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The Influence of Corporate Governance (CG) on Green Innovation (GI) in LQ45 Index Companies on The Indonesia

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ABSTRAK

Penelitian ini menganalisis pengaruh corporate governane (CG) menggunakan varaibel komisaris independen, kepemilikan institusional, dan komite audit terhadap green innovation pada perusahaan yang konsisten terindeks LQ45 di Bursa Efek Indonesia (BEI). Penelitian kuantitatif merupakan jenis penelitian yang digunakan pada penelitian ini, dengan populasi penelitian yaitu pada perusahaan industri yang konsisten terdaftar indek LQ45 periode 2019 – 2023 dengan teknik pengumpulan sampel menggunakan purposive sampling sehingga terpilih 11 perusahaan sampel. Teknik penelitian yang digunakan adalah analisis regresi data panel dengan alat bantu Eviews12. Penelitian ini menunjukkan hasil komisaris independen, kepemilikan institusional berpengaruh positif dan signifikan terhadap green innovation, sedangkan komite audit berpengaruh negatif dan tidak berdampak signifikan terhadap green innovation.

ABSTRACT

This study analyzes the influence of corporate governance (CG) using independent commissioner variables, institutional ownership, and audit committees on green innovation in companies that are consistently indexed in the LQ45 on the Indonesia Stock Exchange (IDX). Quantitative research is the type of research used in this study, with the research population being industrial companies that are consistently listed in the LQ45 index for the period 2019-2023 with a sample collection technique using purposive sampling so that 11 sample companies were selected. The research technique used is panel data regression analysis with the Eviews12 tool. This study shows that independent commissioners, institutional ownership have a positive and significant effect on green innovation, while the audit committee has a negative effect and does not have a significant impact on green innovation.

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INTRODUCTION

Environmental pollution cases are indeed a focus among Indonesian people, especially air and water pollution which is getting worse. In this case, the government has also made efforts to handle environmental pollution by adjusting regulations related to the environment. These regulations are contained in the Environmental Law No. 46 of 2017 concerning Environmental Economic Instruments, Government Regulations on the Environment, Presidential Decrees, and Regulations of the Minister of Environment. With the latest regulation, namely Government Republic of Indonesia Regulation No. 22 of 2021 on the Environment. However, with the ongoing pollution conditions in Indonesia, it is necessary to re-analyze environmental data and find other causal factors.

The Badan Pusat Statistik (BPS) in the Staristik Kementrian Lingkungan Hidup, 2023 proved that factories (industrial companies) are the most influential factors in air pollution as well as water pollution, with the highest totals in Central Java province. This is in accordance with Dihni, 2021 that data from the Badan Pusat Statistik (BPS) states that Indonesia has three provinces in Java that have and occupy the largest distribution of industrial centers, the first position is occupied by Central Java with the number of industrial centers reaching 3,460 centers (Dihni, 2021). So it can be said that increasing environmental pollution goes hand in hand with the increasingly advanced growth of industry, With the outcomes of industrial businesses' production processes, like production waste, air and water pollution can reach dangerously high levels.

The current industrial development is in the spotlight because of the accompanying pollution emissions and the many possibilities that will be faced by its development in the future (Cai et al., 2019). These industrial companies can be taken from a collection of companies that are indexed in stocks, one of which is the LQ45 stock index. The Indonesia Stock Exchange (IDX), which also publishes and creates the LQ45 index, regularly tracks the index's movement in order to assess and replace stocks that don't fit the criteria by issuing them every six months and adding stocks that do (Rachmawati, 2018). Therefore, this sample is suitable for the LQ45 index which includes stocks from various industrial sectors with a broad picture of conditions in Indonesia, LQ45 also includes companies that are more consistent and always disclose their annual reports and sustainability reports every year, making it easier to find information on the company's environment. The following industrial companies meet the requirements and are consistently listed on the LQ45 index for the 2019 to 2023 period:

Table 1. Sample Company List

No	Stock Code	Company Name
1	ADRO	Adaro Energy Tbk.
2	ANTM	Aneka Tambang Tbk
3	CPIN	Charoen Pokphand Indonesia Tbk.
4	INCO	Vale Indonesia Tbk.
5	INTP	Indocement Tunggal Prakarsa Tbk.
6	ITMG	Indo Tambangraya Megah Tbk.
7	KLBF	Kalbe Farma Tbk.
8	PGAS	Perusahaan Gas Negara Tbk.
9	PTBA	Bukit Asam Tbk
10	SMGR	Semen Indonesia (Persero) Tbk.
11	UNTR	United Tractors Tbk.

