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Harnessing Entrepreneurial Creativity and Green Opportunity Exploitability for Expansion Growth: Insights from the Real Estate Development Industry

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ABSTRACT

This study explores the pivotal role of entrepreneurial creativity in driving business opportunity exploitability and its subsequent impact on firm performance within the environmentally friendly housing development industry in Indonesia. Employing the Resource-Based View (RBV) theory, the research investigates the relationship between entrepreneurial creativity and business expansion through green innovation approaches. Data were collected via surveys and interviews with 188 housing developers and contractors in major Indonesian cities, revealing that firms integrating entrepreneurial creativity with green innovations are more likely to expand successfully. The findings highlight the necessity of unique and inimitable resources, such as green innovation and entrepreneurial creativity, for achieving competitive advantages and superior firm performance. The study underscores the importance of strategic resource utilization in sustainable development and provides actionable insights for housing developers and policymakers to foster innovation and sustainability in the real estate sector. These insights contribute to the broader literature on sustainable entrepreneurship and offer a strategic framework for leveraging green business opportunities to enhance firm performance.

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INTRODUCTION

The environmentally friendly housing development industry has become a primary focus in recent years, concurrent with the rising global awareness of environmental and sustainability issues. This industry has seen significant growth with various initiatives to implement green housing concepts (Alaloul et al., 2021; C. C. J. Cheng & Shiu, 2024; Zhang et al., 2020). This research is crucial because the green housing industry not only contributes to environmental preservation but also offers substantial potential for improving firm performance. A study by Jiang et al. (2020) indicates that entrepreneurial creativity plays a pivotal role in identifying opportunities and innovations in green housing development, which involves developing environmentally friendly products and services. This research will delve deeper into the role of entrepreneurial creativity in enhancing firm performance through the Resource-Based View (RBV) approach (J. B. Barney, 2001).

There is a significant research gap regarding the relationship between entrepreneurial creativity and firm performance, with previous studies showing inconsistent results. For

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instance, research by Garousi Mokhtarzadedeh et al. (2022) demonstrates that entrepreneurial creativity significantly impacts firm performance in several industries, whereas Y. Shi et al. (2022) found that the impact of creativity on firm performance is insignificant in other contexts. This inconsistency highlights the need for further research to understand the dynamics within the environmentally friendly housing development industry in Indonesia. By adopting the RBV theory, this study aims to argue that entrepreneurial creativity applied in the context of green development can significantly enhance firm performance. RBV posits that competitive advantage can be achieved through the utilization of unique and inimitable resources (J. Barney, 2020; J. B. Barney & Clark, 2007). In this context, entrepreneurial creativity and green innovation are considered essential resources that can provide a competitive edge for housing development companies (Abu Seman et al., 2019; Agyabeng-Mensah, 2020; Lyu et al., 2022). Therefore, an in-depth understanding of how these resources contribute to firm performance is crucial.

This research is designed to answer two main research questions: (1) How does entrepreneurial creativity affect firm performance in the context of environmentally friendly housing development in Indonesia? (2) What factors mediate or moderate the relationship between entrepreneurial creativity and firm performance in this industry? Addressing these questions will provide deeper insights into the mechanisms and conditions that can maximize the benefits of entrepreneurial creativity in the green housing development industry.

