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Analysis of the Mediation Effect of Green Competitive Advantage: Reviewing the Influence of Green Innovation on SMEs' Business Performance

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ABSTRACT
To achieve sustainability and meet the demands of an increasingly environmentally conscious market, many SMEs have begun to adopt environmentally friendly innovations as part of their business strategies. This innovation is expected to improve environmental performance and strengthen the company's competitiveness. This study aims to analyze the mediating role of green competitive advantage in the relationship between green innovation and business performance in small and medium enterprises. The number of samples used was 110 respondents, as determined by the purposive sampling method. The collected data were analyzed using the path and SEM-PLS methods. The results of this study confirm that green innovation has a positive and significant effect on green competitive advantage. Furthermore, green innovation and green competitive advantage have a positive and significant effect on business performance. The mediation effect analysis also proves that green competitive advantage can mediate the relationship between green innovation and business performance. These findings provide important implications for entrepreneurs and policymakers, who can consider environmentally friendly competitive advantage as an essential factor in designing sustainability strategies to improve SMEs' competitiveness and business performance.

Keywords: Green Innovation; Green Competitive Advantage; Business Performance; SMEs

INTRODUCTION

The development of business performance in SMEs is increasingly influenced by awareness of the importance of environmental sustainability (Halim et al., 2023);(Sinaga et al., 2022). Small and medium enterprises are beginning to realize that implementing green innovation, such as environmentally friendly products and sustainable production processes, can increase their competitiveness in the market (Sudirman et al., 2022);(Augustinah et al., 2022). Through green innovation, SMEs respond to the demands of consumers who are more concerned about the environment, optimize operational efficiency, and reduce long-term costs, such as waste reduction and energy savings (Chandra et al., 2022);(Hasan et al., 2021). This green innovation then helps SMEs build a green competitive advantage based on environmentally friendly initiatives, allowing them to attract consumer segments that are increasingly aware of sustainability issues (Aboelmaged & Hashem, 2019).

Previous studies have shown that green innovation is important in building a green competitive advantage in SMEs. For example, a study by (Chen & Chang, 2013);(Chang, 2011), suggested that green initiatives, such as innovation in

environmentally friendly products and processes, can provide a competitive advantage through differentiation that is difficult for competitors to imitate. The study found that SMEs that implement green innovation tend to be more able to attract environmentally conscious consumers, strengthening their market position and reputation. In addition, green innovation also allows SMEs to stand out in the midst of market competition by offering products that not only meet consumer needs but also support sustainability efforts. The modern market increasingly appreciates this added value. In addition, another study by explained that green innovation can create efficiency in company operations, such as waste reduction and energy savings, which directly strengthens the company's competitiveness (Kuo et al., 2022);(Maziriri, 2022). This efficiency reduces operational costs and strengthens the company's position as a green leader, a competitive advantage in an increasingly environmentally conscious market (Qiu et al., 2020);(Tu & Wu, 2021).

Studies on the influence of green innovation on business performance in SMEs show that adopting green innovation can have a significant positive impact in the long term (Nuryakin & Maryati, 2022);(Zhang & Walton, 2017). According to several previous studies, implementing green innovation allows SMEs to improve operational efficiency, reduce costs, and strengthen the company's position in an increasingly environmentally conscious market (Maziriri, 2022);(Singh et al., 2016). In addition, green innovation is also believed to improve the company's reputation and brand image, influencing customer loyalty and facilitating access to environmentally conscious consumer segments (Singh et al., 2016). Research by (Ardyan & Rahmawan, 2017);(Muangmee et al., 2021), shows that companies implementing green innovation tend to get a positive market response, which drives increased sales and competitiveness in their industries. This finding is also supported by a study by (Baeshen et al., 2021);(Singh et al., 2016), which found that SMEs that integrate green innovation into their business strategies have succeeded in creating strong differentiation, thus attracting the interest of consumers who are increasingly aware of environmental issues.