Source : www.idx.co.id

In overcoming the problem of pollution caused by industrial companies, especially companies indexed in LQ45, the role of organizations is needed to encourage industrial companies towards green innovation.One environmental tactic that can be used to grow a company without breaking any laws is called "green innovation." (GI) (Özşahin et al., 2013). The role of Green innovation in industrial companies is very important in solving environmental pollution problems (Yuan & Xiang, 2018). Therefore, Green innovation is a realistic focal point for encouraging sustainable development and has the potential to create a situation where environmental conservation and economic growth coexist (Magat, 1978). The application of GI is influenced by a wide range of factors, particularly in industrial firms. The function of stakeholders, resources, management abilities, and regulations in GI has also been studied in the past. However, research linking corporate governance (CG) and innovation in developing countries is currently lacking (Shapiro et al., 2015). especially those related to environmental innovation or green innovation (GI). Corporate governance serves as a system, process, and set of guidelines that regulate interactions between different stakeholders in order to accomplish organizational goals (IAI, 2015). Good corporate governance will make the company more accountable and transparent, allowing the public to trust the company's disclosed environmental responsibility (Kholmi et al., 2015).

LITERATURE REVIEW

Agency Theory

According to Pearce & Robinson (2008), agency theory is a collection of concepts regarding organizational control predicated on the idea that the owner's desires may be ignored when ownership and management are kept apart. Therefore, agency theory recognizes the potential for a conflict of interest between owners who may be more interested in short-term financial gain and management (agents) who may have incentives to ignore environmental aspects in order to maximize profits or financial performance. One way that companies use to monitor agency problems is by using corporate governance. With the concept of corporate governance, management (agents) are expected to be trusted in managing the wealth of the owner (principal), and the owner is also convinced that the agent is acting fairly so as to minimize conflicts and agency costs (Solikhah & Winarsih, 2016).

Stakeholder Theory

According to stakeholder theory, businesses must benefit stakeholders in addition to their own interests (Frreeman & Vea, 2001 in Pangesti, 2023). In essence, stakeholders have the power to direct or affect the financial resources allocated to business operations (Pangesti, 2023). Therefore, companies take the existence of stakeholders seriously and make consistent efforts to meet their needs because they are very important to the business and can influence decisions regarding its operations both directly and indirectly. In order to help the company achieve its objectives, including its obligations to various stakeholders, the CG role should be viewed as a crucial mechanism involving the board of directors, shareholders, and other stakeholders.

Green innovation

Companies use green innovation to accomplish strategic goals by reducing environmental damage through new production processes, systems, practices, and technologies (Dewi & Rahmianingsih, 2020). Green innovation can encourage companies to convert waste production into profitable products in order to create and maintain corporate value (Fabiola & Khusnah, 2022).

Corporate governance

With the concept of corporate governance, the management (agent) is expected to be trusted in managing the wealth of the owner (principal), and the owner is also convinced that the agent acts fairly and does not commit fraud for the benefit of the agent himself so as to minimize conflicts and agency costs. Establishing sound corporate governance and adding value for stakeholders are the goals of corporate governance.

Businesses must always run their operations with the interests of their stakeholders, including shareholders, in mind, as they are founded on the principles of equality and fairness (Kholmi et al., 2015). A number of variables influence corporate governance, in particular:

a. **Independent Commissioner**

Board of commissioners members who have no connection to the board of directors, else board members, or majority shareholders and who are not bound Independent commissioners are those who are not bound by any business arrangement that might impair their capacity to act independently or solely in the company's best interests.

b. **Institutional ownership**

According to Tianisyah and Astuti (2024), institutional ownership is the ownership of a business whose shares are held by specific organizations or agencies, such as banks or insurance companies. Through improving the monitoring process, Reducing agency issues can be achieved through institutional ownership, according to Mursalim (2007). Institutional shareholders possess the resources and expertise to scrutinize management's performance and actions.

a. **Audit Committee**

In accordance with Siregar et al. (2013), the audit committee is a board of commissioners supporting body that aids the board in carrying out its duties. The audit committee serves as a tool for oversight in order to reduce expenses and enhance the caliber of the company's disclosures. The audit committee can enhance oversight of environmental performance, which helps with the disclosure of environmental information, in addition to having a major role in environmental disclosure and corporate social responsibility disclosure (Amarrulloh & Annisa, 2023).

