



## **Analysis of the Influence of Corporate Social Responsibility and Corporate Governance on Financial Performance in Mining Companies Mediated by Green Innovation**

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**Abstract:** Financial performance is influenced by several factors, namely corporate social responsibility and corporate governance, which are mediated by green innovation. This study uses a quantitative method. The data collection type for this research is secondary data. The sample used in the research consists of mining companies. The analysis method used in this study is Panel Regression. The purpose of this research is to analyze the effect of corporate social responsibility and corporate governance on financial performance mediated by green innovation. Financial performance is the dependent variable, corporate social responsibility and corporate governance are the independent variables, and green innovation is the mediating variable. The results of this study show that corporate social responsibility has a significant positive effect on financial performance. Corporate governance does not have a significant effect on financial performance. Green innovation did not successfully mediate the relationship between corporate social responsibility and corporate governance on financial performance.

**Keywords:** Corporate Governance; Corporate Social Responsibility; Financial Performance; Green Innovation

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### **INTRODUCTION**

Every company must pay attention to social and environmental responsibility. This research uses a sample of mining companies. In the past five years, mining companies have faced significant challenges that affect their financial performance, especially those arising from environmental issues. The energy sector has received negative publicity, exacerbated by the fact that some major oil and gas companies have caused environmental pollution, such as oil spills from tanks and wells, and atmospheric pollution caused by recyclers. The tightening of global environmental regulations, driven by awareness of climate change and sustainability, forces companies to adopt more "green" mining practices (Lee, 2021; Reiter et al. 2020).

Company performance is measured, among other things, by financial performance. Financial performance indicates how well an entity generates profits, manages its assets, and controls its liabilities over a given period. Financial performance provides an overview of a company's financial condition during a specific period, covering both aspects of fund collection and fund allocation, which are usually measured by indicators of capital adequacy, liquidity, and profitability (Ulum & Yudanto 2022). High financial performance can influence a company's reputation. There are factors that affect financial performance, namely corporate social responsibility and corporate governance, which are mediated by green innovation.

Corporate social responsibility is not just about seeking financial profit but also about integrating moral values and acting responsibly in every decision and action the company takes (Jayaraman et al. 2023). Companies that consistently implement corporate social responsibility will earn a good reputation in the eyes of the public. This positive reputation will, in turn, have a beneficial impact on the company's profitability (Aldama et al. 2021). Moreover, companies that practice corporate social responsibility will gain greater trust from both investors and the community (Addini et al. 2019).

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According to J. S. Lee et al. (2023), corporate social responsibility can enhance a company's reputation and appease stakeholders and the public, which can ultimately improve the financial performance of the company.

Corporate governance refers to the rules and regulations implemented by a company. It influences the internal and external processes carried out by the company in its day-to-day operations (Seetharaman et al. 2020). A company's financial performance heavily depends on good corporate governance. Good corporate governance will guide the company toward healthy financial performance. The decisions made will favor the interests of the company and investors, rather than enriching a few individuals. On the contrary, poor corporate governance, such as fraud, corruption, and lack of transparency, will destroy investor trust and lead the company to downfall (Mahrani et al. 2018).

Green innovation encompasses products, processes, or services designed to reduce negative environmental impacts. This can include the use of more sustainable raw materials, more resource-efficient production processes, as well as the development of environmentally friendly products or services (Khan & Johl 2019). Companies that implement green innovation tend to have a more positive image in the eyes of consumers, investors, and the public. This positive image is earned because the company is seen as environmentally conscious and socially responsible. Consumers are more likely to support and remain loyal to brands they perceive as contributing positively to the environment. Investors are also more inclined to invest in companies that prioritize sustainability, as this indicates good risk management and long-term growth potential (Zhan, 2023).

