., 2021; Pan, 2022; Fabiola and Khusnah, 2022; Mulyadi and Maulana, 2022; Xie et al., 2022; Sumarno et al., 2023; Jeanice and Kim, 2023; Wu and Li, 2023) Inconsistencies in the results of previous studies arise due to differences in measurement methods, observation periods, research objects, and relationships between selected variables (Miles, 2017). In addition, there are allegations of the possibility of moderating variables or mediating variables involved in the inconsistency of previous research results (Pokhariyal, 2019). Therefore, researchers suspect that there are other factors that have an influence on the relationship between new innovations and environmental information disclosure on firm value. One factor that is thought to moderate this relationship is good corporate governance. Based on stakeholder theory, good corporate governance acts as a tool to maintain balance and fulfil the interests of various parties involved with the company.

Good corporate governance was chosen as a moderating variable, because the practice of good corporate governance can strengthen the effect of green innovation and strengthen the effect of environmental information disclosure on firm value. This is because the good corporate governance system has a potential basis for uniting economic interests and environmental interests, allowing both to work together in an effort to improve company performance and have a positive impact on shareholders (Karina and Setiadi, 2020). In addition, companies with good corporate governance can optimise company value for external parties. An added value that leads to green innovation activities and disclosure of environmental information is reflected in increased investor interest in buying shares (Agustia et al., 2019; Damas et al., 2021).

This study aims to extend the literature related to green innovation, environmental disclosure and firm value by addressing inconsistencies in previous research results. In response to the inconsistent results of previous studies, this study hypothesizes that there is a combined effect of good corporate governance on the relationship between green innovation, environmental disclosure and firm value as an answer to the inconsistency of previous research results. In addition, this study also adds updates in the form of research models, measurements, objects, and periods that can be used to assess the consistency of previous research results.

Research Agustia et al. (2019) and Damas et al. (2021), proves that green innovation affects firm value, the development of green innovation encourages companies to convert production waste into marketable products, thereby increasing firm value. In this context, it is relevant to legitimacy theory, which is a theory first coined of Dowling and Pfeffer (1975) which focuses on the interaction between companies and society (Deegan, 2014:344). This theory assumes that companies seek to gain support and recognition from various stakeholders, including communities, governments, and investors, to demonstrate their commitment to environmentally responsible business practices and sustainability. The implementation of green innovation in a company business strategy creates investor confidence that the company is committed to corporate sustainability. Green innovation involves the application of environmentally friendly products with low pollution levels, in accordance with stakeholder expectations (Husnaini & Tjahjadi, 2021). The results of this study are supported Pan (2022), which states that companies that have strong green innovation have higher firm value. Based on the explanation of theory and previous research, the researchers propose the following hypothesis:

$\mathbf{H_1}$**:** Green innovation has a positive effect on firm value.

The legitimacy theory framework, every action taken by a company must be accepted and recognized by society or the community as something that is in accordance with the values embraced by society. In other words, the company activities are considered legitimate and acceptable by society (Damas et al., 2021). This shows that the company does not only focus on the interests of shareholders, but also pays attention to the interests of broader related parties. The level of disclosure of environmental information or often called environmental disclosure by companies has a significant impact on investment evaluation by investors. This is because the quality of good environmental information disclosure tends to get a positive response from investors, which in turn can be reflected in an increase in firm value (Saraswati et al., 2022 and Saputra, 2020).

Research Aboud and Diab (2018) and Ting et al. (2020), found that the implementation of environmental disclosure practices related to environmental performance has a positive impact on firm value. Research Wu and Li (2023), shows that environmental practices positively and significantly affect the increase in firm value, with the environmental dimension consisting of three subcategories, namely resource use, emissions, and innovation. This study shows that companies that effectively disclose environmental information have a positive influence on firm value. In line with the research of Angela and Sari (2023), that the disclosure of environmental information has a positive impact on firm value. Based on the explanation of theory and previous research, the researcher proposes the following hypothesis:

$\mathbf{H_2}$**:** Environmental disclosure has a positive effect on firm value.

The implementation of good corporate governance has a close relationship with firm value, because good corporate governance is a control system that can encourage increasing firm value which is useful for investors (Abdi et al., 2022 Indriastuti and Kartika, 2021) . Research Pan (2022) and Damas et al. (2021), state that the firm value will increase if the company provides new innovations that turn production waste into feasible production, so that resources are more efficient and will be attractive to investors. This will maintain the sustainability of a company in the future.

