



The Mediating Role of Green Innovation in Corporate Governance and Firm Performance

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Abstract

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This study explores the relationship between corporate governance, green innovation, and firm performance within the context of modern business challenges that demand efficiency, transparency, and sustainability. Using a library research approach, this paper reviews relevant literature published last five years to provide a comprehensive understanding of the dynamics between board size, independent commissioners, and ownership concentration in influencing firm performance, both directly and indirectly. The findings reveal that corporate governance mechanisms can enhance transparency and monitoring effectiveness, but their influence on firm performance remains inconsistent due to contextual factors such as regulatory environment and ownership structures. Meanwhile, green innovation emerges as a strategic tool that not only improves environmental performance but also contributes to financial stability and competitive advantage. More importantly, green innovation acts as a mediating variable that strengthens the positive relationship between corporate governance and firm performance, particularly in the manufacturing sector. This study contributes to the academic discourse by addressing research gaps and provides practical implications for firms seeking to integrate governance and sustainability strategies.



1. Introduction

In the era of globalization and increasingly fierce business competition, firm performance is one of the key factors for the company's sustainability and competitiveness. Companies are not only required to generate profits, but must also be able to face challenges in the form of operational efficiency, managerial transparency, and environmental sustainability. This encourages companies to balance profit orientation with sustainability principles. In this context, corporate governance and green innovation are two important interrelated instruments in determining the success of the company. Corporate governance is seen as a fundamental mechanism to ensure healthy, transparent, fair, and long-term oriented business practices.¹

The implementation of good corporate governance is believed to increase investor confidence while reducing the risk of excessive management. A number of studies show that corporate governance plays an important role in supporting green innovation as a response to global environmental issues.² On the other hand, green innovation is a company's strategy in responding to environmental challenges while creating economic added value. Environmentally friendly innovations not only contribute to energy efficiency and emission reduction, but also positively impact the company's image, competitiveness, and long-term financial performance.

¹ Andreas Georg Scherer and Christian Voegtlin. "Corporate governance for responsible innovation: Approaches to corporate governance and their implications for sustainable development." *Academy of Management Perspectives* 34, no. 2 (2020): 182-208.

² Adi Hasan Ragil Saputra, Endang Sulistya Rini, and Yeni Absah. "Pengaruh corporate social responsibility dan green innovation terhadap kinerja keuangan perusahaan." *MBR (Management and Business Review)* 8, no. 1 (2024): 1-23.

Previous research has shown that green innovation can reduce financial risks and corporate volatility, while improving company value and environmental performance.³

However, empirical findings related to the relationship between corporate governance, green innovation, and firm performance are still mixed. Some studies have found that large board sizes can increase the effectiveness of supervision, while other studies show negative impacts due to high coordination costs.⁴ Likewise, the role of independent commissioners and ownership concentration often show different results in influencing innovation and company performance. This indicates that there is a research gap that needs to be studied further. Especially in the Indonesian context, studies that link corporate governance with green innovation simultaneously to firm performance are still limited. In fact, the integration of these two variables is very relevant in supporting business sustainability in the midst of regulatory demands and global competition.

Candy et al.⁵ emphasized the importance of green innovation as a bridge that can mediate the influence of corporate governance on company performance, especially in the manufacturing sector which has a significant contribution to carbon emissions. The urgency of this research is further strengthened by the increasing

³ Lewis Liu. "Green innovation, firm performance, and risk mitigation: evidence from the USA." *Environment, Development and Sustainability* 26, no. 9 (2024): 24009-24030.

⁴ María Consuelo Pucheta-Martínez and Isabel Gallego-Álvarez. "Do board characteristics drive firm performance? An international perspective." *Review of Managerial Science* 14, no. 6 (2020): 1251-1297.