However, the relationship between green innovation and SMEs' business performance is not always straightforward. In some cases, the effects of green innovation may not be directly visible in the company's financial or operational results (Zhang & Walton, 2017). Green competitive advantage here acts as a mediator, clarifying the influence of green innovation on business performance through sustainability-based competitiveness (Zameer et al., 2020);(Yunus & Michalisin, 2016). In this context, green competitive advantage functions as an advantage that allows companies to stand out in the market by offering environmentally friendly products or services, thereby attracting consumers who are increasingly concerned about environmental issues. In addition, green competitive advantage strengthens the position of SMEs in facing competition with companies that have not implemented green innovation. SMEs can create a positive brand image and increase customer loyalty through more environmentally friendly product and process differentiation (Laari et al., 2018);(Ardyan & Rahmawan, 2017). With green competitive advantage, the impact of green innovation on business performance becomes stronger because consumers tend to prefer products that contribute to environmental sustainability (Maziriri, 2022).

Theoretically, this study aims to add to the literature on green innovation, competitive advantage, and business performance. By using green competitive advantage as a mediating variable, this study offers a more comprehensive model to understand the dynamics between the three variables. In an academic context, it can also encourage further discussion on how sustainability concepts can be integrated into business strategies to improve competitiveness and performance. The practical contributions of this study also include recommendations for policymakers in formulating regulations and incentives that support green innovation in the SME sector. The government can encourage more small and medium enterprises to engage in sustainability efforts by creating a conducive environment. Ultimately, collaboration between the business sector and the government is expected to improve the industry's overall competitiveness and strengthen a sustainable economy. This study is expected to contribute significantly to developing theory and practice in green innovation and business sustainability.

METHOD

This study uses a quantitative approach with the Structural Equation Modeling - Partial Least Squares (SEM-PLS) method. The research sample was determined through the purposive sampling method, which is a technique for determining samples intentionally based on certain characteristics relevant to the study's focus. In this case, the sampled SMEs had implemented at least one form of green innovation in their operations or products. They were oriented towards business performance as measured by efficiency, customer satisfaction, or market growth. Data was collected online through questionnaires distributed using an online survey platform. The online questionnaire was chosen to facilitate access for respondents spread across various regions in Indonesia and speed up the data collection process. The number of samples was determined by considering the population size and the availability of SMEs that met the research criteria. The sample size used in this study was 110 respondents.

After the data is collected, the analysis stage begins with a validity and reliability test on each construct to ensure that the instrument used has consistency and accuracy in measuring the research variables. In SEM-PLS, the validity test is carried out by measuring convergent validity and discriminant validity, while reliability is measured by composite reliability and Cronbach's alpha. Furthermore, the structural model is tested to see the direct relationship between green innovation and green competitive advantage and business performance and the mediating role of green competitive advantage in the relationship. SEM-PLS uses software such as SmartPLS, allowing model testing with an iterative method to produce accurate estimates. In testing the mediating role, this study uses a bootstrapping approach in SEM-PLS to test the significance of the mediation effect without having to assume a normal data distribution. Furthermore, the measurement of research variable indicators is summarized in the variable operational definition table, which can be explained in Table 1:

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Table 1. Operational Definition of Research Variables

Variable	Code	Items	Adapted From
Green Innovation	GI1	Green Product Innovation	(Elshaer et al., 2022);(Asadi et al., 2020)
	GI2	Green Process Innovation	
	GI3	Green Technology Innovation	
	GI4	Green Packaging Innovation	
Green Competitive Advantage	GCA1	Resource Efficiency	(Nuryakin & Maryati, 2022);(Zameer et al., 2022)
	GCA2	Green Product Differentiation	
	GCA3	Positive Environmental Image	
Business Performance	BP1	Market Performance	(Maziriri, 2022);(Singh et al., 2016)
	BP2	Operational Performance	
	BP3	Human Resource Performance	
	BP4	Financial Performance	