Good corporate governance is a crucial foundation for companies to integrate environmentally friendly innovation into their business strategy, which ultimately can improve financial performance. Green innovation is a concept that focuses on developing products, services, or processes with the goal of reducing negative environmental impacts and creating value through eco-friendly solutions (Novitasari & Agustia 2022). Gender diversity in corporate governance brings broader and more innovative perspectives, supporting the development and implementation of green innovation. Green innovation driven by good corporate governance will positively impact a company's financial performance by increasing profitability, enhancing company value, and providing a competitive advantage (Makpotche et al. 2024). Women tend to be more sensitive to environmental issues and more proactive in adopting environmentally friendly management practices. This is due to their heightened awareness of ecological issues and social responsibility (Rehman et al. 2020).

The studies by Arian et al. (2023) dan Rossi et al. (2021) show a significant positive relationship between corporate social responsibility and financial performance. There are studies that state corporate governance positively affects financial performance (Bonna et al. 2012; Munir et al. 2019; Tabash et al. 2021). However, some research has found that corporate governance does not have a significant impact on financial performance (Dani et al. 2019) (Hesniati et al. 2024). This research is developed from the studies of Homayoun et al. (2023) and Tabash et al. (2021), which combine corporate social responsibility and corporate governance as independent variables, financial performance as the dependent variable, and green innovation as a mediator. Due to the varying results obtained, the researcher is interested in conducting this study.

Agency theory describes the relationship between shareholders and management, understood as the relationship between the principal and the agent. An agency relationship is an agreement where one or more parties (owners or principals) contract another party (the agent) to perform certain services based on their own interests, involving the delegation of part of the decision-making authority to the agent (According



to Mariani, 2017 in Shoimah et al. 2021). The relationship between gender diversity and agency theory lies in how gender diversity in leadership positions, such as the board of directors and top management, can help align the interests of the principal (shareholders) and the agent (management), which is central to agency theory (Adams & Ferreira 2009).

Stakeholder theory posits that a company should be managed according to the interests of all parties involved, not just the interests of shareholders (Sonpar & Litz 2008). This theory explains that all stakeholders have rights to the company, which can result in a reduction of resources to align with stakeholder interests but can also impact the company's growth through diversification (Hill 1992). A business organization cannot escape environmental issues that affect it. Companies are obligated to enhance profits in an ethical and socially responsible manner to achieve corporate goals and meet stakeholder interests (Donaldson & Preston 1995).

Financial performance refers to a company's ability to manage and organize its resources. Financial performance can be assessed by examining financial statements and using financial ratios (Shoimah et al. 2021). Financial performance is a critical aspect of organizational performance and has been extensively studied in academic literature (Dong & Gil-bazo (2020);(Bartolacci et al. 2020). Financial performance reflects the efficiency and effectiveness of a company in generating profits and value for shareholders and other stakeholders. An indicator that measures a company's financial performance generally includes financial aspects such as revenue, costs, and profits (Lee, 2021).

#### Corporate Social Responsibility and Financial Performance

Corporate social responsibility requires companies to move beyond the concept of "maximizing profit" and develop new concepts regarding legal responsibilities to investors and responsibilities to employees, suppliers, communities, and other stakeholders (Yoon & Chung 2018). A company's financial performance will improve when consumers purchase more products and services. Corporate social responsibility can meet the needs of all stakeholders. There are two types of stakeholders: internal and external. Internal stakeholders, such as employees, will be more dedicated and contribute to the company. Meanwhile, external stakeholders, such as customers and the community, will provide positive evaluations of the company (Chen & Wang, 2011). Rossi et al. (2021) state that there is a positive impact of corporate social responsibility on financial performance. The involvement of corporate social responsibility in company operations leads to higher financial performance. Through good corporate social responsibility practices, companies can create a positive image in the eyes of customers, investors, and the broader community. A good reputation can enhance consumer trust and loyalty, as well as attract investors who care about corporate social responsibility. This will contribute to better financial performance for the company in the future. Several studies indicate that corporate social responsibility positively impacts financial performance (Lee et al. 2023; Homayoun et al. 2023; Li et al. 2023; Yim et al. 2019).  
 $H_1$ : Corporate social responsibility has a positive impact on financial performance.