Based on stakeholder theory, good corporate governance is a form of corporate responsibility to stakeholders, especially to investors, namely company performance is carried out with responsibility fairly between environmental maintenance and obligations to investors, so that if good corporate governance is implemented properly, it will have direct or indirect benefits on increasing firm value. Therefore, good corporate governance can be a moderation with strengthening the effect of new innovations on firm value. Based on the explanation of theory and previous research, the researchers propose the following hypothesis:

H_3: Good corporate governance strengthens the positive influence of green innovation on firm value.

Environmental disclosure provides important cues to investors about the company level of disclosure excellence (Daromes and Kawilarang, 2020). Companies that clearly communicate pro-environmental policies demonstrate openness, reduce the risk of uncertainty and create a competitive advantage that can influence company valuation. The existence of economic benefits that can be obtained by companies through the expansion of social and environmental disclosures is reflected in the potential for increased stock prices (Qiu et al., 2016).

The above research is in line with the research Karina and Setiadi (2020); Zulfia and Widijoko (2019), stating that disclosure of environmental information through the implementation of good corporate governance is very important, which automatically guarantees a positive investor response to sustainability disclosure. In a situation of maximum good corporate governance implementation, sustainability disclosure can have a positive impact on firm value through its share price. Based on stakeholder theory and legitimacy theory in the context of sustainability, it shows that disclosure of environmental information provides responsibility and transparency regarding company operations to stakeholders, as well as gaining legitimacy from society. Therefore, good corporate governance can strengthen the influence of environmental information disclosure on firm value, and the company gets a positive response from investors in this situation. Based on the explanation of theory and previous research, the researcher proposes the following hypothesis:

H_4: Good corporate governance strengthens the positive effect of environmental information disclosure on firm value.

METODE

This research uses an explanatory with a quantitative approach (Sekaran & Bougie, 2017:7). The population of this research is all manufacturing companies listed on the Indonesia Stock Exchange for the period 2018-2022. The sample of this research uses purposive sampling. with the following criteria:

1. Manufacturing companies that publish sustainability reports for the period 2018-2022.
2. Manufacturing companies whose annual reports and sustainability reports can be accessed for the period 2018-2022.

Manufacturing companies were chosen because their operations are vulnerable to environmental pollution, due to producing goods that use a lot of raw materials and energy. The data analysis technique in this study was carried out using factor analysis, descriptive statistics, classical assumption analysis, multiple regression analysis, and regression moderation analysis.

Firm Value

The dependent variable in this study is firm value which is calculated by comparing the proxy of total shares outstanding multiplied by the closing price plus total debt with total assets (Pan, 2022; Xie et al., 2022; Dewi and Rahmianingsih, 2020). The formula for calculating the measurement of firm value is as follows:

$$\text{Tobin's Q} = \frac{\text{Total shares outstanding} \times \text{closing price} + \text{total debt}}{\text{Total Asset}}$$

Green Innovation

Green innovation is measured using research content analysis (Agustia et al., 2019; Damas et al., 2021; Maharani and Sudibijo, 2023). Green innovation measurement uses the following indicators: 1) The production process uses new technology to reduce energy, water, and waste. 2) Products use less polluting or hazardous materials. 3) Using environmentally friendly product materials (such as paper and plastic). 4) Components or materials in the production process can be recycled or can be conditioned. Each indicator is given a score of 1 if the company or business has met the corresponding criteria, while a score of 0 is given if the company does not meet the criteria

Environment Disclosure

Environmental disclosure is measured using content analysis using the Earth Global Carbon (BGK) Foundation standard. Environmental information disclosure using 11 items as follows: 1) GHG emission, 2) GHG intensity), 3) Energy usage, 4) Energy intensity, 5) Energy mix), 6) Water usage, 7) Environmental operations, 8) Climate oversight or board, 9) Climate oversight or management, 10) Climate risk mitigation, and 11) Forestry CSR (Jeanice and Kim, 2023).

Good Corporate Governance

Good corporate governance (GCG) refers to the rules and standards of organizations in the economic sphere that direct corporate governance. GCG regulates the actions of company owners, directors, and management, including details of their duties, authorities, and responsibilities to stakeholders. This study adopts three proxies for measuring good corporate governance that have previously been used (Zulfia and Widijoko, 2019).