RESULTS AND DISCUSSION

Table 2. Profile of Respondents

Categories	Details	Amount	Percentage (%)
Gender	Men	45	40.91
	Woman	65	59.09
Age (years)	20-29	35	31.82
	30-39	35	31.82
	40-49	23	20.91
	50-59	17	15.45
Level of education	High school	72	65.45
	Bachelor	33	30
	Masters	5	4.55
Types of SMEs	Agricultural Sector	23	20.91
	Manufacturing Sector	22	20
	Service Sector	20	18.18
	Tourism Sector	11	10
	Livestock Sector	10	9.09
	Other types of SMEs	24	21.82

Based on the survey results, the demographics of respondents are divided into several main categories. Regarding gender, the majority of respondents are women, 65 people (59.09%), while men are 45 people (40.91%). Based on age group, most respondents are 20-29 years old and 30-39 years old, each as many as 35 people (31.82%). Respondents aged 40-49 years are 23 people (20.91%), and those aged 50-59 years are 17 people (15.45%). The education level of respondents is dominated by high school graduates, which is 72 people (65.45%), followed by bachelor's graduates as many as 33 people (30%), and master's graduates as many as five people (4.55%). In terms of the small and medium enterprises (SMEs) run, most are in the agricultural sector, as many as 23 people (20.91%), followed by the manufacturing sector 22 people (20%), the service sector 20 people (18.18%), the tourism sector 11 people (10%), and the livestock sector ten people (9.09%). As many as 24 other respondents (21.82%) run different types of SMEs from those mentioned.

1. Outer Model Measurement

Validity and reliability tests were conducted to measure the outer model. The loading factor determines a convergent validity testing and AVE with the condition

that the loading factor is above 0.7 and the AVE value is 0.5 (Hair, 2014). The model reliability test, according to(Hair, 2014), is seen from the value of Cronbach's alpha and composite reliability (CR), which has a value higher than 0.7. The following will show an explanation of the measurements of the outer model, which is presented in Table 3:

Table 3. Outer Model Measurement Results

Constructs/items	Outer Loadings	Cronbach's alpha	CR	AVE
Green Innovation		0.930	0.951	0.828
GI1	0.934			
GI2	0.920			
GI3	0.914			
GI4	0.870			
Green Competitive Advantage		0.909	0.944	0.849
GCA1	0.952			
GCA2	0.854			
GCA3	0.954			
Business Performance		0.842	0.894	0.676
BP1	0.893			
BP2	0.877			
BP3	0.774			
BP4	0.773			

In the validity test presented in Table 3 above, it was obtained that the value of each loading factor on the indicators of green innovation, green competitive advantage, and business performance was above 0.7 and 0.5 for the average variance extracted (AVE) value. Furthermore, for Cronbach's alpha value and composite reliability, the value for each variable was above 0.7, which shows that all research variables had good reliability values. With these sound values, it can be used as an overview that the condition of the relationship between variables was also good so that further tests can be carried out.