#### Corporate Governance and Financial performance

A good corporate governance system promotes transparency in financial and operational reporting. This can enhance investor and public confidence, which in turn can affect stock prices and the company's access to capital (Rossi et al. 2021). The separation of ownership and control in a company is a requirement for corporate governance (Cadbury 2000). Corporate governance is an important mechanism that oversees company management and achieves organizational goals. Good corporate



governance functions to monitor company activities and ensure that management operates with effective accountability and transparency (Jatiningrum et al. 2016). Good corporate governance, which emphasizes transparency, accountability, and fairness, creates an environment that supports the involvement of women at various organizational levels, including on boards of directors and in senior management positions (Dworkin & Schipani 2019). According to Hillman et al. (2002), gender diversity can influence how the management board supervises the company. With more women on the board, the professional experience and perspectives become more diverse. This gender diversity helps ensure that oversight and control within the organization are more effective (Bear et al. 2010; Westphal & Zajac 1995). Investors are more inclined to invest in companies with good corporate governance because transparency, accountability, and effective risk management indicate that the company is professionally and responsibly managed. This reduces investment risk and increases the likelihood of returns, which can ultimately improve the company's financial performance (Baxter 2014). Some studies indicate that corporate governance positively affects financial performance (Bonna et al. 2012; Munir et al. 2019; Tabash et al. 2021). However, research by Dani et al. (2019) and (Hesniati et al. 2024) finds that corporate governance does not affect financial performance.

H<sub>2</sub>: Corporate governance has a positive impact on financial performance.

#### Green Innovation and Financial Performance

According to Akdere and Benli (2018), green innovation refers to environmentally friendly financial innovation, which includes technologies that can reduce risk, lower transaction costs, or enhance products and services. Green innovation is a commercial strategy that can reduce environmental impact and has conceptual roots in sustainable activities, connecting management activities with environmental impacts (Cancino et al. 2018; Padilla-Lozano & Collazzo 2022). Research on this topic continues to evolve, as green innovation is a relatively new concept along with its methodologies (Wang et al. 2022; Albort-Morant et al. 2017). Previous studies have shown that green innovation has a positive impact on financial performance. This is because green innovation provides a way for companies to meet customer needs without harming the environment. Often, companies may unintentionally damage the environment with their products or goods. By adopting green innovation, companies can enhance their image as environmentally conscious and sustainable organizations. This can increase customer trust and boost revenue by offering more environmentally friendly products and services. According to several studies, green innovation positively impacts financial performance (Kraus et al. (2020); Homayoun et al. 2023; Ma et al. 2023; Sarfraz et al. 2023).

H<sub>3</sub>: Green innovation has a positive impact on financial performance.

#### Corporate Social Responsibility and Green Innovation

Corporate Social Responsibility (CSR) and green innovation have a strong connection, as both revolve around the idea of responsible and sustainable business practices. The integration of CSR and green innovation enables companies to address environmental issues while contributing to societal well-being. This research suggests that innovation plays a crucial role in the long-term competitiveness of businesses (Bekk et al. 2016). In an increasingly competitive business world, companies need to focus on social responsibility and green innovation to gain a competitive advantage. CSR is an essential factor that can drive companies to develop green innovation. By implementing social responsibility, companies can enhance their green intellectual capital, which in turn boosts green innovation (Mehmood & Hanaysha 2022). Previous studies have found a favorable correlation between CSR and green innovation. According to Shahzad et al.



(2020), CSR influences green innovation. Wei et al. (2012) argue that the relationship between green innovation and CSR is highly significant, as green innovation is one of the ways for companies to conduct business responsibly and sustainably by reducing negative environmental impacts, which is a key aspect of CSR. CSR activities and green innovation have an impact, with environmental strategies becoming eco-innovative and supporting sustainable environmental development. Several studies indicate that CSR has a positive influence on green innovation (Homayoun et al. 2023; Ma et al. 2023; Li et al. 2023).

