

# Green Innovation and Corporate Social Responsibility

Subjects: [Management](#) | [Business](#) | [Economics](#)

Contributor: Zeplin Jiwa Tarigan , Maya Novitasari

Indonesia's government policy recommends that medium and large companies carry out corporate social responsibility programs. These programs provide sustainability for the company because they can involve community social relations, economic growth, and increasing environmental awareness. Corporate social responsibility can increase green innovation in companies with the stability of environmentally friendly materials, emission reductions for the surrounding community, and saving energy use. Corporate social responsibility has a positive effect on firm performance because the company has maintained the continuity of the process. After all, it has a harmonious relationship with the community. Furthermore, green innovation positively affects firm performance because the company can reduce energy use and utilize environmentally friendly resources. Therefore, green innovation can mediate the influence of corporate social responsibility and firm performance.

corporate social responsibility

firm performance

green innovation

## 1. Corporate Social Responsibility

Corporate Social Responsibility is a challenge for companies concerning humane approaches to social and environmental issues. It is used as a test concept by considering its application in the environment and the idea of the business-society interaction ([Moon et al. 2005](#); [Tjahjadi et al. 2021](#)). Corporate Social Responsibility is defined in five sections through a comprehensive analysis of 37 relevant definitions from 1980 to 2003, including the environmental, social, economic, stakeholder, and volunteer sections ([Dahlsrud 2008](#)). The company incorporates political conflict with the local culture to provoke the economic system ([Hermanto et al. 2021](#)). Nonetheless, corporate social responsibility is the business, implying that the corporation runs by stressing the social aspects of responsibly exploiting capabilities. Business sustainability is responsible for the implementation of the results of the relationship between the community and the company, in which the individual policies of the managers require wise decision-making ([Wood 1991](#)).

Companies that implement corporate social responsibility will improve the government's commitment to promoting and trying to provide sustainability for company investments, where this business requires top management's readiness for the success of the objectives based on environmental business ([Abbas 2020](#); [Wongthongchai and Saenchaiyathon 2019](#); [Tarigan et al. 2020](#)). Corporate social responsibility aims to improve strategic implementation and dynamic development in the industrial sector to support countries' economic activities functioning smoothly ([Anser et al. 2018](#)). Community involvement in corporate social responsibility practices helps

minimize emissions, while, overall, it leads to an increase in sustainable environmental awareness ([Gordon et al. 2012](#); [Santoso et al. 2022](#)).

## 2. Green Innovation

Green innovation refers to diminishing the risk of environmental exploitation and the negative impact caused in terms of resources, including energy ([Basana et al. 2022](#)). Environmentally friendly innovation with novel technology and collaboration on energy savings, pollution avoidance, recycling waste, making environmentally friendly products, and managing the company's surrounding environment are all examples of green innovation ([Tang et al. 2017](#)). The company's green innovation can manufacture items and provide services that are supposed to have little or minimal environmental impact ([Wong et al. 2012](#)). Furthermore, implementing green innovation in businesses increases competition ([Tarigan et al. 2021](#)). In addition to increasing efficiency in the environment, it involves lowering costs for chemical waste disposal, helping companies comply with government regulations, and generating positive reactions from stakeholders for increasing consumers and attaining superior product quality ([Chiou et al. 2011](#)). Eco-innovation is a reasonable basis on which companies can implement green innovation to address rapid climate change as corporate environmental responsibility ([Sáez-Martínez et al. 2016](#)). Eco-innovation aims to improve the company's environmental and economic performance by implementing eco-efficiency ([Leitão et al. 2019](#); [Barba-Sánchez and Atienza-Sahuquillo 2016](#); [Sáez-Martínez et al. 2016](#)).

The supporting element in green innovation indicates the company's support by paying attention to social expectations for pressure from stakeholders who are willing to take responsibility but have a significant impact on social expectations as awareness in taking the opportunity to utilize the environment sustainability ([Lee et al. 2018](#)). Furthermore, in encouraging the expansion of green innovation, companies allocate exports intensively and tend to maximize the progress of green innovation practices in order to develop to a better level ([Galbreath 2017](#)).