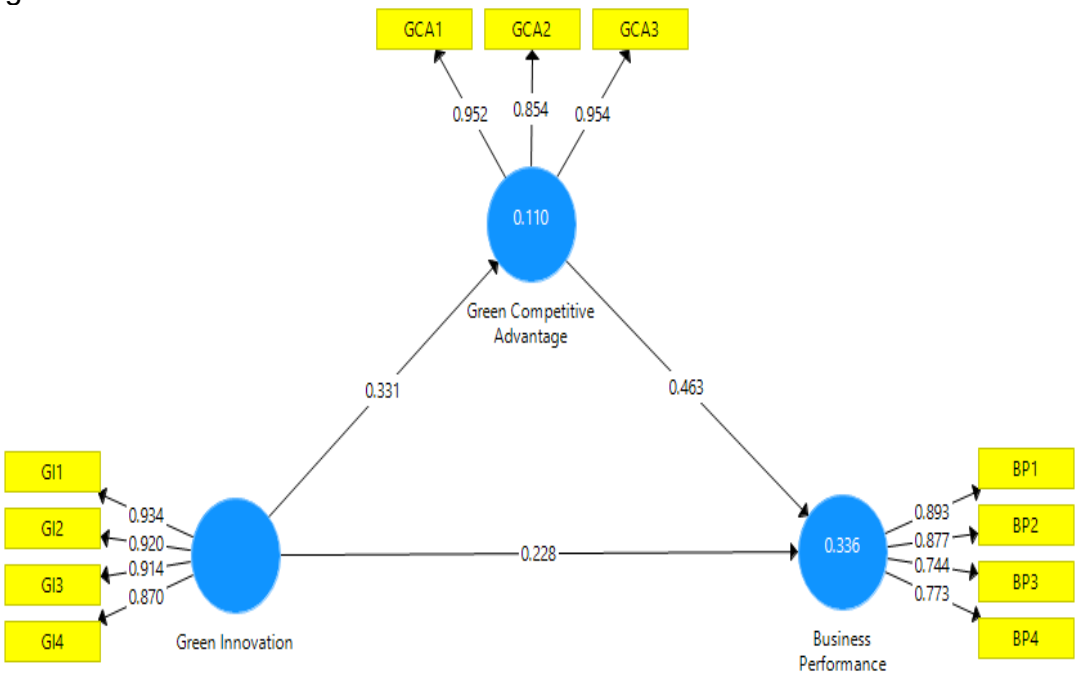

Figure 1. Outer Model Data Analysis Results

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2. Inner Model Measurement

Inner model measurement was carried out by bootstrapping research data using SmartPLS 3.2.9. Two results were obtained from bootstrapping; the first was the significance of the two related variables and the study's R-square. The R-square value is the value that shows the ability of exogenous variables to build endogenous variables. According (Edeh et al., 2023), there are three categories of R-square values; if the R-square value is 0.19, the relationship between exogenous variables forming endogenous variables is weak; if it is 0.33, it means that the relationship is moderate, and if the value is 0.67, it means that the relationship is strong.

Table 4. Calculation results of the R-Square value

Variable	*R Square*	*R Square Adjusted*
Green Competitive Advantage	0.110	0.101
Business Performance	0.336	0.324

Judging from the R-square value for the endogenous green competitive advantage variable, a value of 0.110 is obtained, indicating that the exogenous variables' overall ability to explain the green competitive advantage variable is weak. Then, to obtain the R-square value of the business performance variable, the value obtained is 0.286. This is obtained, indicating that the overall ability of the exogenous variables to explain the business performance variable is moderate.

3. Hypothesis Testing

Furthermore, a significance test was carried out to prove the hypothesis testing, which was used to determine the relationship between the exogenous and endogenous variables. A significant criterion is seen in the p-value. With a significance level of 5%, if the p-value between the exogenous and endogenous variables is less than 0.05, it means that the exogenous variable has a significant effect on the endogenous variable; conversely, if the value is more significant than 0.05, it means that the exogenous variable has no significant effect on building endogenous variables. A positive or negative path coefficient indicates the direction of the influence of the relationship, while a considerable value indicates the strength of the influence between the constructs. With this approach, users can interpret test results to understand the influence between variables in the model according to the proposed hypothesis.