Institutional ownership is measured by comparing the percentage of ownership of other institutions and the total number of shares outstanding (Amalya et al., 2023; Indriastuti and Kartika, 2021). The measurement of institutional ownership is as follows:

$$\text{Institutional Ownership} = \frac{\text{Percentage ownership of other institutions}}{\text{Total shares outstanding}}$$

Independent commissioners are measured by comparing the percentage of the number of independent commissioners and the total members of the company's board of commissioners (Amalya et al., 2023; Indriastuti and Kartika, 2021). The measurement of independent commissioners is as follows:

$$\text{Independent Commissioner} = \frac{\text{Percentage of independent commissioners}}{\text{Total company board members}}$$

The audit committee is measured using the number of audit committees in the company (Amalya et al., 2023; Indriastuti and Kartika, 2021). The audit committee measurement is as follows:

$$\text{Audit Committee} = \sum \text{audit committee}$$

Data were analyzed using IBM SPSS Statistics 27 software. The regression equation used was to test the effect of the independent variable on the dependent. In addition, moderation regression analysis is used to see the effect of additional independent variables on the relationship between the independent and dependent variables.

The regression equation is as follows:

$$Tobin's\ Q = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \tag{1}$$

The Moderation regression analysis equation is as follows:

$$Tobin's\ Q = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 * Z + \beta_4 X_2 * Z + \varepsilon \tag{2}$$

RESULT AND DISCUSSION

This study uses secondary data on manufacturing companies listed on the Indonesia Stock Exchange for the period 2018-2022 are 165 companies. In the sample criteria, manufacturing companies that did not publish sustainability reports in the period 2018-2022 were 122 companies. Manufacturing companies that cannot be accessed annual reports and sustainability reports in the period 2018-2022 are 3 companies. So that the final result of the sample to be studied is 200 companies with five years observation period.

Factor Analysis Test

This research uses factor analysis to find a new component from several initial variables by determining the structure through data summarization or reduction. Some of the initial variables include institutional ownership, independent board of commissioners and audit committee which are factor analyzed into a new variable called good corporate governance. Factor analysis requires that the data must have sufficient correlation for a factor analysis to be carried out, namely the value of the KMO Measure of Sampling Adequacy (KMO-MSA) > 0.50 and the sig value <0.05.

Table 1.
Factor Analysis Test

No.	Indicator	KMO-MSA	Sig	MSA
1	Institutional Ownership			0.577
2	Independent Commissioner	0.514	0.004	0.588
3	Audit Committee			0.629

Source: data processed by SPSS 27.

Based on the results of factor analysis in table 2, the KMO-MSA value is 0.514 with a significance of 0.004, which means factor analysis can be carried out. The MSA value for institutional ownership is 0.577, the independent board of commissioners is 0.588, and the audit committee is 0.629. Since all MSA values are > 0.50, these three indicators are qualified and suitable for use in factor analysis.

Descriptive Statistic Test

Table 2. Descriptive Statistics

Variable	N	Minimum	Maximum	Average	Std. Dev
Firm Value	200	0.40	9.87	3.5733	2.62345
Green Innovation	200	0.25	1.00	0.7188	0.19403
Environment Disclosure	200	0.27	1.00	0.7991	0.19376
GCG	200	1.11	1.82	1.3808	0.13485

Source: data processed by SPSS 27.

The results of descriptive statistical analysis presented in table 3. show that the proxy of Tobin's Q firm value which is the dependent variable has a standard deviation that is lower than the average value, as well as green innovation and environmental disclosure which are independent variables. Thus these results indicate a fairly varied distribution of variable data, so it can be said that the data on green innovation, environmental disclosure, and Tobin's Q are highly reliable.

Classic Assumption Test

Normality Test

The normality test is to test whether the observations are normally distributed or not, this test uses the Kolmogorov-Smirnov Test. The test results based on table 4. It can be seen that the direct Asymp.sig value is 0.052 and with moderation 0.056 > 0.05 so it can be concluded that the data is normally distributed.

Table 3. The Result of the Normality Test

Test	Unstandardized_residual	Limit	Description
Direct testing	0.052	0.05	Normal
Testing with Moderation	0.056	0.05	Normal

Source: data processed by SPSS 27.

Autocorrelation Test

The autocorrelation test in table 5. below shows that the direct testing regression model has a Durbin Watson value of 1,948 and testing with moderation has a value of 1,944 which can be concluded that the data does not have autocorrelation because the DW value is between the scale of -2 to 2.

Table 4. Autocorrelation Test

Regression Model	Durbin-Watson	limit	Description
Direct testing	1.948	-2 < DW < 2	No Autocorrelation
Testing with Moderation	1.944	-2 < DW < 2	No Autocorrelation

Source: data processed by SPSS 27.