H<sub>4</sub>: Corporate social responsibility has a positive impact on green innovation.

#### Corporate Governance and Green Innovation

Corporate governance and green innovation are two important aspects that, when effectively integrated, can contribute to the sustainability and long-term success of a company. Asni dan Agustia (2022) found that effective corporate governance mechanisms have a positive and significant impact on green innovation. This indicates that corporate governance can promote the implementation of green innovation to advance corporate sustainability. Corporate governance involves balancing the interests of various stakeholders, such as shareholders, management, customers, investors, government, and society. Some research shows that diversity, especially in terms of gender, is increasing. Bilimora (2000) reported that while the number of women on corporate boards has slightly increased, few companies actively recruit them. Additionally, gender bias, stereotypes, and tokenism toward women on boards still exist. According to Bruner's (2022) research, the relationship between green innovation and corporate governance can be highly significant because companies with good corporate governance often incorporate sustainability issues, including green innovation, into their strategies and decision-making processes. They recognize that green innovation is not only beneficial for the environment but can also open up new business opportunities and enhance corporate value in the long term. Studies have shown that good corporate governance positively influences green innovation (Asni & Agustia 2022).

H<sub>5</sub>: Corporate governance has a positive impact on green innovation

#### Corporate Social Responsibility and Financial Performance are mediated by Green Innovation

Green innovation can improve financial performance, reduce resource consumption, and production costs, and effectively reduce environmental pollution (Salman, 2001). Green innovation can enhance market performance and create new competitive advantages. Corporate social responsibility can drive corporate innovation investments (Tian et al., 2023). To explain the relationship between green innovation and financial performance, this study can also utilize the concept of firm resources and the extension of the natural concept. Green innovation and related business rights are intangible resources that are difficult to manage in the short term and hard for competitors to imitate. New environmentally friendly efforts can make resources more accessible by using them effectively (Gök & Peker 2017). According to Huong et al. (2021), companies can enhance financial performance by implementing green innovation as part of their corporate social responsibility strategy. Green innovation involves developing and implementing environmentally friendly technologies and practices that reduce negative environmental impacts. By adopting green innovation, companies can gain various benefits, such as improved operational efficiency, reduced energy costs, and more effective resource management. Several studies have revealed that green innovation successfully mediates the relationship between corporate social

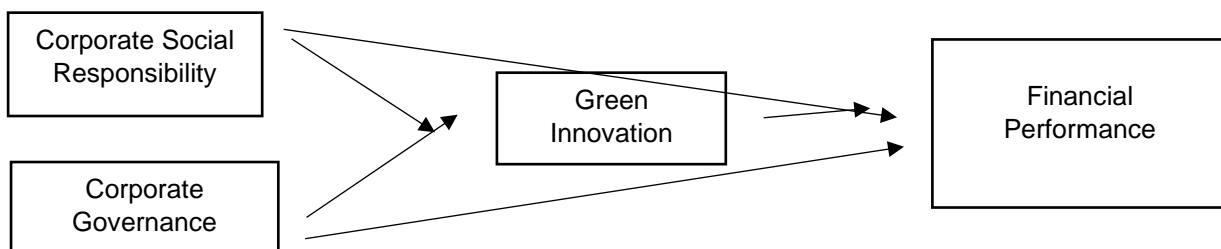
responsibility and financial performance (Homayoun et al. 2023; Sarfraz et al. 2023; Li et al. 2023; Ma et al. 2023)

H<sub>6</sub>: Green innovation mediates the relationship between corporate social responsibility and financial performance.