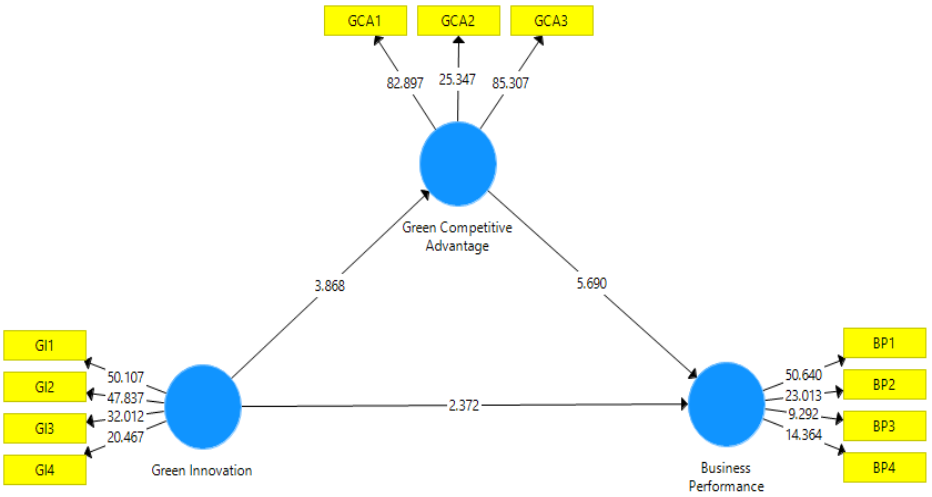

Figure 2. Hypothesis Testing Results

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Table 5. Hypothesis Test Results

Path Between Variables	*Coefficient*	*t-count*	*P-Value*	Conclusion
Green Innovation >>Green Competitive Advantage	0.228	2,372	**0.018**	**Accepted**
Green Competitive Advantage>>Business Performance	0.463	5,690	**0.000**	**Accepted**
Green Innovation >>Business Performance	0.331	3,868	**0.000**	**Accepted**

Based on the results of the processed data presented in Table 5, it is known that three hypotheses were accepted from the compiled hypotheses. The first data analysis confirmed that green innovation positively and significantly affects green competitive advantage. The second data analysis stated a positive and significant effect between green competitive advantage and business performance. The results of the last data analysis also stated a positive and significant effect between green innovation and business performance.

4. Testing the Mediation Effect

Mediation testing aims to detect the position of the intervening variable. To test the significance of the indirect effect, it is necessary to test the t value of the ab coefficient. The t-count value is compared with the t-table value; if the t-count value> the t-table value, then it can be concluded that there is a mediation effect, then see the nature of the relationship between the variables either as a perfect mediation variable or partial mediation or not as a mediation variable. The following is a complete explanation of the mediation effect test based on the indirect effect.

Table 6. Hypothesis Test Results

Path Between Variables	*Coefficient*	*t-count*	*P-Value*	Conclusion
Green Innovation >>Green Competitive Advantage>>Business Performance	0.153	3.176	**0.002**	**Accepted**

In the mediation analysis of green competitive advantage, it can be seen in Table 6 that the T-statistic value shows a figure of 3,176, which is > 1.96 and can also be proven by the P-value of 0.002 or is said to be smaller than 0.05. This proves that green competitive advantage can mediate the influence between green innovation and business performance.

Discussion

According to the results of the data analysis, it was confirmed that green innovation has a positive and significant effect on green competitive advantage. This is because environmentally friendly innovation helps companies produce more sustainable products and services. By reducing carbon emissions, waste, and energy use, companies not only meet strict environmental regulations but also create a positive image in the eyes of consumers. In addition, by creating more environmentally friendly products, companies can attract environmentally conscious market segments, strengthening their competitiveness and position in the market. In addition to increasing consumer appeal, green innovation can improve a company's operational efficiency. This innovation allows for more efficient use of resources, reduced long-term production costs, and increased productivity. Companies can reduce operational costs through this efficiency, directly strengthening their competitiveness. Therefore, green innovation is a strategy that supports

environmental sustainability and becomes a significant competitive advantage for companies that adopt it.

According to the results of the data analysis, it was confirmed that competitive advantage has a positive and significant effect on business performance. These results prove that companies can attract more loyal and environmentally sensitive consumers by prioritizing environmentally friendly practices and products, thereby increasing revenue. This advantage also helps companies build a positive image and increase their brand value, strengthening their position in the market. Consumers choose products that align with sustainability values, so green competitiveness can directly increase sales volume and market share. In addition to the benefits from the consumer side, green competitive advantage also contributes to better operational efficiency. Companies that focus on sustainability tend to be efficient in the use of resources and energy, which has an impact on reducing operational costs. This allows companies to increase their profitability and financial resilience. In other words, green competitiveness is not only a marketing strategy but also a strategic approach that can improve overall business performance through sustainable efficiency and cost reduction.