Multicollinearity Test

Multicollinearity estimation commonly used the cut off value to indicate the presence of multicollinearity is a tolerance value ≥ 0.10 or equal to a VIF value ≤ 10. The results of the multicollinearity test show that the data does not occur because the tolerance value> 0.10 or the VIF value < 10, so there is no correlation between the independent variables.

Table 5. The Result of the Multicollinearity Test

Variable	Collinearity Statistics		Description
	Tolerance	VIF	
Green Innovation	0.819	1.221	No Multicollinearity
Environment Disclosure	0.819	1.220	No Multicollinearity
GCG	1.000	1.000	No Multicollinearity

Source: data processed by SPSS 27.

Heteroscedasticity Test

The heteroscedasticity test is used to test whether the regression model occurs inequality of residual variance from one observation to another.

Table 6. The Result of the Heteroscedasticity Test

Variable	Coefficient	Std. Error	t	Sig.
(Constant)	0.574	1.013	0.566	0.572
Green Innovation	0.659	1.178	0.56	0.576
Environment Disclosure	-0.957	1.108	-0.864	0.389
GCG	-0.285	0.727	-0.391	0.696
Green Innovation *GCG	-0.526	0.853	-0.616	0.538
Environment Disclosure *GCG	0.902	0.792	1.14	0.256

Source: data processed by SPSS 27.

Based on table 9. the results of the heteroscedasticity test conducted using the Glejser test show that the significant value of all variables> 0.05, so there is no heteroscedasticity.

Regression Analysis Test

This research analyses multiple linear regression and moderation regression analysis. This analysis consists of the coefficient of determination (R-Square) and partial hypothesis testing (t test).

Table 7. Determination Coefficient Test

Regression Model	Adjusted R-Square
Direct Testing	0.264
Testing with Moderation	0.347

Source: data processed by SPSS 27.

Based on table 8 above, the results of testing model 1, the entire sample obtained an Adjusted R2 value of 0.264. This result means that the variation in changes in the firm value variable can be explained the variables in the research model 26.4%, and the rest (73.6%) is influenced other variables not included in the study. On the other hand, testing model 2 with moderation on the entire sample obtained an Adjusted R2 value of 0.347. This result means that the variation in changes in firm value variables can be explained the variables in the research model 34.7%, and the rest (65.3%) is influenced other variables not included in the study.

Table 8. Result Summary

Hypothesis	Coefficient	t	Sig.	Description
H1	-1,155	-1,443	0,061	Rejected
H2	2,874	8,560	0,000	Accepted
H3	2,903	2,106	0,027	Accepted
H4	11,957	4,911	0,000	Accepted
Independent Variable: Firm Value				

Source: data processed by SPSS 27.

Based on table 9 above, the significant value of H1> 0.05, it can be concluded that green innovation has no effect on firm value, while H2, H3, and H4 show a significant value> 0.05. It can be concluded that environmental disclosure has a positive effect on firm value. In addition, the role of good corporate governance can moderate the relationship between green innovation and environmental disclosure with firm value.

DISCUSSION

Effect of green innovation on firm value

According to the result of this study, green innovation has no effect on firm value. The results of the above study are consistent with the research of Husnaini and Tjahjadi (2021); Mulyadi and Maulana (2022); Tonay and Murwaningsari (2022), who tested the effect of green innovation on firm value. The practice of green innovation through an environmentally friendly product approach is faced with a lot of capital, the use of new technology and equipment that produces the desired product requires a huge initial cost. Companies are also required to immediately show investment in the form of profit or revenue growth. However, the market often does not immediately reward green innovation efforts in the form of increased share value, especially if the long term benefits of the innovation are not immediately visible or difficult to measure.

The research results above are not supported of legitimacy theory which states that the relationship between business entities and the environment is strongly influenced with the community where the company is located, investors will see the extent to which the company can maintain or care about the environment (Damas et al., 2021). This can affect investors decisions to provide an injection of funds to the company which can result in an increase or decrease in company value. While the above research shows that green innovation has no effect, indicating that companies require high costs and significant efforts to create green or environmentally friendly products, so it does not support the view of legitimacy theory about the positive impact of green product commitment on firm value.

Effect of environmental disclosure on firm value

According to the results of this study, environmental disclosure has a positive effect on firm value. Transparent and comprehensive environmental disclosure can increase firm value. The results of this study confirm the research of Abdi et al. (2022); Aboud and Diab (2018);

Fatemi et al. (2018); Zhang et al. (2020), which examines the effect of environmental disclosure on firm value. The higher the value of the company environmental disclosure, the higher the investor perception of the company and the firm value, which is reflected in its stock price, is also higher. The results of this study are supported of legitimacy theory. According to legitimacy theory, company operations that gain legitimacy from the community indicate that the company is in accordance with the norms adopted by the local population.