Independent commissioners and green innovation

Because independent directors don't have any special connections to other internal parties within the company, they are thought to be able to lower the potential of agency conflicts among shareholders and top management, which can ultimately lower agency costs (Naciti, 2019). Corporate innovation benefits from independent commissioners (Shapiro et al., 2015). In addition, independent commissioners are very important for achieving sustainable development within the framework of social and environmental interests (Naciti, 2019). Independent commissioners can function as an effective oversight mechanism, ensuring that management actions are in accordance with the interests of shareholders, including in terms of investment in green innovation. In other words, independent commissioners help minimize the risk of moral hazard and ensure more responsible decision-making regarding green innovation.

H1 : Independent commissioners has a significant influence on green innovation

Institutional ownership and green innovation

By enhancing the monitoring procedure, institutional ownership can be utilized to lessen agency issues. Additionally, institutional ownership has the ability, resources, and knowledge to evaluate management performance and actions (Mursalim, 2007). Amore & Bennedsen (2015) stated that internal institutional ownership of a company can mitigate the negative impact of anti-takeover legal entities on environmental innovation. High levels of institutional ownership encourage companies to pay more

attention to environmental performance, thanks to tighter supervision from institutional ownership (Saputra & Mahyuni, 2018). Institutional ownership often has social and environmental pressures from various stakeholders and has a reputation to maintain. Therefore, they will encourage companies to carry out green innovation so that companies can fulfill their social and environmental responsibilities, in line with stakeholder demands. Significant institutional ownership can also strengthen pressure on management to pay attention to aspects of sustainability and green innovation as part of the company's value and institutional reputation.

H2 : institutional ownership has a significant influence on green innovation

Audit committee and green innovation

By acting as an impartial watchdog, the audit committee reduces conflicts of interest among the agent (management) and the principal (shareholder). By carrying out strict internal supervision, the audit committee ensures that management does not only focus on short-term profits, but also pays attention to long-term risks and sustainability. In addition to playing a significant role in environmental disclosure and corporate social responsibility disclosure, the audit committee can improve oversight of environmental performance, which benefits the disclosure of environmental information (Amarrulloh & Annisa, 2023). The audit committee can ensure that investments in environmentally friendly innovations are carried out transparently and efficiently, and minimize the risk of violating environmental regulations that can harm shareholders. In other words, the existence of an audit committee helps direct management to make decisions that are in line with the interests of shareholders, especially in terms of innovations that maintain sustainability and long-term value.

H3 : Audit committee has a significant influence on green innovation

Conceptual Framework

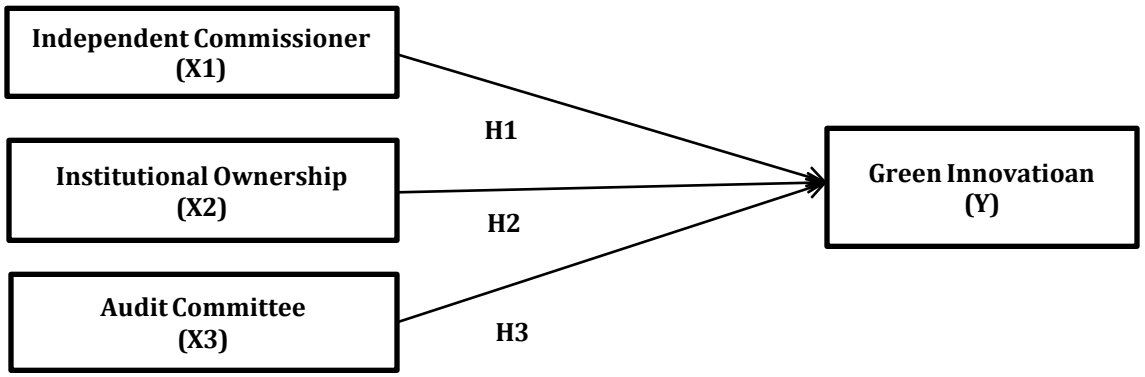

Figure 1. Conceptual Framework

METODE

Type Of Research

This study falls under the category of quantitative research. This kind of study places more emphasis on analyzing numerical data, which is subsequently processed to produce conclusions. Sugiyono (2010) states that quantitative research is a positivist-based research methodology that is used to study a specific population or sample. Data is collected using research instruments, and the analysis is quantitative or statistical, with the goal of testing the hypothesis.