According to the results of the data analysis, green innovation has a positive and significant effect on business performance. These results prove that it helps companies optimize processes and products in an environmentally friendly way, thus attracting consumers who care about sustainability issues. By introducing more sustainable products and services, companies can strengthen their brand image and expand their market share, especially among consumers increasingly concerned about their environmental impact. In addition, companies active in green innovation tend to be more adaptive in meeting strict environmental regulations, reducing the risk of fines or other compliance costs that can negatively impact business performance. Regarding operational efficiency, green innovation helps companies save long-term costs by efficiently using resources and energy. Green innovation often focuses on reducing waste and energy consumption, directly reducing operational costs. With these savings, companies can increase profitability while maintaining high sustainability standards. The cost advantages and competitiveness resulting from this efficiency also strengthen the company's position in the market, so green innovation is an added value for the environment and a strategy to improve the company's overall financial performance.

According to the results of the data analysis, it was confirmed that green competitive advantage can mediate the influence of green innovation on business performance. These results strengthen that environmental competitive advantage strengthens the positive impact of green innovation in attracting consumer attention and loyalty. When companies innovate to create more environmentally friendly products or processes, they gain an advantage that differentiates them from competitors who are less committed to sustainability. This advantage makes green innovation more powerful in enhancing the company's positive image and attracting environmentally conscious consumers, thus contributing to improved business performance through increased sales and reputation. In addition to the consumer side, green competitive advantage also strengthens the impact of green innovation on operational efficiency, improving business performance. Green innovation usually involves reducing waste and using energy more efficiently, which helps companies

reduce costs. With a green competitive advantage, companies can maintain this efficiency and outperform competitors in terms of costs and productivity, thereby increasing profitability. Thus, environmental competitive advantage acts as a mediator that significantly influences green innovation and impacts business performance significantly through increased competitiveness and operational efficiency.

CONCLUSION

The general conclusion of this study shows that green competitive advantage plays a vital role in mediating the influence of green innovation on business performance, especially in SMEs. Green innovation, which includes developing environmentally friendly products and processes, can improve companies' competitiveness and profitability. However, the influence of this innovation on business performance will be more significant if the company can process it into an environmentally-based competitive advantage. Therefore, for SMEs who want to improve business performance through green innovation, strengthening sustainable competitiveness is an essential step.

The implications of this study suggest that decision-makers in SMEs consider investing in green innovation as a long-term strategy to gain a competitive advantage that positively impacts company performance. Policies and strategies supporting sustainability, both in production and marketing, can help SMEs stand out in the market and attract consumers increasingly concerned about environmental issues. In addition, the government and other related parties can support SMEs by providing incentives or access to green technology that supports the development of green innovation so that environmentally-based competitiveness can be optimized.

Suggestions for further research are to expand the scope of this study by considering various other variables that can strengthen the relationship between green innovation, green competitive advantage, and business performance. For example, external factors such as government regulations, consumer awareness of the environment, and technological support can strengthen or hinder the implementation of green innovation in SMEs. Research in various sectors and geographic areas can also enrich the understanding of how these dynamics occur in various contexts so that research results can be more focused on providing relevant recommendations for SMEs in various industries.

Reference

Aboelmaged, M., & Hashem, G. (2019). Absorptive Capacity And Green Innovation Adoption in Smes: The Mediating Effects of Sustainable Organisational Capabilities. *Journal of Cleaner Production*, *220*, 853–863. https://doi.org/10.1016/j.jclepro.2019.02.150

Ardyan, E., & Rahmawan, G. (2017). Green Innovation Capability As Driver of Sustainable Competitive Advantages and Smes Marketing Performance. *International Journal of Civil Engineering and Technology*, *8*(8), 1114–1122.