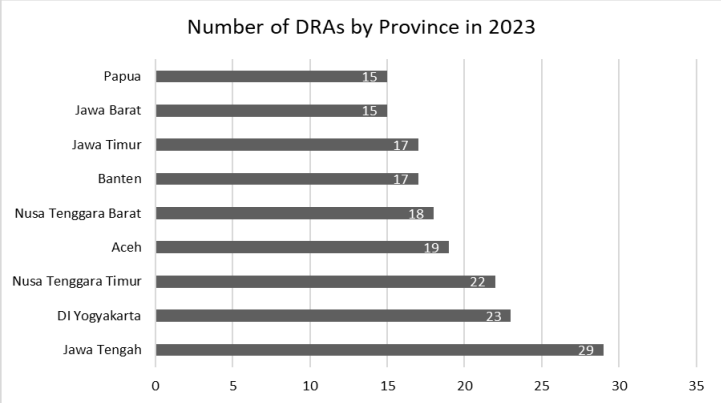

Figure 1. Number of DRAs

This study is significant as it can offer strategic recommendations for housing developers in Indonesia to apply sustainability principles. Furthermore, this research can assist policymakers in formulating regulations that support innovation and sustainability in the housing sector. Data from the Ministry of Public Works and Housing show that only 20% of the total housing projects in Indonesia have adopted green housing concepts. This indicates a substantial untapped potential to enhance sustainability in this sector. Figure 1 shows the number of Developments in Residential Areas (DRA). The increasing population and lifestyle changes in Indonesia have led to an increase in urbanization, impacting the need for livable housing (Prihapsari *et al.*, 2024). Based on this information, housing developers and contractors can understand the opportunities to develop their business capacity while expanding for business growth. This research aims to find effective strategies that integrate entrepreneurial creativity to improve firm performance in the environmentally friendly housing development industry in Indonesia, contributing to both national and global sustainability goals.

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LITERATURE REVIEW

2.1 Theoretical Background Hypotheses

2.1.1 Entrepreneurship in the Green Housing Development Industry

The green housing development industry is gaining momentum as environmental concerns and sustainability become pivotal in construction practices (Liang *et al.*, 2024; Qu *et al.*, 2024). Green housing emphasizes the use of eco-friendly materials and energy-efficient processes (Martwong *et al.*, 2024), providing ben\efits such as reduced carbon footprints and long-term cost savings (Sun, 2024). Entrepreneurs in this sector must balance the challenges of initial high costs with the long-term benefits of sustainable practices (Sapuan *et al.*, 2022; Xuan *et al.*, 2024).

Green housing is not just a construction trend but a global movement toward considering housing as a public good that benefits everyone (Yang *et al.*, 2024). This is evident from initiatives where policymakers encourage green building through subsidies and tax incentives, particularly in emerging markets where poor construction practices significantly contribute to carbon emissions (Gu & Jie, 2024). For example, in Colombia, tax incentives have been introduced to promote green building, and in India, financing solutions have been developed to increase the number of affordable green homes (Adabre *et al.*, 2020; Franco *et al.*, 2021)

The Resource-Based View (RBV) theory is particularly relevant in the context of the green housing industry (Kedir & Hall, 2021). RBV emphasizes the importance of a firm's internal resources in achieving and sustaining competitive advantage (J. B. Barney, 2001). According to RBV, resources that are valuable, rare, inimitable, and non-substitutable (VRIN) enable firms to develop and maintain a competitive edge (Daly, 2020). In the green housing industry, resources such as advanced sustainable technologies, innovative construction practices, and environmental certifications are critical (Andersén, 2021). These resources not only help firms differentiate their offerings but also comply with increasingly stringent environmental regulations and meet the growing demand for sustainable housing (Erlwein *et al.*, 2023; Gueler & Schneider, 2021). By leveraging RBV, this research aims to understand how entrepreneurial creativity and the ability to exploit green opportunities can lead to superior market positions and enhanced firm performance (Makhloufi *et al.*, 2023; Savastano *et al.*, 2022)

2.1.2 Opportunity Exploitabillity in Green Housing Development

Opportunity exploitability in the green housing sector involves strategically identifying and leveraging market opportunities to expand market reach while prioritizing green innovations (Abbas *et al.*, 2024). This requires a deep understanding of market dynamics, consumer preferences for sustainable living, and the regulatory landscape (S. Liu & Zhong, 2024). Green entrepreneurs must continually innovate, adopting new technologies and sustainable practices to maintain a competitive edge in a rapidly evolving market (Lei *et al.*, 2024).

Green entrepreneurship focuses on developing products and technologies that address environmental issues, playing a crucial role in sustainable development (Shafait & Huang, 2024). Entrepreneurs in this field face the dual challenges of market turbulence and the necessity for constant innovation, requiring a strategic alignment of internal capabilities, such as innovative resources and technical expertise, with external opportunities, including market demand and policy incentives (Chuweni *et al.*, 2024; Kedir & Hall, 2021). By understanding what drives consumer preferences and staying informed on regulatory changes, green

entrepreneurs can effectively exploit market opportunities (Qu *et al.*, 2024; Simpeh *et al.*, 2024).