Population

Companies listed on the LQ45 index of 2019 and 2023 make up the study's population. The LQ45 index has 45 listed companies.

Sampel

According to Indrianto & Supomo (2002), a sample is part of the elements of a population. The samples for this study were chosen using a sampling technique known as "purposive sampling" which takes particular factors into account (Sugiyono, 2010). The following are the study's sampling criteria:

1. Companies listed on the LQ45 index.
2. Companies that publish sustainability reports (Sustainability Reports) during 2019-2023.
3. Companies that are not financial companies. If financial companies are included, it will cause bias, because green innovation is carried out in industrial companies, so the role of green innovation in industrial companies is very important in resolving environmental pollution problems (Yuan & Xiang, 2018).
4. Companies that present environmental cost data during 2019-2023.
5. Companies that disclose the number of members of the independent board of commissioners, board of commissioners, and audit committee.
6. Companies that present green innovation data.

Considering these criteria, out of 45 companies included in the index, 11 companies match the sample requirements and have sustainability reports for five years of monitoring. Thus, there are 55 samples that are the subject of this study (11x5).

Operational Definition and Sample Measurement

Variabel-variabel dalam penelitian ini mempunyai definisi operasional dan pengukuran sebagai berikut:

Table 2 Operational Definition and Sample Measurement

	Operational Definition	Measurement
Dependent Variable		
Green Innovation (GI)	Setiap poin indikator diberi nilai 1 jika perusahaan berhasil menjalankan operasinya sesuai dengan indikatornya. If it is not in accordance, it is given a value of 0. The total points of all indicators in each sample are divided by the number of each indicator (Agustia et al., 2019).	$GI = \frac{number\ of\ environmental\ innovation\ points}{number\ of\ environmental\ indicators}$
Independent Variable		
Independent Commissioner	The number of independent commissioners is calculated by dividing it by the total number of commissioner members (Wardoyo & Theodora, 2013).	$^{IC}_{= \frac{Number\ of\ independent\ board\ of\ commissione}{Total\ number\ of\ board\ of\ commissioners}} \times 100\%$
Institutional Ownership	Institutional ownership refers to business ownership that is legally owned by certain organizations or institutions, such as bank, insurance	$IO = Amount\ of\ institutional\ share\ ownership$

	companies, and others (Tianisyah & Astuti, 2024). This is compared to the total amount of institutional ownership.	
Audit Committee	According to the number of audit committee members, the Debby et al. (2014) journal is cited in the ratio scale that the audit committee uses.	$AC = \sum Jumlah\ anggota\ komite\ audit$

Data Analysis

The following analysis techniques were used in the hypothesis testing and data analysis procedures of this study, with the help of eviews12:

The panel data method, also known as the pooled data method, was applied in this study. Panel data includes data from several regions or subjects at one point in time (cross-section) and data observed sequentially over time (time series). After that, panel regression analysis is carried out using information collected from various people over a predetermined period of time. The general equation can be used to state the form of the panel regression model or equation used, using a significance level of 5%. The model used in panel data analysis is as follows:

$$\mathbf{Y}=\beta_0 + \beta IC + \beta IO + \beta AC + e3$$

Deskription:

Y	: Green Innovation
β_0	: Constant
βIC	: Independent Commissioner regression coefficient
βIO	: Institutional Ownership Regression Coefficient
βAC	: Audit Committee regression coefficient
e	: Eror

HASIL DAN PEMBAHASAN

Descriptive Analysis

This study was carried out on industrial companies on the LQ45 index for the 2019-2023 period with a final sample of 55 samples. The research variables include Independent Commissioner returns (X1), Institutional Ownership (X2), Audit Committee (X3), and Green Innovation (Y). The outcomes of the descriptive analysis are as follows:

Table 3 Descriptive Statistics of Research Variables (N= 55)