## 3. Firm Performance

Profitability, growth, market value development, customer happiness, employee loyalty, environmental audit accuracy, firm operations, and social activities comprise a comprehensive policy that includes nine multidimensional firm performances ([Tarigan et al. 2021](#)). The company's expertise, blends, and technical capabilities propel it ([Abeysekara et al. 2019](#)). Foreign ownership and corporate governance drive the determinants of firm performance with dynamic political continuity ([Mardnly et al. 2018](#)). The firm's competitive recognition in the market reflects its success, and maintaining value creation and value capture operations can help the firm perform better ([Lepak et al. 2007](#); [Wongthongchai and Saenchaiyathon 2019](#); [Nguyen et al. 2021](#)). The firm performance focuses on investors globally, removing the limitations of financial investment barriers, establishing developments and new opportunities, and allowing companies to gain performance efficiency ([Al-Matari et al. 2014](#)). Finally, management that executes potential logistics renewal in the environment in the practice of business performance must be able to finish long-term strategies, with indirect advantages visible at the start of the economy after its implementation ([Agyabeng-mensah et al. 2020](#); [Zhu et al. 2005](#); [Tarigan et al. 2020](#)).

## 4. Corporate Social Responsibility and Green Innovation

The relationship between corporate social responsibility and green innovation is the renewal of applied technology within the company environment that is in line with the community's needs and the company's sustainability and strategy. Green innovation and corporate social responsibility have a strong dynamic impact, each with a favorable effect on the other ([Handayani et al. 2017](#); [Shahzad et al. 2020a](#)). The continuity of the implementation of corporate social responsibility affects the performance of green innovation that renders the company attractive in the market ([Rehfeld et al. 2007](#)). Corporate social responsibility is a government recommendation for companies to pay attention to the environment. Eco-innovation is one form of output by which companies should attain eco-efficiency. Companies can implement eco-innovation to improve products, processes, and markets by reducing the use of natural resources and reducing environmental impacts ([Leitão et al. 2019](#); [Barba-Sánchez and Atienza-Sahuquillo 2016](#)). Corporate environmental performance can impact increasing eco-innovation, with the formation of resource efficiency and a green market in 3647 SMEs operating in 38 countries ([Sáez-Martínez et al. 2016](#)).

The company has the resources and capabilities to excel competitively, allowing it to link corporate social responsibility performance with green innovation ([Broadstock et al. 2019](#)). In addition, companies can distribute and integrate knowledge on corporate social responsibility and green innovation ([Gras-gil et al. 2016](#)). The benefits of implementing corporate social responsibility include improved company image and staff skills, customer happiness, increased workforce, and environmental friendliness ([Gürlek and Tuna 2017](#); [Mazodier et al. 2021](#)).

## 5. Green Innovation and Firm Performance

The link between green innovation and firm performance is the foundation of management's policy to perceive green innovation as improving firm performance ([Novitasari and Agustia 2021](#); [Siagian et al. 2021](#)). However, competition in the aggressive business world has a role in building and establishing effective stakeholder control. Therefore, the accuracy of a policy plays a significant role in providing opportunities for global companies ([Antonioli et al. 2013](#); [Xue et al. 2019](#)). Furthermore, green innovation provides financial business and ecological performance ([Tariq et al. 2017](#); [Xie et al. 2019](#)). Research by [Barba-Sánchez and Atienza-Sahuquillo \(2016\)](#) states that environmental proactiveness is a form of implementing eco-innovation that focuses on green innovation as reducing and preventing environmental damage. This research shows that environmental proactiveness can have a positive and significant impact on the economic performance and environmental performance of 312 Spanish wineries. Furthermore, [Leitão et al. \(2019\)](#) stated that the technology used, market characteristics, public policies, cooperation relationships, and lean management could significantly impact eco-innovation in 334 Portuguese companies contributing to the economy's more competitive dynamic. Furthermore, corporate environmental performance can affect increasing firm performance consisting of environmental performance and economic performance in 3647 SMEs operating in 38 countries ([Sáez-Martínez et al. 2016](#)).