Adopting advanced sustainable technologies, such as energy-efficient materials and renewable energy systems, is essential for differentiation in the competitive green housing market (Fang & Lv, 2023; Uzar, 2024). Continuous improvement and innovation, supported by a culture of research and development, a skilled workforce, and strategic partnerships, enable green entrepreneurs to capitalize on external opportunities. This approach, guided by the Resource-Based View (RBV) theory, helps green entrepreneurs develop unique value propositions that resonate with environmentally conscious consumers and comply with regulatory standards, thus achieving sustainable competitive advantages and contributing to broader environmental and economic sustainability goals (Si *et al.*, 2024; Xuan *et al.*, 2024).

2.1.3 Hypotheses Development

Entrepreneurial creativity is fundamental in generating and implementing novel ideas that drive sustainable innovation (Putro & Takahashi, 2024). In the green housing industry, creativity facilitates the development of unique, eco-friendly housing solutions that not only meet regulatory standards but also appeal to the growing market of environmentally conscious consumers (Chuweni *et al.*, 2024; Sapuan *et al.*, 2022). Creative entrepreneurs are better positioned to identify gaps in the market and exploit green opportunities that can lead to significant competitive advantages. Research has shown that creativity in entrepreneurship is crucial for fostering innovation and addressing complex environmental challenges (Makhloufi *et al.*, 2023)

From the perspective of the Resource-Based View, resources such as creativity are valuable, rare, inimitable, and non-substitutable (Gueler & Schneider, 2021). Entrepreneurial creativity fits these criteria by providing unique insights and solutions that are difficult for competitors to replicate (Asghar *et al.*, 2023; Fleck & Asmuth, 2020). By leveraging creative resources, firms can effectively exploit green opportunities, leading to sustainable competitive advantages. Hence, we propose the following hypothesis:

H1: Entrepreneurial creativity positively influences pro-green opportunity exploitability.

Pro-green opportunity exploitability refers to the ability of firms to identify and capitalize on opportunities that align with green and sustainable principles. In the context of green housing, this involves leveraging eco-friendly innovations and practices to create unique value propositions (Chanda *et al.*, 2023; Meirun *et al.*, 2024). Firms that excel in exploiting green opportunities can differentiate themselves by offering superior, sustainable housing solutions that meet the increasing demand for environmentally responsible living (Dinibutun, 2024; Tan *et al.*, 2024). This differentiation creates a significant positional advantage, as firms can attract and retain a customer base that values sustainability.

The RBV theory posits that a firm's resources and capabilities are critical to achieving competitive advantage (Khan *et al.*, 2023). Pro-green opportunity exploitability acts as a strategic capability that allows firms to capitalize on sustainable opportunities. By integrating green practices into their core business strategies, firms can build a strong, sustainable brand that resonates with both consumers and regulators, thereby gaining a positional advantage (Atalay *et al.*, 2017; Lei *et al.*, 2024; S. Liu & Zhong, 2024). Therefore, we hypothesize:

H2: Pro-green opportunity exploitability positively influences positional advantage.

Firm performance in the green housing sector is closely tied to the ability to exploit green opportunities effectively (Elliott *et al.*, 2024) . Firms that successfully leverage green innovations can achieve significant cost savings through improved energy efficiency and reduced waste, leading to better financial performance (Jiao *et al.*, 2023; R. Shi *et al.*, 2024). Additionally, the growing consumer preference for sustainable products means that firms offering green housing solutions can capture a larger market share and command premium prices. (Halicioglu & Gurel, 2023; Jacob *et al.*, 2023)

Pro-green opportunity exploitability is such a resource, as it enables firms to effectively utilize their sustainable practices and innovations to gain a competitive edge. This capability allows firms to improve their market performance by differentiating their offerings and achieving cost efficiencies, thus enhancing overall firm performance. Consequently, we propose the following hypothesis:

H3: Pro-green opportunity exploitability positively influences firm performance.

A strong positional advantage in the green housing sector enables firms to achieve superior firm performance by differentiating themselves from competitors (Ho et al., 2019; Varadarajan, 2020). This differentiation is achieved through unique, sustainable value propositions that meet the growing demand for eco-friendly housing solutions (Bajra & Wagner, 2024; Shamsuzzoha et al., 2023). Firms with a clear sustainability edge can attract a loyal customer base willing to pay a premium for green products, resulting in higher revenues and profitability (han et al., 2024; Wu et al., 2024).