Corporate Governance and Financial Performance are mediated by Green Innovation

Zafar et al. (2021) emphasize that strong corporate governance is crucial for promoting environmentally friendly innovation in Pakistan. The relationship between corporate governance and green innovation is significant. When companies implement effective corporate governance practices, it encourages them to adopt various environmentally supportive practices. With good corporate governance, companies are more likely to prioritize sustainability and environmental responsibility. This not only helps protect the environment but also enhances the company's reputation and creates a competitive advantage in the market. When a company is well-managed and applies green innovation to reduce environmental pollution, it can lead to improved financial performance. Companies with good corporate governance are more likely to use green innovation as a strategy to enhance financial performance. This can be achieved through operational efficiency, improved reputation, and better access to capital and broader markets (Khan et al. 2023). According to (Tabash et al. 2021), gender diversity has a negative relationship with financial performance. This means that increased female representation on the board does not contribute to improved financial performance. Some studies have indicated that green innovation successfully mediates the relationship between corporate governance and financial performance (Zafar et al. 2021; Mahrani & Soewarno 2018).

H<sub>7</sub>: Green innovation mediates the relationship between corporate governance and financial performance.



**Figure 1. Framework**  
Source: Processed data (2024)

## METHODS

This study uses a quantitative method. The quantitative method is a research approach that collects and analyzes data in numerical form. The data collection type for this research is secondary data. The research period covers the last 5 years, from 2019 to 2023. The sample used in this study consists of mining companies. This study analyzes several variables: independent variables (Corporate Social Responsibility, Corporate Governance), the dependent variable (Financial Performance), moderated by (Green Innovation).

The analysis method used in this study is Panel Regression. Panel Regression is used to measure several variables from the data related to various individuals (Khornida 2024). The application used for testing the data is STATA. The sampling method for this study is purposive sampling. This method is used when researchers want to gain in-depth and specific insights from a sample considered representative or having certain



characteristics important for the research objectives. It allows for identifying relationships between dependent and independent variables. This study collects data from 30 companies using standards and listed on the Indonesia Stock Exchange (IDX). There are standards and specifications for data collection, as follows:

1. Data collection for this study uses mining companies.
2. Mining companies listed on the IDX (Indonesia Stock Exchange).
3. Mining companies that have financial statements and sustainability reports.

**Table 1. Variable Measurement**

| Variable                        | Formula  | Sources   |
|---------------------------------|--|---|
| <b>Dependent Variable</b>       |  |   |
| Financial Performance           | ROA = Net Profit / Total Asset   | (Arian et al., 2023) (Kristina & Khornida 2023) |
| <b>Independent Variable</b>     |  |   |
| Corporate Social Responsibility | Standard GRI (135 indicators) GRI 101-GRI 419 Measurement  | (Mahrani & Soewarno 2018)                       |
| Corporate Governance            | Gender Diversity (percentage the proportion of female directors)   | (Tabash et al., 2021) (Suprpto and Ng 2023)     |
| <b>Mediated Variable</b>        |  |   |
| Green Innovation                | <ul style="list-style-type: none"> <li>- The production process uses new technologies to reduce energy, water, and waste.</li> <li>- The product uses less non-polluting or hazardous substances (environmentally friendly)</li> <li>- Using an eco-friendly product package (e.g., paper and plastic)</li> <li>- Components or materials in the production process can be recycled or reconditioned.</li> </ul> | (Agustia, Sawarjuwono, and Dianawati 2019)      |

Source: Processed data (2024)

## RESULTS AND DISCUSSION

The following are the results of descriptive statistics that describe the relationship between variables.