⁵ Candy Candy, Jesslyn Jesslyn, and Hery Haryanto. "Hubungan Antara Corporate Governance dan Green Innovation: Studi Terhadap Kinerja Perusahaan Manufaktur." *Equilibrium: Jurnal Ilmiah Ekonomi, Manajemen dan Akuntansi* 13, no. 2 (2024): 292–305.

global awareness of environmental and sustainability issues. Companies need to implement good corporate governance not only as compliance, but also as a strategy in integrating green innovation into business operations. Thus, this study aims to: (1) analyze the influence of board size, independent commissioners, and ownership concentration on firm performance; (2) examining the role of green innovation in improving company performance; and (3) examine whether green innovation can be a mediating variable between corporate governance and firm performance.

By filling the research gap, this study is expected to make an academic contribution to the development of the literature on corporate governance and green innovation, as well as provide practical implications for companies in managing good governance and encouraging environmentally friendly innovation as a long-term sustainability strategy. This research is also relevant in supporting the sustainable development agenda (SDGs), especially goals related to sustainable consumption and production as well as action on climate change.

2. Literature Review

Corporate governance has become an important factor in directing managerial practices towards better company performance. Governance mechanisms such as board size, independent commissioners, and ownership concentration are believed to affect the effectiveness of supervision and decision-making. Research shows that optimal board sizes can improve the quality of monitoring, but too large can cause coordination problems so the results are not

always consistent.⁶ The role of independent commissioners is also an important highlight in ensuring transparency and accountability. Independent commissioners are considered to be able to suppress opportunistic management behavior while encouraging decisions that are more oriented to the interests of shareholders and other stakeholders. However, some studies have also found that the influence of independent commissioners on green innovation is not always significant, especially if their existence is merely a formality with no force in decision-making practices.

On the other hand, ownership concentration has a dual relationship with the company's performance. A high concentration of ownership can strengthen control over management, but it also risks creating decisions that are biased in the interests of the majority shareholders. In the context of innovation, long-term oriented shareholders tend to encourage investment in sustainable green innovation, while short-term investors place more emphasis on quick profits. Green innovation itself has proven to have a strategic role in improving the competitiveness and sustainability performance of the company. Cross-country studies have found that the implementation of green innovation significantly increases company value while reducing financial and environmental risks.⁷ Furthermore, research by Candy et al.⁸ confirms that green innovation can act as a mediating variable that strengthens the influence of corporate governance on company performance, especially in the

⁶ Nur Asni and Dian Agustia. "Does corporate governance induce green innovation? An emerging market evidence." *Corporate Governance: The International Journal of Business in Society* 22, no. 7 (2022): 1375-1389.

⁷ Lewis Liu. "Green innovation, firm performance, and risk mitigation: evidence from the USA." *Environment, Development and Sustainability* 26, no. 9 (2024): 24009-24030.

⁸ Candy Candy, Jesslyn Jesslyn, and Hery Haryanto. "Hubungan Antara Corporate Governance dan Green Innovation: Studi Terhadap Kinerja Perusahaan Manufaktur." *Equilibrium: Jurnal Ilmiah Ekonomi, Manajemen dan Akuntansi* 13, no. 2 (2024): 292-305.

Indonesian manufacturing sector. Thus, the current literature emphasizes that the relationship between corporate governance, green innovation, and firm performance is still dynamic, with research results varying depending on the context, sector, and indicators used.

3. Method

This research uses a library research approach that focuses on the analysis of theories, concepts, and results of previous research related to corporate governance, green innovation, and firm performance. Literature studies are chosen because the topics raised require an in-depth understanding of existing conceptual constructions and empirical findings, so that they can be used to identify research gaps as well as develop a strong theoretical framework of thought. Through this method, researchers do not collect field data directly, but rather examine relevant academic literature, especially articles from reputable international journals published in the last five years. The main data sources for this study come from scientific publications available through the Google Scholar database. The selected article must meet several criteria, namely: first, focusing on corporate governance, green innovation, or firm performance issues; second, published within the last five years to be relevant to the latest developments; and third, it is written in a context that allows for generalization into the study of companies in Indonesia, especially the manufacturing sector.

In addition, previous research that explicitly mentioned the mediating role of green innovation in the relationship between corporate governance and corporate

performance was also used as the main reference. The research procedure begins by collecting articles according to predetermined keywords. After that, a selection process is carried out to ensure the relevance, novelty, and contribution of each study. The selected articles were then analyzed thematically by grouping the results of the research based on the main variables, namely board size, independent commissioners, ownership concentration, green innovation, and firm performance.