RBV theory suggests that firms with unique and valuable resources can sustain competitive advantages and achieve superior performance (Ozdemir et al., 2023). Positional advantage, derived from the effective exploitation of green opportunities, enhances a firm's market resilience and financial performance (Q. Cheng et al., 2024; Martin et al., 2017). Firms that lead in sustainability not only attract customers but also investors and partners who prioritize environmental responsibility, further reinforcing their market position and performance. Thus, we hypothesize:

H4: Positional advantage positively influences firm performance.

This theoretical framework underscores the importance of entrepreneurial creativity and opportunity exploitability in achieving a competitive and sustainable position in the green housing industry. The hypotheses, grounded in the RBV theory, suggest that leveraging unique resources and capabilities can lead to significant market advantages and enhanced firm performance. This approach not only benefits individual firms but also contributes to broader environmental and economic sustainability goals.

In the green housing development industry, entrepreneurial creativity is pivotal for generating sustainable innovations that cater to the increasing demand of environmentally conscious consumers. However, achieving superior firm performance necessitates the effective exploitation of green opportunities. While creativity enables entrepreneurs to identify unique market opportunities (Ivcevic *et al.*, 2024; Uddin *et al.*, 2024), it is pro-green opportunity exploitability that transforms these creative ideas into tangible competitive advantages (Rehman *et al.*, 2024). Pro-green opportunity exploitability involves the application of green innovations and sustainable practices that allow firms to comply with stringent environmental

regulations and create unique value propositions that appeal to consumers (Elsner & Neumann, 2023; Kim *et al.*, 2020).

Within the Resource-Based View framework, entrepreneurial creativity provides the foundation for recognizing green opportunities, yet without pro-green opportunity exploitability (PGOE), this creative potential cannot be fully realized. Thus, PGOE acts as a mediator, ensuring that eco-friendly innovations and solutions derived from entrepreneurial creativity are effectively implemented to achieve desired outcomes. Consequently, the proposed hypothesis is that PGOE mediates the influence of entrepreneurial creativity on firm performance ensuring that creative potential is translated into tangible competitive advantages and long-term sustainability for the firm. Therefore, we put forward the following hypothesis:

H5: Pro Green Opportunity Exploitability mediates the influence of Entrepreneurial Creativity on Firm Performance

METHODS

3.1 Sample and data collection

The sample for this study consists of 188 respondents who are either owners or managers of residential contractor companies or housing developers. The data collection took place from December 2023 to March 2024 across several major cities in Indonesia. Respondents were selected based on their membership in Gapensi (Gabungan Pelaksana Konstruksi Nasional Indonesia) and REI (Real Estate Indonesia), ensuring that they are active participants in the country's construction and real estate sectors. This demographic was chosen for three key reasons: firstly, their direct involvement in the industry provides valuable insights into current market trends and practices; secondly, their professional experience and educational background ensure a high level of expertise and reliability in their responses; and thirdly, their roles in influential organizations such as Gapensi and REI indicate their commitment to and knowledge of industry standards and regulatory frameworks. This carefully selected sample is thus well-positioned to contribute meaningful data to the study.

3.2 Survey Distribution

Questionnaires were sent to the general manager or founding leader of each real estate development company with a cover letter explaining the purpose of the study and providing instructions for completing the questionnaire both offline and online. To limit potential social desirability bias in participants' responses (Ganster *et al.*, 1983), the cover letter explained that: (1) "this survey is developed for academic purposes and does not judge individuals or institutions;" (2) "questionnaire responses are not linked to the respondent's identity;" and (3) "data will be treated with strict confidentiality." To increase the response rate, we assured the questionnaire recipients in the cover letter that a souvenir would be given upon receipt of their valid responses. In addition to the email survey, an internet-based survey system was developed and employed to facilitate respondents' feedback and phone interviews. The survey URL link and QR code for online responses were printed on the cover paper, and potential participants were encouraged to respond to our survey through social media messaging apps like WhatsApp for their convenience. A reminder email with the URL link for the survey system was sent to general managers or owners to encourage responses. After two stages of the survey, 188 valid

questionnaires were collected. Table 1 shows the demographic profile of the surveyed entrepreneurs and descriptive statistics for their real estate development companies.