Asadi, S., OmSalameh Pourhashemi, S., Nilashi, M., Abdullah, R., Samad, S., Yadegaridehkordi, E., Aljojo, N., & Razali, N. S. (2020). Investigating Influence of Green Innovation on Sustainability Performance: A Case on Malaysian Hotel Industry. *Journal of Cleaner Production*, *258*.

https://doi.org/10.1016/j.jclepro.2020.120860

Augustinah, F., Chandra, E., Julyanthry, J., Putri, D. E., & Sudirman, A. (2022). The Existence of SMEs Business Performance During the Covid-19 Pandemic : Analyzing the Contribution of Intellectual Capital and Technological Innovation. *Jurnal Organisasi Dan Manajemen*, *18*(2), 87–99. https://doi.org/10.33830/jom.v18i2.3592.2022

Baeshen, Y., Soomro, Y. A., & Bhutto, M. Y. (2021). Determinants of Green Innovation to Achieve Sustainable Business Performance: Evidence From SMEs. *Frontiers in Psychology*, *12*(November). https://doi.org/10.3389/fpsyg.2021.767968

Chandra, E., Julyanthry, Rahmayanti, P. L. D., Syarifa Diah Kusuma, R. C., & Sudirman, A. (2022). Analyzing Business Performance from Human Capital and Social Capital with Competitive Advantage as Mediating Variable. *International Journal of Economics, Business and Management Research*, *06*(11), 137–151. https://doi.org/10.51505/ijebmr.2022.61110

Chang, C. H. (2011). The Influence of Corporate Environmental Ethics on Competitive Advantage: The Mediation Role of Green Innovation. *Journal of Business Ethics*, *104*(3), 361–370. https://doi.org/10.1007/s10551-011-0914-x

Chen, Y. S., & Chang, K. C. (2013). The Nonlinear Effect of Green Innovation on The Corporate Competitive Advantage. *Quality and Quantity*, *47*(1), 271–286. https://doi.org/10.1007/s11135-011-9518-x

Edeh, E., Lo, W.-J., & Khojasteh, J. (2023). Review of Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook. In *Structural Equation Modeling: A Multidisciplinary Journal* (Vol. 30, Issue 1). https://doi.org/10.1080/10705511.2022.2108813

Elshaer, I. A., Abdelrahman, M. A., Azazz, A. M. S., Alrawad, M., & Fayyad, S. (2022). Environmental Transformational Leadership and Green Innovation in the Hotel Industry: Two Moderated Mediation Analyses. *International Journal of Environmental Research and Public Health*, *19*(24). https://doi.org/10.3390/ijerph192416800

Hair, J. F. (2014). *Multivariat Data Analysis 7th Edition*. Pearson Prentice Hall.

Halim, F., Kusuma, R. C. S. D., Sherly, S., Loist, C., & Sudirman, A. (2023). The Influence Of Social Capital And Innovation Capability On Creative Industry Business Performance. *International Journal of Business, Law, and Education*, *4*(2), 971–978.

Hasan, M., Roslan, A. H., Hendrayani, E., Sudirman, A., Jamil, M., Sitaniapessy, R. H., Basoeky, U., Fauziah, Yasa, N. N. K., & Wardhana, A. (2021). *Kewirausahaan*. Media Sains Indonesia.