Furthermore, the analysis is directed to identify similarities, differences, and contradictions in the results of previous research. In this way, researchers can map the research gaps that are still open and formulate research arguments more systematically. The literature study approach in this study also provides benefits in integrating various cross-country and cross-sectoral perspectives. By referring to international literature, this research not only captures local conditions, but also places the issues of corporate governance and green innovation in a global context. The results of this method are expected to be able to present a comprehensive conceptual framework, as well as provide a solid basis for analyzing the relationship between corporate governance mechanisms, environmentally friendly innovations, and corporate performance in the face of global competition challenges and environmental sustainability demands.

4. Results

4.1. The Influence of Corporate Governance on Company Performance

The results of the literature analysis show that the corporate governance mechanism has an important role in determining the quality of company

management, which ultimately has an impact on the company's performance. One of the main mechanisms is the size of the board of directors. Some studies have found that a larger board size can improve the quality of monitoring due to the diversity of perspectives and expertise possessed by board members. This condition encourages management to be more careful in making strategic decisions, so that it has positive implications for firm performance. However, a board size that is too large has the potential to cause coordination problems, slow down the decision-making process, and reduce the effectiveness of supervision.⁹

In addition to board size, the existence of independent commissioners also affects the company's performance. Independent commissioners are seen as parties who are able to maintain a balance of interests between majority, minority, and other stakeholders. With a more objective supervisory function, they can suppress management's opportunistic behavior. Previous research has shown that the higher the proportion of independent commissioners on the board, the better the company's performance due to increased transparency and accountability of managerial decisions.¹⁰ However, in some cases, the existence of independent commissioners is only a formality with no substantive role in the company's strategy, so their impact on performance is not always significant.

Ownership concentration also has a considerable influence. A high concentration of ownership can strengthen shareholder control over management,

⁹ María Consuelo Pucheta-Martínez and Isabel Gallego-Álvarez. "Do board characteristics drive firm performance? An international perspective." *Review of Managerial Science* 14, no. 6 (2020): 1251-1297.

¹⁰ Bishawjit Chandra Deb, Md Mominur Rahman, and Mohammad Haseeb. "Unveiling the impact on corporate social responsibility through green tax and green financing: a PLS-SEM approach." *Environmental Science and Pollution Research* 31, no. 1 (2024): 1543-1561.

thereby reducing the likelihood of agency problems occurring. Investors with large holdings tend to have long-term interests and therefore are more likely to encourage management to make decisions that support the sustainability of the company. However, other research suggests that the concentration of ownership can lead to majority shareholder dominance, which sometimes conflicts with the interests of minority shareholders, thus creating distortions in the company's performance.¹¹ Thus, the results of the literature show that corporate governance has a complex relationship with firm performance. Contextual factors such as company size, regulations, and business culture also determine the direction of the relationship.

4.2. The Role of Green Innovation in Improving Company Performance

The next analysis shows that green innovation has a strategic role in improving company performance, both from financial and non-financial aspects. Green innovation can be in the form of product innovation, processes, or business models that are oriented towards energy efficiency, emission reduction, and environmental sustainability.¹² A number of studies confirm that the implementation of green innovation not only helps companies meet the demands of environmental regulations, but also increases competitiveness through cost efficiency and a positive reputation in the eyes of consumers and investors. Cross-country research shows

¹¹ Marcellin Makpotche, Kais Bouslah, and Bouchra M'Zali. "Corporate governance and green innovation: international evidence." *Review of Accounting and Finance* 23, no. 2 (2024): 280-309.

¹² Mingyue Wang, Yingming Li, Junqiang Li, and Zitong Wang. "Green process innovation, green product innovation and its economic performance improvement paths: A survey and structural model." *Journal of environmental management* 297 (2021): 113282.

that green innovation is positively related to company value and can reduce long-term financial risks.