3.3 Data Analysis

In the initial phase of this research, an empirical study was conducted through hypothesis testing using input data collected via surveys and analyzed with the assistance of Structural Equation Modeling (SEM) using AMOS version 24 to derive empirical results. The decision to employ structural equation modeling to test our model and hypotheses was driven by several key considerations. Firstly, unlike traditional regression analysis, SEM allows for the simultaneous handling of multiple equations (Fornell & Larcker, 1981). This means the same variable can serve as a predictor (regressor) in one equation and as a criterion (regressor) in another, as illustrated in our model (Nachtigall *et al.*, 2003). Secondly, one of the significant advantages of using SEM in our analysis is its ability to test mediation processes simultaneously, providing a more comprehensive understanding of the relationships between variables (Tabachnick *et al.*, 2007). This methodological approach not only enhances the robustness of our findings but also ensures a more nuanced and accurate representation of the complex interactions within the data. Table 1 below provides an overview of the demographic profile of the respondents and their companies. The analysis revealed significant insights into how entrepreneurial creativity and opportunity exploitability contribute to the positional advantage and firm performance in the eco-friendly real estate development industry in Indonesia.

Table 1 Demografic Profile

Demographic Variable	**Category**	**Frequency**	**Percentage (%)**
Gender	Female	76	40.4%
	Male	112	59.6%
Age (years)	≤30	27	14.4%
	31-40	74	39.4%
	41-50	53	28.2%
	≥51	34	18.1%
Education Level	High School	32	17.0%
	Bachelor's	89	47.3%
	Master's	66	35.1%
	Doctorate	1	0.5%
Entrepreneurial Experience	None	53	28.2%
	Once	80	42.6%
	More than once	55	29.2%
Company Size	Small	94	50.0%
	Medium	68	36.2%
	Large	26	13.8%
Company Type	Developer	128	68.1%
	Contractor	60	31.9%

Source: Author's Data Processing

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This table highlights the diversity of the sample in terms of gender, age, education level, entrepreneurial experience, company size, and company type, providing a comprehensive understanding of the respondents' backgrounds and their businesses.

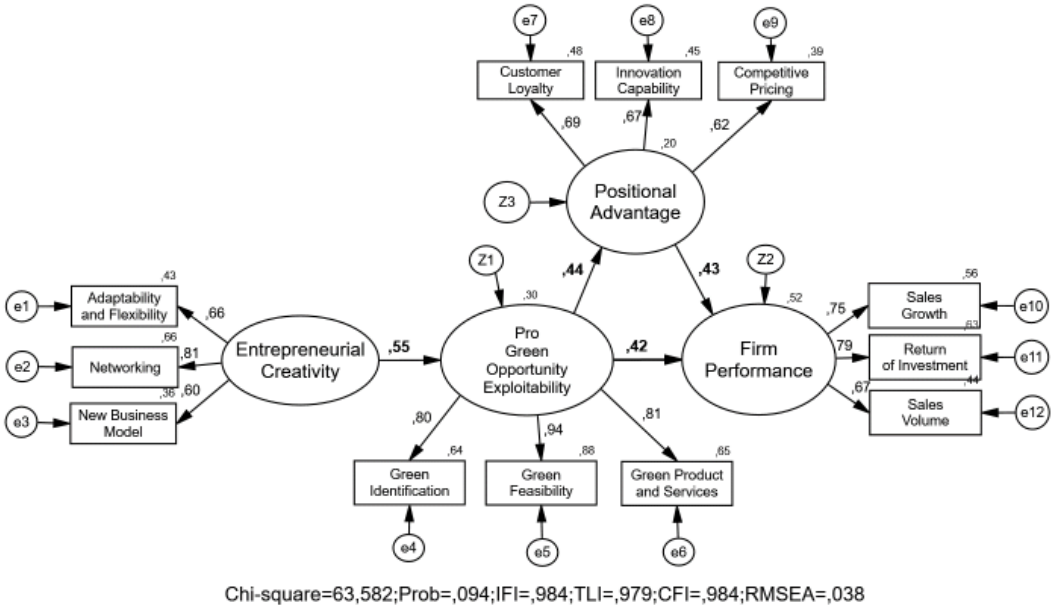

Figure 2. Full structural model

Tabel 2 Hyphotesis Testing

Hypothesis	Coefficient	Standard Error (S.E)	t-value	C.R	P	Conclusion
H1 : EC□PGOE	0,550	0,128	5.703	5,964	***	Supported
H2 : PGEO□PA	0,444	0,079	4.658	4,679	***	Supported
H3 : PGOE□FP	0,424	0,101	4.742	4,751	***	Supported
H4 : PA□FP	0,429	0,153	3.820	3,812	***	Supported
H5 : EC□PGOE□FP	Bootstrap procedure					
Path	Direct Effect	Indirect Effect	Lower Bound	Upper Bound	P	Conclusion
EC□FP	0,167	-	-0,014	0,331	0,135 (ns)	Not Significant