This practice allows data on market and financial performance to be easily monitored by stakeholders in implementing social performance in the environment ([Baah and Jin 2019](#); [Jin et al. 2017](#)). Green innovation saves cost modification models of products, operations, and processing as company finances increase ([Khan and Johl](#)

[2019](#); [Tarigan et al. 2021](#)). The company can improve its existence as it applies the practices of green innovation and green management ([Albort-morant et al. 2016](#); [Awan et al. 2018](#)), especially by providing the benefits of green innovation for the companies to enjoy, which indicates trust in a high price for firm performance ([Ho et al. 2016](#)).

## 6. Corporate Social Responsibility and Firm Performance

Corporate social responsibility and firm performance, which serve as attempts to enhance trust among stakeholders, are the aspects to encourage the sustainability of corporate social responsibility practices. The results of a study by [Wei et al. \(2020\)](#) showed that customer trust could reduce the negative impact of corporate social responsibility and enhance firm performance. In addition, a study by [Canh et al. \(2019\)](#) demonstrated that, while the capital spent to implement corporate social responsibility does not generate a return on investment, it does have a favorable impact on firm performance. CSR implementation is a policy set by the government for companies to pay attention to environmental conditions. The policies set are essential, so companies can quickly create and spread eco-innovation to reduce emissions. For example, public policies have been stipulated in Europe by which companies that reduce emissions can get incentives in the form of tax reductions and receive subsidies from the government, which has a significant impact on eco-innovation in 334 Portuguese companies ([Leitão et al. 2019](#)).

Therefore, companies attain a better firm performance by implementing corporate social responsibility ([Flammer 2015](#); [Nguyen et al. 2021](#)). Furthermore, corporate social responsibility utilizes resources effectively and enhances firm performance and reputation among stakeholders, clients, and suppliers ([Orlitzky et al. 2003](#)).

## 7. Mediation Effects of Green Innovation

Several previous studies have found continuity between corporate social responsibility and firm performance. Consequently, adding green innovation as a mediating variable will affect operational efficiency ([Gillani et al. 2020](#)) on environmental management technology and determinants of the success of the company's sustainability ([Hansen and Schaltegger 2016](#)). Green innovation bridges eco-design, renewable energy, green supply chain management, and eco-efficiency, along with enhancing firm performance on the availability of resources and balancing environmental protection in corporate social responsibility policies ([Su et al. 2020](#)).

However, if a corporation spends solely because of external pressure, the invention may fail to offer financial benefits to the organization ([Arfi et al. 2018](#)). The regulation of companies decreases their environmental impact, which will benefit a company's competitiveness in the market by making profits and increase firm performance significantly ([Zhang et al. 2019a](#)).

## 8. Diagnostic Use of Sustainability Control Variables Leverages, Tangibility, Firm Age, Firm Size and Board Size

Research results show that corporate social responsibility can impact firm performance for companies ([Wei et al. 2020](#); [Canh et al. 2019](#); [Flammer 2015](#); [Orlitzky et al. 2003](#)). Firm performance can be influenced by raising the capital structure's leverage. The profit generated by the company can determine conventional leverage as a means of financing. In Saudi Arabia, the United Arab Emirates, and Qatar, leverage is a term that is used to compare a company's equity to its overall debt ([El-Khatib 2017](#)). Companies must maintain the amount of leverage to have better performance, because highly leveraged firms make the company's performance decline ([Gharsalli 2019](#)). Tangibility, firm size, and firm age can determine the amount of conventional leverage ([El-Khatib 2017](#)). Apart from the company's leverage, the value of tangible assets can be used to assess firm performance, size, and age ([Gharsalli 2019](#)).