**Table 2. Descriptive Statistics**

| Variable | Obs | Mean      | Std.dev.  | Min     | Max    |
|----------|-----|-----------|-----------|---------|--------|
| ROA      | 150 | 0,0690382 | 0,115936  | -0,1892 | 0,6176 |
| GD       | 150 | 0,1227494 | 0,1549395 | 0       | 0,5    |
| CSR      | 150 | 67,69333  | 35,19608  | 0       | 148    |
| GI       | 150 | 0,8716667 | 0,1915511 | 0       | 1      |

Note: Financial Performance (ROA), Corporate Governance (GD), Corporate Social Responsibility (CSR), Green Innovation (GI)

Source: Processed data (2024)

Table 2 presents a summary of descriptive statistics. The mean value of financial performance is 0.0690382 for the sample of mining companies listed on the Indonesia Stock Exchange (IDX). The smallest value of financial performance is -0.1892, indicating that some companies have not utilized their assets optimally. The largest value of financial performance is 0.6176, while the standard deviation is 0.115936. The mean value of gender diversity is 0.1227494, with the smallest value being 0, indicating no



female representation at all on some companies' boards of directors. The largest value of gender diversity is 0.5, and the standard deviation is 0.1549395. The mean value of corporate social responsibility is 67.69333, with the smallest value being 0, meaning some companies do not engage in corporate social responsibility activities, possibly due to a lack of awareness of its importance and its positive impact on company reputation. The largest value of corporate social responsibility is 148, and the standard deviation is 35.19608. The mean value of green innovation is 0.8716667, with the smallest value being 0, indicating some companies have not yet adopted green innovation or environmentally friendly products. The largest value of green innovation is 1, and the standard deviation is 0.1915511. The standard deviation of financial performance and gender diversity is considered highly variable because the standard deviation is greater than the mean, whereas the standard deviation of corporate social responsibility and green innovation is considered less variable, as the standard deviation is smaller than the mean.

**Table 3. Correlation Matrix**

|     | ROA     | GI     | GD     | CSR    |
|-----|---------|--------|--------|--------|
| ROA | 1,0000  |        |        |        |
| GI  | 0,1686  | 1,0000 |        |        |
| GD  | -0,0095 | 0,0716 | 1,0000 |        |
| CSR | 0,2447  | 0,4182 | 0,2098 | 1,0000 |

Note: Financial Performance (ROA), Corporate Governance (GD), Corporate Social Responsibility (CSR), Green Innovation (GI)

Source: Processed data (2024)

The Correlation Matrix in Table 3 shows that the variables green innovation and corporate social responsibility have a positive correlation with ROA, while the corporate governance (GD) variable has a negative correlation with financial performance (ROA). This indicates the relationship between financial performance (ROA) with green innovation, corporate governance (GD), and corporate social responsibility. It can be concluded that good financial performance (ROA) is influenced by the practice of green innovation and a strong commitment to corporate social responsibility. On the other hand, the negative impact of corporate governance (GD) on financial performance (ROA) may result from an excessive focus on corporate governance (GD).

**Table 4. T-test**

| Dependent Variable: Financial Performance (ROA) |             |       |                      |
|---|-------------|-------|----------------------|
| Variable  | Coefficient | Prob. | Result               |
| GD  | 0,0226745   | 0,712 | Not Significant      |
| CSR   | 0,0010704   | 0,000 | Significant Positive |
| Dependent Variable: Financial Performance (ROA) |             |       |                      |
| Variable  | Coefficient | Prob. | Result               |
| GI  | 0,0901261   | 0,135 | Not Significant      |
| Dependent Variable: Green Innovation (GI)       |             |       |                      |
| Variable  | Coefficient | Prob. | Result               |
| GD  | -0,1241186  | 0,128 | Not Significant      |
| CSR   | 0,0009001   | 0,014 | Significant Positive |

Note: Financial Performance (ROA), Corporate Governance (GD), Corporate Social Responsibility (CSR), Green Innovation (GI)

Source: Processed data (2024)





The first hypothesis shows that corporate social responsibility has a significant positive effect on financial performance, as indicated by the probability value of 0.000. A probability value of  $<0.05$  means it is significant. This is because companies actively implement corporate social responsibility within the organization, enhancing the company's reputation in the eyes of investors, consumers, and the general public. Corporate social responsibility programs can also manage the company's environment, which affects the company's financial performance. Companies that successfully practice corporate social responsibility are more likely to enter new markets and secure funding from investors who care about sustainability and social responsibility. Many investors and banks now prefer to invest in companies that take corporate social responsibility seriously, which can increase the company's value in the stock market. Thus, corporate social responsibility can help companies access more diverse funding sources. This study yields similar results to the research by (Homayoun et al. 2023; Lee et al. 2023; Li et al. 2023).