EC□PGOE	0,543	-	0,653	0,001*	Significant
		0,420			
PGOE□FP	0,324	-	0,497	0,009*	Significant
		0,119			
EC□PGOE□FP	-	0,280	0,393	0,001*	Significant
		0,192			

***=p<0,000; *=p<0,05; ns="”not significant”

The hypothesis testing results provided in Table Hypothesis Testing offer significant insights into the relationships between the variables in our study. Hypothesis 1 (H1) posits that entrepreneurial creativity (EC) positively influences pro-green opportunity exploitability (PGOE). The coefficient for this relationship is 0.550, with a standard error of 0.128, yielding a t-value of 5.703 and a critical ratio (C.R) of 5.964. The p-value is less than 0.001, denoted by ***, indicating strong statistical significance. This result supports H1, affirming that higher levels of EC significantly enhance the ability to exploit green opportunities, a finding consistent with the notion that creativity is pivotal in identifying and leveraging new, sustainable business opportunities.

Hypothesis 2 (H2) asserts that PGOE positively impacts positional advantage (PA). The analysis shows a coefficient of 0.444, a standard error of 0.079, a t-value of 4.658, and a critical ratio of 4.679, with a p-value again below 0.001, indicating strong support for H2. This suggests that effective exploitation of green opportunities significantly enhances a firm's positional advantage in the market. Hypothesis 3 (H3) examines the effect of PGOE on firm performance (FP), yielding a coefficient of 0.424, standard error of 0.101, t-value of 4.742, and a critical ratio of 4.751, all statistically significant at $p < 0.001$. This indicates that firms that capitalize on green opportunities tend to perform better financially. Finally, Hypothesis 4 (H4) suggests that PA positively influences FP, with a coefficient of 0.429, standard error of 0.153, t-value of 3.820, and critical ratio of 3.812, which are significant at $p < 0.001$. The critical ratio for all regression hypotheses exceeds the threshold value of 2.0 (Arbuckle, 2016); therefore, these hypotheses are well-supported. This demonstrates that a strong market position, enhanced by green strategies, translates into superior firm performance. These findings collectively underscore the critical role of sustainability-oriented entrepreneurial strategies in achieving competitive advantage and superior performance.

3.4 Mediation Effect of Pro-Green Opportunity Exploitability

This study explores the impact of EC on FP both directly and through the mediation of PGOE. The objective is to understand how entrepreneurial creativity can influence firm performance and the crucial role played by the firm's ability to exploit green opportunities. The analysis shows that the direct path from EC to FP has an effect size of 0.167 with a p-value of 0.135, which is not statistically significant. This indicates that although there is a positive relationship between entrepreneurial creativity and firm performance, this relationship is not strong enough to be considered significant without the mediating factors.

Conversely, the path from EC to PGOE shows a significant direct effect of 0.543 with a p-value of 0.001, indicating that entrepreneurial creativity significantly impacts the firm's ability to exploit green opportunities. The path from PGOE to FP also shows a significant effect of 0.324 with a p-value of 0.009, reinforcing that the firm's ability to exploit green opportunities positively impacts firm performance. The indirect effect of EC on FP through PGOE is 0.280 with a p-value of 0.001, demonstrating that entrepreneurial creativity can enhance firm

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performance through increased capability to exploit green opportunities. Thus, the study shows full mediation where PGOE fully explains the relationship between EC and FP. These findings emphasize the necessity for firms to focus on strategies that strengthen their ability to exploit green opportunities to achieve optimal performance, providing valuable insights for managers in crafting policies aimed at sustainability and green innovation.