	X1	X2	X3	Y
Mean	0,4025	22,5324	3,5636	0,6087
Maximum	0,6700	24,0300	6,0000	0,8600
Minimum	0,2900	20,4200	3,0000	0,4300
Std. Deviation	0,1009	1,0553	0,7139	0,1137
Observasi	55	55	55	55

source : Eviews12 Data Processing 2024

Based on Table 3, it can be observed that the maximum value of independent commissioners is 0.67 with a minimum value of 0.29 and has an average of 0.40 along with a standard deviation indicating

a variation in data distribution of 0.10 for independent commissioners. While institutional ownership has a maximum value of 24.03 with a minimum of 20.42 and an average of 22.53 along with a standard deviation indicating a variation in data distribution of 1.05. In addition, the maximum value for the audit committee is 6.00 with a minimum of 3.00 and an average of 3.5636 along with a standard deviation indicating a variation in data distribution of 0.71. The last variable analysis for green innovation has a maximum value of 0.86 with a minimum of 0.43 and an average of green innovation of 0.60 along with a standard deviation indicating a variation in data distribution of 0.11.

Inductive Analysis

Panel Data Model Selection Test

The panel data method, also known as the combined data method, is used in this study. The panel data is composed of data that is analyzed in a systematic manner from time to time (time series) and data from several regions or subjects at a single point in time (cross-section). Following this, panel regression analysis is carried out using data collected from various individuals over a predetermined period of time. Generally, equations can be used to indicate the type of panel regression model or equation that is used.

Chow Test

One of the tests used to identify the best CEM and FEM models is the Chow test. The results of the Chow Test are listed below:

Table 4 Chow Test Results

Effecst Test	Statistic	d.f	Prob
Cross-section F	31.438070	(10,41)	0.0000
Cross-section Chi Square	118.778864	10	0.0000

Source : Eviews12 Data Processing 2024

Based on the results of the data processing above: Prob 0.0000 < 0.05 then the FEM model is selected.

Hausman Test

Table 5 Hausman Test Results

Test Summary	Chi-Sg. Statistic	Chi-Sg. d.f	Prob.
Cross-section Random	10.723050	3	0.0133

source : Eviews12 Data Processing 2024

Based on the results of the data processing above, Prob 0.0133 > 0.05, the FEM model was selected.

Classical Assumption Test

Conducting classical assumption testing on the selected model. If the selected model is a model with a CEM or FEM approach, then a heteroscedasticity assumption test and a multicollinearity test are carried out. If the selected model is a model with a REM approach, then a normality assumption test and a multicollinearity test are carried out (Candra & Irmeilyana, 2024). In this study, the selected model is FEM, so it is necessary to conduct a heteroscedasticity assumption test and a multicollinearity test as follows:

1. Multicollinearity Test

Table 6. Multicollinearity Test

	X1	X2	X3
X1	1	0,21811718	0,49122465
X2	0,21811718	1	0,07163953
X3	0,49122465	0,07163953	1

Source : Eviews12 Data Processing 2024

in Table 6 the multicollinearity test can be analyzed by taking into account how independent variables are correlated. Correlation in X1 with X2 is 0.21811718 < 0.80, X1 with X3 0.49122465 < 0.80. Correlation of X2 with X1 0.21811718 < 0.80, X2 with X3 0.07163953 < 0.80. Correlation of X3 with X1 0.49122465 < 0.80, X3 with X2 0.07163953 < 0.80. then the results show that there is no multicollinearity problem because all variable correlation coefficients are below or < 0.80.

2. Heteroscedasticity Test

Table 7. Heteroscedasticity Test Results

Vaiabel	Coefficient	Std. Error	t-Ststistic	Prob.
C	5.054223	2.585621	1.954743	0.0575
X1	0.120966	0.029210	4.141309	0.1002
X2	-0.222550	0.114744	-1.939532	0.1593
X3	-0.017534	0.008377	-2.093146	0.2426

Source : Eviews12 Data Processing 2024

Table 7 displays the outcomes of the Glejser test for heteroscedasticity, where the significance value or probability of the variable is higher than 0.05. Therefore, it can be said that this study does not exhibit heteroscedasticity.