For example, companies that invest in green innovation are able to lower profit volatility and credit risk, which ultimately increases investor confidence and corporate stability.¹³ These findings confirm that green innovation is not only relevant from an environmental perspective, but also a rational and profit-oriented business strategy. In the context of Southeast Asia, research shows that companies with high levels of green innovation tend to have better financial performance. This is due to the company's increasing operational efficiency and ability to adapt to increasingly stringent environmental regulations. In addition, the positive reputation of sustainable business practices provides a competitive advantage in the global market.¹⁴ In Indonesia, research by Yang and Zhu.¹⁵ shows that green innovation contributes significantly to improving the performance of manufacturing companies. These findings confirm that green innovation is not only meeting the demands of regulatory compliance, but also a key strategy in the face of global competition.

¹³ Jianhong Cao, Siong Hook Law, Abdul Rahim Bin Abdul Samad, Wan Norhidayah Binti W. Mohamad, Jianlong Wang, and Xiaodong Yang. "Impact of financial development and technological innovation on the volatility of green growth—evidence from China." *Environmental Science and Pollution Research* 28, no. 35 (2021): 48053-48069.

¹⁴ Suhairi Suhairi, Devi Safitri, Muhammad Fauzan, and Muhammad Helma Musyafa. "Etika Dan Tanggung Jawab Sosial Dalam Pemasaran Global: Membangun Reputasi Yang Berkelanjutan." *Jurnal Minfo Polgan* 12, no. 2 (2023): 2660-2664.

¹⁵ Haochang Yang and Xuan Zhu. "Research on green innovation performance of manufacturing industry and its improvement path in China." *Sustainability* 14, no. 13 (2022): 8000.

4.3. Green Innovation as a Mediation Variable

One of the important findings from the literature review is the role of green innovation as a mediating variable in the relationship between corporate governance and firm performance. Strong corporate governance is believed to be able to encourage companies to invest in green innovation as part of a long-term strategy. With green innovation, companies can improve efficiency, reputation, and sustainability, which ultimately positively impacts overall performance. Empirical research shows that companies with good governance tend to be more proactive in developing green innovation. Mechanisms such as independent commissioners and long-term oriented ownership concentration encourage management to invest in environmentally friendly innovations. Thus, green innovation acts as a bridge that strengthens the positive influence of corporate governance on firm performance.¹⁶

In addition, comparative studies in the Asian region confirm that green innovation plays an important role in linking the corporate governance index to company performance. Companies with higher governance scores tend to have greater green innovation intensity, which in turn improves the company's financial performance and sustainability.¹⁷ In the Indonesian context, Yang and Zhu¹⁸ shows that green innovation can be a significant mediating variable, especially in the

¹⁶ Thanh Tiep Le. "How Do Corporate Social Responsibility And Green Innovation Transform Corporate Green Strategy Into Sustainable Firm Performance?." *Journal of Cleaner Production* 362 (2022): 132228.

¹⁷ Parvez Alam Khan, Satirejit Kaur Johl, Anil Kumar, and Sunil Luthra. "Hope-Hype Of Green Innovation, Corporate Governance Index, And Impact On Firm Financial Performance: A Comparative Study of Southeast Asian Countries." *Environmental Science and Pollution Research* 30, no. 19 (2023): 55237-55254.

¹⁸ Haochang Yang and Xuan Zhu. "Research on green innovation performance of manufacturing industry and its improvement path in China." *Sustainability* 14, no. 13 (2022): 8000.

manufacturing sector. This shows that strong corporate governance not only has a direct impact on company performance, but also creates an environment conducive to sustainable innovation. Thus, the relationship between corporate governance, green innovation, and firm performance can be understood as a mutually reinforcing mechanism. The results of this study confirm that the integration of corporate governance and green innovation is an effective strategy in improving company performance in an era of increasingly fierce global competition. This not only contributes to the sustainability of the company, but also supports the sustainable development agenda at a broader level.