Firm size and tangibility are control variables for companies in determining profitability as a form of firm performance in ASEAN countries, namely, Indonesia, Malaysia, the Philippines, and Thailand ([Liang et al. 2020](#)). Firm size has a negative impact on company leverage for the ASEAN countries except for Indonesia, while, tangibility assets impact Malaysia and are positive for the Philippines. Asset turnover, capital assets, and firm size impact firm performance, while leverage has an impact on decreasing the firm performance of companies in Mauritius ([Bhattu-Babajee and Seetanah 2021](#)). The significant capital owned by the company can loosen credit policies with prospective customers to increase firm performance through increased sales and growing market share ([Habib et al. 2022](#)). Firm size can determine firm performance for the company ([Yadav et al. 2020](#)). What is different in determining firm performance is a large number of board sizes with positions on the board of commissioners in the company ([Ozbek and Boyd 2020](#)). The board of directors' function is critical in sustaining the company's ability to influence financial success through increased investor participation ([Yakob and Hasan 2021](#)).

## References

1. Moon, Jeremy, Andrew Crane, and Dirk Matten. 2005. Can corporations be citizens? Corporate citizenship as a metaphor for business participation in society. *Business Ethics Quarterly* 15: 429–53.
2. Tjahjadi, Bambang, Noorlailie Soewarno, and Febriani Mustikaningtiyas. 2021. Good corporate governance and corporate sustainability performance in Indonesia: A triple bottom line approach. *Heliyon* 7: e06453.
3. Dahlsrud, Alexander. 2008. How corporate social responsibility is defined: An analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management* 15: 1–13.
4. Hermanto, Yustinus B., Lusy Lusy, and Maria Widyastuti. 2021. How financial performance and state-owned enterprise (SOE) values are affected by good corporate governance and intellectual capital perspectives. *Economies* 9: 134.
5. Wood, Donna J. 1991. Corporate social performance revisited. *Academy of Management Review* 16: 691–718.

6. Abbas, Jawad. 2020. Impact of total quality management on corporate green performance through the mediating role of corporate social responsibility. *Journal of Cleaner Production* 242: 118458.
7. Wongthongchai, Jirawat, and Krittapha Saenchaiyathon. 2019. The key role of institution pressure on green supply chain practice and the firm's performance. *Journal of Industrial Engineering and Management* 12: 432–46.
8. Tarigan, Zeplin Jiwa Husada, Novia Chandra Tanuwijaya, and Hotlan Siagian. 2020. Does top management attentiveness affect green performance through green purchasing and supplier collaboration? *Academy of Strategic Management Journal* 19: 1–9.
9. Anser, Muhammad Khalid, Zhihe Zhang, and Lubna Kanwal. 2018. Moderating effect of innovation on corporate social responsibility and firm performance in the realm of sustainable development. *Corporate Social Responsibility and Environmental Management* 25: 799–806.
10. Gordon, Melissa, Michael Lockwood, Frank Vanclay, Dallas Hanson, and Jacki Schirmer. 2012. Divergent stakeholder views of corporate social responsibility in the Australian forest plantation sector. *Journal of Environmental Management* 113: 390–98.
11. Santoso, Ruben Wahyu, Hotlan Siagian, Zeplin Jiwa Husada Tarigan, and Ferry Jie. 2022. Assessing the benefit of adopting ERP technology and practicing green supply chain management toward operational performance: An evidence from Indonesia. *Sustainability* 14: 4944.
12. Basana, Sautma Ronni, Widjojo Suprpto, Fransisca Andreani, and Zeplin Jiwa Husada Tarigan. 2022. The impact of supply chain practice on green hotel performance through internal, upstream, and downstream integration. *Uncertain Supply Chain Management* 10: 169–80.
13. Tang, Mingfeng, Grace Walsh, Daniel Lerner, Markus A. Fitza, and Qiaohua Li. 2017. green innovation, managerial concern and firm performance: An empirical study. *Business Strategy and the Environment* 27: 39–51.
14. Wong, Christina W. Y., Kee-hung Lai, Kuo-Chung Shang, Chin-Shan Lu, and T. K. P. Leung. 2012. Green operations and the moderating role of environmental management capability of suppliers on manufacturing firm performance. *International Journal of Production Economics* 140: 283–94.
15. Tarigan, Zeplin Jiwa Husada, Hotlan Siagian, and Ferry Jie. 2021. Impact of enhanced enterprise resource planning (ERP) on firm performance through green supply chain management. *Sustainability* 13: 4358.
16. Chiou, Tzu-Yun, Hing Kai Chang, Fiona Lettice, and Sai Ho Chung. 2011. The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. *Transportation Research Part E* 47: 836.