The second hypothesis shows that corporate governance does not have a significant effect on financial performance, as indicated by the probability value of 0.712. A probability value of  $>0.05$  means it is not significant. This may be due to a lack of attention to corporate governance, as individual interests tend to focus on personal gains rather than the overall well-being of the company. Companies that do not implement strong and effective practices may experience inconsistency in the relationship between corporate governance and financial performance. The gender diversity variable within corporate governance does not have a significant impact on financial performance, as this policy is often implemented as a formality and not executed properly. Companies focus more on short-term results rather than the long-term benefits of diversity. Financial performance is more influenced by external factors such as economic conditions and market competition, which often have a more dominant impact. The lack of consistent evidence regarding the benefits of gender diversity also makes companies hesitant to view it as an important factor, and corporate culture that does not support inclusion hinders the potential benefits of gender diversity. This study yields similar results to the research by (Dani et al. 2019) (Hesniati et al. 2024)

The third hypothesis shows that green innovation does not have a significant effect on financial performance, as indicated by the probability value of 0.135. A probability value of  $>0.05$  means it is not significant. This could be due to regulatory barriers that complicate or hinder the adoption of new technologies, making it difficult for companies to implement green innovation. As a result, when companies do not adopt green innovation, the market or investors may not recognize the added value of green innovation, leading to low demand for products or services, which can affect financial performance. This can also occur because the implementation of environmentally friendly technologies and practices often requires significant initial investment and takes time to see results. Many companies focus more on short-term profits rather than the long-term benefits of green innovation. Additionally, the lack of consistent evidence regarding the positive impact of green innovation on financial performance makes companies reluctant to allocate significant resources to these initiatives. The findings of this study are in contrast with those of (Kraus et al. 2020).

The fourth hypothesis shows that corporate social responsibility has a positive effect on green innovation, as indicated by the probability value of 0.014. A probability value of  $<0.05$  means it is significant. This can be due to companies that take corporate social responsibility seriously being more open to investing in green innovation as part of their strategy to achieve sustainability goals. Companies involved in corporate social responsibility, often prioritizing a good reputation, use green innovation for environmental benefits as a means of enhancing the company's image and attracting investor attention.



By practicing corporate social responsibility, companies not only enhance their reputation and meet stakeholder expectations but also gain a competitive advantage in the market through innovations that reduce environmental impact and improve operational efficiency. This study yields similar results to previous research by (Homayoun et al. 2023; Li et al. 2023; Ma et al. 2023).

According to Table 4, there is a discrepancy in the results for the fifth hypothesis, which shows that corporate governance does not significantly affect green innovation, as indicated by the probability value of 0.128. A probability value of  $>0.05$  means it is not significant. This may be due to corporate governance lacking sufficient knowledge and experience in green innovation. The limited understanding of environmental issues related to green innovation becomes a barrier to contributing to the company. This can also occur because corporate governance policies often focus on aspects such as compliance, transparency, and risk management, which may not always align with the drive for environmental innovation. Furthermore, good corporate governance does not always guarantee that companies will invest resources appropriately in environmentally friendly innovation. These decisions are often influenced by managers' priorities, market needs, and external pressures. If the structure and processes of corporate governance do not specifically encourage environmental innovation, the impact on the development and implementation of green innovation will be less significant. This study does not align with the findings of (Asni & Agustia 2022).