5. Discussion

The results of this study confirm that corporate governance has an important role in determining the direction and quality of company management. Mechanisms such as board size, independent commissioners, and ownership concentration contribute to increased transparency, oversight, and decision-making effectiveness. However, the findings of the literature show that the influence of corporate governance on firm performance is not linear, but rather influenced by contextual factors such as regulations, business culture, and industry sectors. For example, a large board size can increase the diversity of skills, but it also creates coordination problems.¹⁹ This explains the inconsistency of previous research results and opens

¹⁹ Pamela Wicker, Svenja Feiler, and Christoph Breuer. "Board gender diversity, critical masses, and organizational problems of non-profit sport clubs." *European Sport Management Quarterly* 22, no. 2 (2022): 251-271.

up space for further exploration in the context of Indonesia, which has different governance characteristics and ownership structures from developed countries.²⁰

Furthermore, green innovation has proven to be an important factor in improving company performance. By reducing operational costs through energy efficiency and strengthening the company's reputation in the eyes of investors and consumers, green innovation plays a dual role as a business strategy as well as a sustainability strategy. These results are consistent with the global literature that confirms that green innovation is not only ecologically beneficial, but also financially beneficial. Companies that are oriented towards environmentally friendly innovation are able to reduce the risk of volatility and increase the value of companies in the capital market.²¹

Another interesting aspect is the role of green innovation as a mediating variable. Strong corporate governance creates an environment that supports the development of green innovation. This happens because good governance demands accountability and sustainability, so management is more encouraged to make strategic investments in green innovation. Research in Indonesia shows that green innovation is able to strengthen the influence of corporate governance on firm performance, especially in the manufacturing sector. These findings are in line with

²⁰ Nur Asni and Dian Agustia. "Does corporate governance induce green innovation? An emerging market evidence." *Corporate Governance: The International Journal of Business in Society* 22, no. 7 (2022): 1375-1389.

²¹ Jianhong Cao, Siong Hook Law, Abdul Rahim Bin Abdul Samad, Wan Norhidayah Binti W. Mohamad, Jianlong Wang, and Xiaodong Yang. "Impact of financial development and technological innovation on the volatility of green growth—evidence from China." *Environmental Science and Pollution Research* 28, no. 35 (2021): 48053-48069.

the literature that confirms the synergistic relationship between corporate governance, environmentally friendly innovation, and sustainable performance.²²

This discussion emphasized that the relationship between corporate governance, green innovation, and firm performance is interrelated and mutually reinforcing. Companies with good governance tend to be better equipped to adopt environmentally friendly innovations, which ultimately increase global competitiveness while meeting sustainability demands. However, the complexity of local contexts such as regulations and ownership structures makes these relationships not always consistent. Therefore, further research needs to explore additional variables such as organizational culture, ownership orientation, and environmental regulation to provide a more comprehensive understanding. Practically, the implication of these findings is the need for companies to strengthen governance while making green innovation an integral part of their business strategy. In this way, the company not only improves short-term performance, but also prepares the foundation for long-term sustainability in the midst of increasingly competitive global competition.

6. Conclusion

This research emphasizes that corporate governance and green innovation are two important factors that are interrelated in improving company performance. Corporate governance mechanisms such as the size of the board of directors,

²² Candy Candy, Jesslyn Jesslyn, and Hery Haryanto. "Hubungan Antara Corporate Governance dan Green Innovation: Studi Terhadap Kinerja Perusahaan Manufaktur." *Equilibrium: Jurnal Ilmiah Ekonomi, Manajemen dan Akuntansi* 13, no. 2 (2024): 292–305.

independent commissioners, and ownership concentration have been proven to affect the effectiveness of supervision, transparency, and strategic decision-making. However, its effect on a company's performance is not always consistent, as it depends on the industry context, regulations, and organizational culture. On the other hand, green innovation plays a central role in strengthening the company's competitiveness. Eco-friendly innovations not only help companies meet regulatory and social responsibility demands, but also improve operational efficiency, reputation, and company value in the eyes of stakeholders.

Thus, green innovation becomes a strategic bridge that connects corporate governance with the achievement of sustainable performance. The results of this study confirm that the integration between corporate governance and green innovation can be an effective strategy in facing the challenges of globalization and environmental issues. The academic contribution of this research is to fill the gap of previous studies, while its practical contribution lies in the recommendations for companies to make good corporate governance and green innovation the main pillars of long-term sustainability strategies.