17. Sáez-Martínez, Francisco J., Cristina Díaz-García, and Ángela González-Moreno. 2016. Factors Promoting Environmental Responsibility in European SMEs: The Effect on Performance. *Sustainability* 8: 898.
18. Leitão, João, Sónia de Brito, and Serena Cubico. 2019. Eco-Innovation Influencers: Unveiling the Role of Lean Management Principles Adoption. *Sustainability* 11: 2225.
19. Barba-Sánchez, Virginia, and Carlos Atienza-Sahuquillo. 2016. Environmental Proactivity and Environmental and Economic Performance: Evidence from the Winery Sector. *Sustainability* 8: 1014.
20. Lee, Jung Wan, Young Min Kim, and Young Ei Kim. 2018. Antecedents of adopting corporate environmental responsibility and green practices. *Journal of Business Ethics* 148: 397–409.
21. Galbreath, Jeremy. 2017. Drivers of Green Innovations: The impact of export intensity, women leaders, and absorptive capacity. *Journal of Business Ethics* 158: 47–61.
22. Abeysekara, Nadeesha, Haijun Wang, and Duminda Kuruppuarachchi. 2019. Effect of supply-chain resilience on firm performance and competitive advantage A study of the Sri Lankan apparel industry. *Business Process Management Journal* 25: 1673–95.
23. Mardnly, Zukka, Sulaiman Mouselli, and Riad Abdulraouf. 2018. Corporate governance and firm performance: An empirical evidence from Syria. *International Journal of Islamic and Middle Eastern Finance and Management* 11: 591–607.
24. Lepak, David P., Ken G. Smith, and M. Susan Taylor. 2007. Introduction to special topic forum value creation and value capture: A multilevel perspective. *Academy of Management Review* 32: 180–94.
25. Nguyen, Nguyen Thi Thao, Nguyen Phong Nguyen, and Tu Thanh Hoai. 2021. Ethical leadership, corporate social responsibility, firm reputation, and firm performance: A serial mediation model. *Heliyon* 7: e06809.
26. Al-Matari, Ebrahim Mohammed, Abdullah Kaid Al-Swidi, and Faudziah Hanim Bt Fadzil. 2014. The measurements of firm performance's dimensions. *Asian Journal of Finance and Accounting* 6: 24.
27. Agyabeng-mensah, Yaw, Esther Ahenkorah, Ebenezer Afum, Adu Nana Agyemang, Carin Agnikpe, and Foday Rogers. 2020. Examining the influence of internal green supply chain practices, green human resource management and supply chain environmental cooperation on firm performance. *Supply Chain Management: An International Journal* 25: 585–99.
28. Zhu, Qinghua, Joseph Sarkis, and Yong Geng. 2005. Green supply chain management in China: Pressures, practices, and performance. *International Journal of Operations & Production Management* 25: 449–68.