Providence of clear information about the company efforts to protect the environment and practice sustainability, the company can increase trust and reputation towards stakeholders (Chen et al., 2023). This can lead to increased investor interest which results in the company share price rising. Good environmental disclosure can reduce reputational and legal risks, and increase the company access to environmentally friendly capital and markets. The results of this study suggest that comprehensive environmental disclosure not only provides short-term benefits in terms of stock price, but also supports the long-term growth and sustainability of the company (Li et al., 2018).

Good corporate governance on the relationship between green innovation and firm value

Based on the results of this study, good corporate governance strengthens the relationship between green innovation and firm value. This result is supported of stakeholder theory. Good corporate governance is a corporate responsibility to help consider the interests of all stakeholders, implemention of good corporate governance, companies will tend to be more open to green innovations that can improve the efficiency and sustainability of their operations (Susanti and Handayani, 2022). By accommodating the needs and expectations of a wider range of stakeholders, including investors who are increasingly concerned about environmental aspects, companies can increase their long-term value while supporting environmental sustainability.

Good corporate governance has several principles that must be carried out, including transparency and responsibility, which require companies to be responsible for the environment in carrying out company operations that do not conflict with existing rules in society so that the company gets a good reputation among the public (Permatasari and Widianingsih, 2020; Zulfia and Widijoko, 2019). Effective implementation of good corporate governance through green innovation practices can direct investor perceptions. This indicates that the existence of good corporate governance will strengthen the influence of green innovation on firm value. A well-run good corporate governance mechanism assigns management to ensure that green innovation policies and practices are in accordance with applicable environmental principles. Information on environmental sustainability must be accounted of management, so that the company environmental practices can be accounted for. This assist interested parties in making informed decisions related to the company environmental conditions.

Good corporate governance on the relationship between environmental disclosure and firm value

Based on the results of this study, it proves that good corporate governance strengthens the relationship between environmental disclosure and firm value in companies. This result is supported of stakeholder theory. Environmental disclosure based on the concept of good corporate governance engenders transparency and involvement of all parties, helping to create an environment in which companies are more likely to disclose environmental information clearly and openly (Putra and Putri, 2022; Karina and Setiadi, 2020). This increases investor and other stakeholder confidence, which in turn can affect the value of the company and its share price. Thus implementation of good corporate governance effectively, companies can create long-term value while paying attention to environmental aspects.

The results of this study also support legitimacy theory, environmental disclosure is achieved through support from interested parties and business practices that are in accordance with the norms and legitimacy of society. Environmental disclosure provides an important signal to investors about the level of quality of corporate disclosure (Kawi and Natalylova, 2022; Zhang et al., 2020). Companies that clearly state pro-environmental policies demonstrate transparency, reduce uncertainty, and create a competitive advantage that can influence corporate valuation. The economic benefits of expanded social and environmental disclosures are reflected in the potential for increased stock prices. Good corporate governance that has been well implemented can ensure transparent environmental disclosure (Aboud and Diab, 2018). Effective corporate governance also ensures sound management of environmental risks, alignment of interests with stakeholders, and long-term value creation through integrating environmental considerations in the company strategic planning and decision making.

CONCLUSION

The results of this study found that the higher the value of environmental disclosure, the higher the firm value, while green innovation practices have no effect on firm value. Furthermore, the results of the moderation regression analysis show that the role of good governance can strengthen the influence of green innovation practices and environmental disclosure to increase firm value by encouraging investor confidence in the company, implementing good corporate governance using an environmentally friendly product approach and environmental disclosure as a concrete effort in supporting pro-environmental and sustainability issues.

This research study provides theoretical implications of legitimacy theory, specifically showing that green innovation and environmental disclosure through the role of good corporate governance drive up firm value. Therefore, it is important for companies to pay attention to the prevailing norms as a form of concern for the environment. In addition, this study provides practical implications for companies to reconsider the application of the green economy related to controlling the level of pollution resulting from the company operational activities.

This study has limitations, namely related to the data collection and analysis process. Many manufacturing companies do not present sustainability reports separately from annual reports. This has an impact on the difficulty of tracing research data. It is recommended that future researchers consider and use other secondary data sources such as environmental disclosure databases provided of independent institutions and thirdparty data such as Bloomberg or MSCI Index on environmental disclosure.

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