References

- Asni, Nur, and Dian Agustia. "Does corporate governance induce green innovation? An emerging market evidence." *Corporate Governance: The International Journal of Business in Society* 22, no. 7 (2022): 1375-1389.
- Candy, Candy, Jesslyn Jesslyn, and Hery Haryanto. "Hubungan Antara Corporate Governance dan Green Innovation: Studi Terhadap Kinerja Perusahaan

- Manufaktur." *Equilibrium: Jurnal Ilmiah Ekonomi, Manajemen dan Akuntansi* 13, no. 2 (2024): 292–305.
- Cao, Jianhong, Siong Hook Law, Abdul Rahim Bin Abdul Samad, Wan Norhidayah Binti W. Mohamad, Jianlong Wang, and Xiaodong Yang. "Impact of financial development and technological innovation on the volatility of green growth—evidence from China." *Environmental Science and Pollution Research* 28, no. 35 (2021): 48053-48069.
- Deb, Bishawjit Chandra, Md Mominur Rahman, and Mohammad Haseeb. "Unveiling the impact on corporate social responsibility through green tax and green financing: a PLS-SEM approach." *Environmental Science and Pollution Research* 31, no. 1 (2024): 1543-1561.
- Khan, Parvez Alam, Satirenjit Kaur Johl, Anil Kumar, and Sunil Luthra. "Hope-Hype Of Green Innovation, Corporate Governance Index, And Impact On Firm Financial Performance: A Comparative Study of Southeast Asian Countries." *Environmental Science and Pollution Research* 30, no. 19 (2023): 55237-55254.
- Le, Thanh Tiep. "How Do Corporate Social Responsibility And Green Innovation Transform Corporate Green Strategy Into Sustainable Firm Performance?." *Journal of Cleaner Production* 362 (2022): 132228.
- Liu, Lewis. "Green innovation, firm performance, and risk mitigation: evidence from the USA." *Environment, Development and Sustainability* 26, no. 9 (2024): 24009-24030.

- Makpotche, Marcellin, Kais Bouslah, and Bouchra M'Zali. "Corporate governance and green innovation: international evidence." *Review of Accounting and Finance* 23, no. 2 (2024): 280-309.
- Pucheta-Martínez, María Consuelo, and Isabel Gallego-Álvarez. "Do board characteristics drive firm performance? An international perspective." *Review of Managerial Science* 14, no. 6 (2020): 1251-1297.
- Saputra, Adi Hasan Ragil, Endang Sulistya Rini, and Yeni Absah. "Pengaruh corporate social responsibility dan green innovation terhadap kinerja keuangan perusahaan." *MBR (Management and Business Review)* 8, no. 1 (2024): 1-23.
- Scherer, Andreas Georg, and Christian Voegtlin. "Corporate governance for responsible innovation: Approaches to corporate governance and their implications for sustainable development." *Academy of Management Perspectives* 34, no. 2 (2020): 182-208.
- Suhairi, Suhairi, Devi Safitri, Muhammad Fauzan, and Muhammad Helma Musyafa. "Etika Dan Tanggung Jawab Sosial Dalam Pemasaran Global: Membangun Reputasi Yang Berkelanjutan." *Jurnal Minfo Polgan* 12, no. 2 (2023): 2660-2664.
- Wang, Mingyue, Yingming Li, Junqiang Li, and Zitong Wang. "Green process innovation, green product innovation and its economic performance improvement paths: A survey and structural model." *Journal of environmental management* 297 (2021): 113282.

- Wicker, Pamela, Svenja Feiler, and Christoph Breuer. "Board gender diversity, critical masses, and organizational problems of non-profit sport clubs." *European Sport Management Quarterly* 22, no. 2 (2022): 251-271.
- Yang, Haochang, and Xuan Zhu. "Research on green innovation performance of manufacturing industry and its improvement path in China." *Sustainability* 14, no. 13 (2022): 8000.