29. Handayani, Rini, Sugeng Wahyudi, and Suharnomo Suharnomo. 2017. The effects of corporate social responsibility on manufacturing industry performance: The mediating role of social collaboration and green innovation. *Business: Theory and Practice* 18: 152–59.
30. Shahzad, Mohsin, Ying Qu, Abaid Ullah Zafar, Saif Ur Rehman, and Tahir Islam. 2020a. Exploring the influence of knowledge management process on corporate sustainable performance through green innovation. *Journal of Knowledge Management* 24: 2079–106.
31. Rehfeld, Katharina-Maria, Klaus Rennings, and Andreas Ziegler. 2007. Integrated product policy and environmental product innovations: An empirical analysis. *SSRN Electronic Journal* 61: 91–100.
32. Broadstock, David C, Roman Matousek, Martin Meyer, and Nickolaos G. Tzeremes. 2019. Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental and social governance implementation and innovation performance. *Journal of Business Research* 119: 99–110.
33. Gras-gil, Ester, Mercedes Palacios Manzano, and Joaquín Hernández Fernández. 2016. Investigating the relationship between corporate social responsibility and earnings management: Evidence from Spain. *BRQ Business Research Quarterly* 19: 289–99.
34. Gürlek, Mert, and Muharrem Tuna. 2017. Reinforcing competitive advantage through green organizational culture and green innovation. *The Service Industries Journal* 38: 467–91.
35. Mazodier, Marc, Francois Anthony Carrillat, Claire Sherman, and Carolin Plewa. 2021. Can donations be too little or too much? *European Journal of Marketing* 55: 271–96.
36. Novitasari, Maya, and Dian Agustia. 2021. Green supply chain management and firm performance: The mediating effect of green innovation. *Journal of Industrial Engineering and Management* 14: 391–403.
37. Siagian, Hotlan, Zeplin Jiwa Husada Tarigan, and Ferry Jie. 2021. Supply chain integration enables resilience, flexibility, and innovation to improve business performance in COVID-19 Era. *Sustainability* 13: 4669.
38. Antonioli, Davide, Susanna Mancinelli, and Massimiliano Mazzanti. 2013. Is environmental innovation embedded within high-performance organisational changes? The role of human resource management and complementarity in green business strategies. *Research Policy* 42: 975–88.
39. Xue, Min, Francis Boadu, and Yu Xie. 2019. The penetration of green innovation on firm performance: Effects of absorptive capacity and managerial environmental concern. *Sustainability* 11: 2455.
40. Tariq, Adeel, Yuosre F. Badir, Waqas Tariq, and Umair Saeed Bhutta. 2017. Drivers and consequences of green product and process innovation: A systematic review, conceptual



framework, and future outlook. *Technology in Society* 51: 8–23.

41. Xie, Xuemei, Jiage Huo, and Hailiang Zou. 2019. Green process innovation, green product innovation, and corporate financial performance: A content analysis method. *Journal of Business Research* 101: 697–706.
42. Baah, Charles, and Zhihong Jin. 2019. Sustainable supply chain management and organizational performance: The intermediary role of competitive advantage. *Journal of Management and Sustainability* 9: 119–31.
43. Jin, Mingzhou, Renzhong Tang, Yangjian Ji, Fei Liu, Liang Gao, and Donald Huisingh. 2017. Impact of advanced manufacturing on sustainability: An overview of the special volume on advanced manufacturing for sustainability and low fossil carbon emissions. *Journal of Cleaner Production* 161: 69–74.
44. Khan, Parvez Alam, and Satirenjit Kaur Johl. 2019. Nexus of comprehensive green innovation, environmental management system-14001-2015 and firm performance: A conceptual framework. *Cogent Business and Management* 6: 1691833.
45. Albort-morant, Gema, Antonio Leal-millán, and Gabriel Cepeda-carrión. 2016. The antecedents of green innovation performance: A model of learning and capabilities. *Journal of Business Research* 69: 4912–17.
46. Awan, Usama, Andrzej Kraslawski, and Janne Huiskonen. 2018. Impact of relational governance on performance improvement in export manufacturing firms. *Journal of Industrial Engineering and Management* 11: 349–70.
47. Ho, Ying-Chin, Wen Bo Wang, and Wen Ling Shieh. 2016. An empirical study of green management and performance in Taiwanese electronics firms. *Cogent Business and Management* 3: 1266787.
48. Wei, An-Pin, Chi-Lu Peng, Hao-Chen Huang, and Sang-Pao Yeh. 2020. Effects of Corporate social responsibility on firm performance: Does customer satisfaction matter? *Sustainability* 12: 7545.
49. Canh, Nguyen Thi, Nguyen Thanh Liem, Phung Anh Thu, and Nguyen Vinh Khuong. 2019. The impact of innovation on the firm performance and corporate social responsibility of vietnamese manufacturing firms. *Sustainability* 11: 3666.
50. Flammer, Caroline. 2015. Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management Science* 61: 2549–68.
51. Orlitzky, Marc, Frank L. Schmidt, and Sara L. Rynes. 2003. Corporate social and financial performance: A meta-analysis. *Sage Journals* 24: 403–41.