**Table 5. Mediation Test**

| <b>Dependent Variable: Financial Performance (ROA)</b> |                    |              |
|--|--------------------|--------------|
| <b>Variable</b>  | <b>t-Statistic</b> | <b>Prob.</b> |
| GD   | -1,07027366        | 0,28449615   |
| CSR  | 1,28245062         | 0,19968462   |

Note: Financial Performance (ROA), Corporate Governance (GD), Corporate Social Responsibility (CSR), Green Innovation (GI)

Source: Processed data (2024)

Based on Table 5, the sixth hypothesis shows that corporate governance does not successfully mediate the relationship between financial performance and green innovation. This result is indicated by a probability value of 0.28449615. Since the probability value is  $>0.05$ , it is not significant. This may be due to companies struggling to establish standards for measuring the impact of green innovation, making it ineffective as a mediator between corporate governance and financial performance. Company culture can also be a barrier, as it may not support either corporate governance or green innovation within the company. Additionally, green innovation requires significant financial investment and time to yield tangible financial benefits. Meanwhile, corporate governance often focuses on short-term structures and policies that may not directly influence innovation decisions. Good corporate governance does not always guarantee that a company will prioritize or succeed in green innovation. Other factors, such as business strategies, market conditions, and existing technologies, also significantly impact financial performance. Therefore, green innovation may not always effectively link corporate governance with financial outcomes.

The seventh hypothesis indicates that green innovation mediates the relationship between corporate social responsibility (CSR) and financial performance. However, the results of this study show a difference, as green innovation does not successfully mediate the relationship between CSR and financial performance, with a probability value of 0.19968462. Since the probability value is  $>0.05$ , it is not significant. This may be because the company prioritizes financial gains over green innovation, which



complicates the mediating effect of green innovation on the CSR-financial performance relationship, as the company focuses more on immediate results. CSR might not have a significant impact on financial performance through green innovation because CSR often includes various other initiatives, such as social welfare and ethics, which are not always directly related to environmental innovation. Additionally, green innovation requires substantial investment and time to yield tangible financial benefits. On the other hand, CSR can deliver financial benefits more quickly through enhanced reputation and consumer trust. If a company does not effectively integrate green innovation into its CSR strategy or if environmental initiatives are not strongly implemented, green innovation may not be effective in linking CSR to financial performance.

**Table 6. F-test**

|                         |                      |
|-------------------------|----------------------|
| <b>GD, CSR &gt; GI</b>  | Prob > F = 0,0226    |
| <b>GI &gt; ROA</b>      | Prob > chi2 = 0,1350 |
| <b>GD, CSR &gt; ROA</b> | Prob > chi2 = 0,0003 |

Note: Financial Performance (ROA), Corporate Governance (GD),  
 Corporate Social Responsibility (CSR), Green Innovation (GI)

Source: Processed data (2024)

Table 6 shows that the probability value for the relationship between corporate governance, corporate social responsibility (CSR), and green innovation is 0.0226. Since this probability value is  $<0.05$ , it is significant. This indicates that corporate governance and CSR positively impact green innovation, suggesting that this relationship is worthy of further investigation. The probability value for green innovation's impact on ROA (Return on Assets) is 0.1350. As this value is  $>0.05$ , it is not significant. Therefore, it can be concluded that green innovation does not have an impact on ROA, indicating that this relationship is not suitable for further study. The probability value for corporate governance and CSR's impact on ROA is 0.0003. Since this probability value is  $<0.05$ , it is significant. This implies that both corporate governance and CSR positively affect ROA, making this relationship worthy of further investigation.

## CONCLUSION

The study analyzes the impact of corporate social responsibility (CSR) and corporate governance on financial performance, mediated by green innovation. This research uses secondary data, with samples collected from mining companies. The reports used include annual reports and sustainability reports. The findings indicate that CSR has a significant positive effect on financial performance, corporate governance does not significantly affect financial performance, and both CSR and corporate governance are not successfully mediated by green innovation. The results of this study show that most findings lack sufficient significance.

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