Panel Data Regression

Based on the model selection test, the Fixed Effect Model (FEM) was selected as a panel regression model that can be built based on the general equation to test the relationship of corporate governance variables such as; independent commissioners (X1), institutional ownership (X2), and audit committees (X3) to green innovation (Y). The Fixed Effect Model (FEM) estimation produces the following findings:

Table 8. FEM Estimation Results

Variabel	Coefficient	Std. Error	t-statistic	Prob.
C	-20.70130	7.108873	-2.912037	0.0058
X1	0.172183	0.080309	2.144008	0.0380
X2	0.949788	0.315476	3.010652	0.0044
X3	-0.044736	0.023031	-1.942022	0.0590
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.890010	**Mean dependent var**		0.608727
Adjusted R-squared	0.855136	**S.D. dependent var**		0.113775
S.E. Ofregression	0.043304	**Akaike info criterion**		-3.225823
Sum squared resid	0.076884	**Schwarz criterion**		-2.714866
Log likelihood	102.7101	**Hannan-Quinn criter.**		-3.028232
F –statistic	25.52018	**Durbin-Watson stat**		1.577772
Prob (F-statistic)	0.000000			

Source : Eviews12 Data Processing 2024

Based on the Fixed Effect Model (FEM) findings estimation regression in Table 8, the following equation can be obtained:

Y = -20.70130 + 0.172183*X1 + 0.949788*X2 - 0.044736*X3

The Regression Equation Analysis's findings indicate that:

1. The obtained constant value is -20.70130, meaning that a one-unit increase in the independent variable will result in a 20.70130 decrease in the dependent variable..
2. Given the obtained coefficient value of 0.172183, it can be concluded that a one-unit increase in the independent commissioner variable will result in a 0.172183 increase in green innovation.
3. Since the obtained coefficient value is 0.949788, it can be concluded that a one-unit increase in the institutional ownership variable will result in a 0.949788 increase in green innovation.
4. The obtained coefficient value is -0.044736, meaning that a one unit increase in the audit committee variable will result in a 0.044736 decrease in green innovation.

Hypothesis Test

T-Test

Table 9. Partial Test Results (Uji T)

Variabel	Coefficient	Std. Error	t-statistic	Prob.
C	-20.70130	7.108873	-2.912037	0.0058
X1	0.172183	0.080309	2.144008	0.0380
X2	0.949788	0.315476	3.010652	0.0044
X3	-0.044736	0.023031	-1.942022	0.0590

Source : Eviews12 Data Processing 2024

The study's first hypothesis, supported by table 9 Panel Data Regression Results, is that independent commissioners significantly and favorably influence green innovation, the results show a positive coefficient of 0.172183 with a probability of 0.0380 (p>0.05) so hypothesis 1 is accepted/supported. Hypothesis two in this study is that institutional ownership has a positive and significant effect on green innovation, a positive coefficient of 0.949788 with a probability of 0.0044 (p>0.05) is also significant, so hypothesis 2 is accepted/supported. While hypothesis three in this study is that the audit committee has a negative and insignificant effect on green innovation at a significance level of 5%, but has a negative and significant effect at a significance level of 10%, supported by a negative coefficient of -0.044736 and a probability of 0.0590 (p>0.05), because this study uses a significance level of 5%, it shows that the audit committee has a negative and insignificant effect on green innovation so that hypothesis 3 is rejected/not supported.

F-Test (Simultan)

Table 10. Simultaneous Test Results (Uji F)

R-squared	0.890010
Adjusted R-squared	0.855136
S.E. Ofregression	0.043304
Sum squared resid	0.076884
Log likelihood	102.7101
F -statistic	25.52018
Prob (F-statistic)	0.000000

sumber : Eviews12 Data Processing 2024

Table 10 shows that the F-Statistic Probability value is 0.000000 <0.05, indicating that the corporate governance variables—in particular, audit committees, independent commissioners, and institutional ownership—have a significant overall impact on green innovation.

Koefisien Determinasi (R2)

Identifying the degree to which the independent variables influence the dependent variable is the goal of the coefficient of determination value.The adjusted R-Square value in Table 10 obtained from the test is 0.855136. This finding indicates that corporate governance factors, such as audit committees, independent commissioners, and institutional ownership have an 85% chance of affecting green innovation. However, other factors other than those in this study contribute the remaining 15%.