52. Gillani, Fatima, Kamran Ali Chatha, Muhammad Shakeel Sadiq Jajja, and Sami Farooq. 2020. Implementation of digital manufacturing technologies: Antecedents and consequences. *International Journal of Production Economics* 229: 107748.
53. Hansen, Erik G., and Stefan Schaltegger. 2016. The sustainability balanced scorecard: A systematic review of architectures. *Journal of Business Ethics* 133: 193–221.
54. Su, Xiaofeng, Anxin Xu, Wenhe Lin, Youcheng Chen, Sangtao Liu, and Wenxing Xu. 2020. Environmental leadership green innovation practices, environmental knowledge learning, and firm performance. *SAGE Open* 10: 2158244020922909.
55. Arfi, Wissal Ben, Lubica Hikkerova, and Jean-Michel Sahut. 2018. External knowledge sources, green innovation, and performance. *Technological Forecasting and Social Change* 129: 210–20.
56. Zhang, Dayong, Zhao Rong, and Qiang Ji. 2019a. Green innovation and firm performance: Evidence from list companies in China. *Resources, Conservation and Recycling* 144: 48–55.
57. El-Khatib, Rwan. 2017. Determinants of corporate leverage in publicly listed GCC companies—Conventional versus Sukuk. *Global Corporate Governance* 19: 77–102.
58. Gharsalli, Mazen. 2019. High leverage and variance of SMEs performance. *Journal of Risk Finance* 20: 155–75.
59. Liang, Chin Chia, Yuwen Liu, Carol Troy, and Wen Wen Chen. 2020. Firm characteristics and capital structure: Evidence from ASEAN-4 economies. *Advances in Pacific Basin Business, Economics, and Finance* 8: 149–62.
60. Bhattu-Babajee, Reena, and Boopen Seetanah. 2021. Value-added intellectual capital and financial performance: Evidence from Mauritian companies. *Journal of Accounting in Emerging Economies* 12: 486–506.
61. Habib, Ashfaq, Muhammad Asif Khan, József Popp, and Mónika Rákó. 2022. The influence of operating capital and cash holding on firm profitability. *Economies* 10: 69.
62. Yadav, Inder Sekhar, Debasis Pahi, and Phanindra Goyari. 2020. The size and growth of firms: New evidence on law of proportionate effect from Asia. *Journal of Asia Business Studies* 14: 91–108.
63. Ozbek, O. Volkan, and Brian Boyd. 2020. The Influence of CEO duality and board size on the market value of spun-off subsidiaries: The contingency effect of firm size. *Journal of Strategy and Management* 13: 333–50.
64. Yakob, Noor Azuddin, and Norraidah Abu Hasan. 2021. Exploring the interaction effects of board meetings on information disclosure and financial performance in public listed companies. *Economies* 9: 139.

---

Retrieved from <https://encyclopedia.pub/entry/history/show/56862>