Kuo, F. I., Fang, W. T., & LePage, B. A. (2022). Proactive Environmental Strategies in The Hotel Industry: Eco-Innovation, Green Competitive Advantage, and Green Core Competence. *Journal of Sustainable Tourism*, *30*(6), 1240–1261. https://doi.org/10.1080/09669582.2021.1931254

Laari, S., Töyli, J., & Ojala, L. (2018). The Effect Of A Competitive Strategy and Green Supply Chain Management on The Financial and Environmental Performance of Logistics Service Providers. *Business Strategy and the Environment*, *27*(7), 872–883. https://doi.org/10.1002/bse.2038

Maziriri, E. T. (2022). Green Innovation In Smes: The Impact Of Green Product And Process Innovation On Achieving Sustainable Competitive Advantage And

Improved Business Performance. *Academy of Entrepreneurship Journal*, *28*(3), 1–14. https://www.abacademies.org/articles/green-innovation-in-smes-the-impact-of-green-product-and-process-innovation-on-achieving-sustainable-competitive-advantage-and-imp-14362.html

Muangmee, C., Dacko-Pikiewicz, Z., Meekaewkunchorn, N., Kassakorn, N., & Khalid, B. (2021). Green Entrepreneurial Orientation and Green Innovation in Small And Medium-Sized Enterprises (SMEs). *Social Sciences*, *10*(4). https://doi.org/10.3390/socsci10040136

Nuryakin, N., & Maryati, T. (2022). Do Green Innovation and Green Competitive Advantage Mediate The Effect of Green Marketing Orientation on Smes' Green Marketing Performance? *Cogent Business and Management*, *9*(1). https://doi.org/10.1080/23311975.2022.2065948

Qiu, L., Jie, X., Wang, Y., & Zhao, M. (2020). Green Product Innovation, Green Dynamic Capability, and Competitive Advantage: Evidence From Chinese Manufacturing Enterprises. *Corporate Social Responsibility and Environmental Management*, *27*(1), 146–165. https://doi.org/10.1002/csr.1780

Sinaga, O. S., Candra, V., Inrawan, A., & Sudirman, A. (2022). Analysis of the Mediation Effect of Innovation Culture on the Effect of Entrepreneurial Orientation on the Sustainable Competitive Advantage of SMEs in Indonesia. *International Journal of Economics, Business and Management Research*, *6*(11), 51–62. https://doi.org/https://doi.org/10.51505/IJEBMR.2022.61104

Singh, M. P., Chakraborty, A., & Roy, M. (2016). The Link Among Innovation Drivers, Green Innovation and Business Performance: Empirical Evidence From A Developing Economy. *World Review of Science, Technology and Sustainable Development*, *12*(4), 316–334.

Sudirman, A., Hanika, I. M., Halim, F., Julyanthry, J., & Chandra, E. (2022). Testing The Effect Of Customer Capital And Technological Innovation On Business Performance. *Jurnal Manajemen Dan Bisnis*, *11*(2), 321–330.

Tu, Y., & Wu, W. (2021). How Does Green Innovation Improve Enterprises' Competitive Advantage? The Role of Organizational Learning. *Sustainable Production and Consumption*, *26*(1), 504–516. https://doi.org/10.1016/j.spc.2020.12.031

Yunus, E. N., & Michalisin, M. D. (2016). Sustained Competitive Advantage Through Green Supply Chain Management Practices: A Natural-Resource-Based View Approach. *International Journal of Services and Operations Management*, *25*(2), 135–154. https://doi.org/10.1504/IJSOM.2016.078890

Zameer, H., Wang, Y., & Yasmeen, H. (2020). Reinforcing Green Competitive Advantage Through Green Production, Creativity and Green Brand Image: Implications For Cleaner Production in China. *Journal of Cleaner Production*, *247*. https://doi.org/10.1016/j.jclepro.2019.119119

Zameer, H., Wang, Y., Yasmeen, H., & Mubarak, S. (2022). Green Innovation as A Mediator in The Impact Oo Business Analytics And Environmental Orientation on Green Competitive Advantage. *Management Decision*, *60*(2), 488–507. https://doi.org/10.1108/MD-01-2020-0065

Zhang, J. A., & Walton, S. (2017). Eco-Innovation and Business Performance: The Moderating Effects of Environmental Orientation and Resource Commitment In Green-Oriented Smes. *R and D Management*, *47*(5), E26–E39. https://doi.org/10.1111/radm.12241