Discussion

1. **The influence of independent commissioners on green innovation**

   The results of the analysis using eviews 12 show a coefficient value of 0.172183, and a probability value of 0.0380, which is smaller than 0.05. These results illustrate that there is a significant positive influence between independent commissioners on green innovation. Asni and Agustia (2022) research indicates that independent commissioners greatly promote green innovation. This research is supported by this study.

   Independent commissioners are essential to the establishment of good corporate governance in Indonesia. In addition to promoting the application of sound CG principles, they can also advise the board of directors on the adoption of GI policies (Asni & Agustia, 2022).

   The positive influence of independent commissioners on GI shows that an increase in the number of independent commissioners leads to an increase in GI, because independent commissioners can help minimize the risk of moral hazard and ensure more responsible decision-making related to green innovation. So it gives an illustration that if the company's independent commissioners are more numerous and better, then green innovation will also increase and be encouraged, and vice versa if the number of independent commissioners is less, then GI will also decrease so that it can hinder the sustainability of the company. Based on this, it is stated that hypothesis one is accepted.

2. **The influence of institutional ownership on green innovation**

   According to the analysis conducted with Eviews12, the probability value of institutional ownership is 0.0044, which is smaller than 0.05, and the coefficient value is 0.949788. These results indicate that institutional ownership and green innovation have a strong positive relationship. This study supports research by Amore & Bennedsen (2015) which found that institutional ownership significantly affects green patents, as well as research by Choi et al. (2011) which found that institutional investor ownership significantly and positively affects innovation performance. Institutional ownership can increase supervision of management so that company operations become more optimal. high levels of institutional ownership encourage companies to pay more attention to environmental performance, thanks to tighter supervision from institutional ownership (Saputra & Mahyuni, 2018). Institutional ownership can also mitigate the negative impact of anti-takeover legal entities on environmental innovation (Amore & Bennedsen, 2015).

   The positive effect of institutional ownership on GI shows that an increase in institutional ownership can support the development of GI and significant institutional ownership can also strengthen the pressure on management to pay attention to aspects of sustainability and green innovation as part of the company's value and institutional reputation. Thus, it illustrates that if the company's institutional ownership increases, green innovation will also increase and further encourage more sophisticated innovation and technology that is beneficial to the environment. So based on this, it is stated that hypothesis two is accepted.

3. The influence of the audit committee on green innovation

Considering the study's findings, the coefficient value is -0.044736, and the probability value is 0.0590 which is more than 0.05. These results illustrate that the audit committee has a negative and insignificant influence at a significance level of 5% because the probability exceeds 0.05 between the audit committee and green innovation, but has a negative and significant effect at a significance level of 10%. The audit committee does have an important role in environmental disclosure and disclosure of corporate social responsibility, in addition the audit committee can strengthen supervision of environmental performance, which has a positive impact on the disclosure of information related to the environment (Amarrulloh & Annisa, 2023). However, it turns out that only related to the environment does not determine and does not guarantee that the audit committee has an influence or relationship with green innovation.

This is consistent with research by Sari et al. (2019), which found that the audit committee's percentage is unable to improve the correlation between the independent audit committee's percentage and environmental disclosure. Reports or conversations with management, internal auditors, and external auditors can be used to fulfill this duty.

The development of a positive supervisory environment within the organization can be facilitated by the active participation of independent audit committees in assessing implementation, recommendations for enhancement, and internal management oversight (Nugroho & Purwanto, 2013). In agency theory, the greater the number of audit committees, the stronger the monitoring mechanism for management. However, a large number of audit committees in decision making can be slower and tend to be conservative because audit committee members may focus on short-term stability and avoid high risks. Green innovation, which often requires large and risky initial investments, can be considered too risky or difficult to measure the results directly. A large number of audit committees can increase supervision of risky investments, so that management is more likely to avoid or reduce investment in green innovation. So based on this, it is stated that hypothesis three is rejected.

CONCLUSION

Based on the results of the study on the influence of Corporate Governance proxied by independent commissioners, institutional ownership, and audit committees on green innovation in companies consistently indexed in the LQ45 for the period 2019 - 2023, the following conclusions can be drawn:

1. Independent commissioners have a positive and significant influence on green innovation.
2. Institutional ownership has a positive and significant influence on green innovation.
3. The audit committee has a negative and insignificant influence on green innovation at the 5% level of significance, but the audit committee has a negative and significant influence at the 10% level on green innovation..

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