Table 3 Summary Model Fit

Fit Index	Default Model	Saturated Model	Independence Model
CMIN/DF	1272	0	13823
IFI (Delta2)	0.984	1.000	0.000
CFI	0.984	1.000	0.000
TLI (rho2)	0.979	1.000	0.000
RMSEA	0.038	0.000	0.262
RMSEA LO 90	0.000	0.000	0.247
RMSEA HI 90	0.064	0.000	0.277
PCLOSE	0.750	0.000	0.000

Cut off value= IFI≤0,90; CFI≤0,90; TLI≤0,90; RMSEA≤0,08

The summary model fit table presents several key indices used to assess the adequacy of the Default Model compared to the Saturated and Independence Models. The CMIN/DF ratio for the Default Model is 1272, indicating a reasonable but not perfect fit, while the Saturated Model has a ratio of 0, denoting a perfect fit, and the Independence Model has a ratio of 13823, indicating a poor fit. Incremental fit indices such as the IFI (0.984), CFI (0.984), and TLI (0.979) for the Default Model are all very close to 1, signifying an excellent fit and demonstrating that the Default Model significantly improves over the Independence Model (all indices at 0.000) and is nearly as good as the Saturated Model (all indices at 1.000).

The RMSEA for the Default Model is 0.038, falling well within the acceptable range (less than 0.06), indicating a good fit with the data. The 90% confidence interval for RMSEA (0.000 to 0.064) further supports this, suggesting that the true RMSEA value lies within a range indicative of a good fit. The PCLOSE value of 0.750 for the Default Model confirms a close fit, as it tests the null hypothesis that RMSEA is less than 0.05 and yields a high p-value, suggesting the model fits the data well. In contrast, the Independence Model's RMSEA of 0.262 and PCLOSE of 0.000 underscore its poor fit. Overall, the fit indices collectively indicate that the Default Model is a robust representation of the data, providing an adequate and reliable fit.

RESULTS AND DISCUSSIONS

The empirical results derived from our hypothesis testing provide compelling evidence that entrepreneurial creativity significantly enhances the exploitation of green opportunities, which in turn positively impacts both positional advantage and firm performance. Specifically, the

strong support for Hypothesis 1 underscores the pivotal role of entrepreneurial creativity in identifying and leveraging sustainable business opportunities. This aligns with contemporary theories suggesting that creativity not only drives innovation but also fosters the ability to recognize and act upon emergent green opportunities. The significant positive relationship between Pro Green Opportunity Exploitability and Positional Advantage, as posited in Hypothesis 2, highlights the strategic importance of sustainability in gaining a competitive edge. Firms that effectively exploit green opportunities are better positioned in the market, suggesting that sustainability initiatives can serve as a key differentiator in increasingly environmentally conscious markets (Bai, 2024; Guo *et al.*, 2024).

Furthermore, the findings related to Hypotheses 3 and 4 elucidate the direct and indirect pathways through which green opportunity exploitation enhances firm performance. The significant positive impact of Pro Green Opportunity Exploitability on Firm Performance, coupled with the positive influence of Positional Advantage on Firm Performance, suggests a dual mechanism at play. On one hand, direct exploitation of green opportunities translates into immediate performance gains, possibly through cost savings, innovation, and enhanced reputation. On the other hand, the strengthened positional advantage serves as a mediating factor that amplifies these performance gains over time by solidifying the firm's market standing. These insights not only advance our theoretical understanding of the intersection between sustainability and entrepreneurship but also provide practical implications for managers seeking to integrate sustainability into their strategic frameworks. By fostering an entrepreneurial mindset oriented towards sustainability, firms can achieve a virtuous cycle of innovation, competitive advantage, and superior performance (Baquero, 2024).

Building on the Resource-Based View (RBV) theory, our findings provide robust support for the assertion that unique, valuable, and inimitable resources, such as entrepreneurial creativity and the capability to exploit green opportunities, are critical drivers of competitive advantage and superior firm performance (Zameer *et al.*, 2024). According to RBV, firms achieve sustained competitive advantage by leveraging their unique resources and capabilities. In our study, entrepreneurial creativity emerges as a strategic resource that enables firms to identify and exploit green opportunities effectively. This aligns with RBV's proposition that intangible assets, such as creativity and innovation capabilities, are essential for developing distinctive competencies that are difficult for competitors to replicate.

The significant relationships observed between Pro Green Opportunity Exploitability and both Positional Advantage and Firm Performance further underscore the RBV framework. The ability to exploit green opportunities can be seen as a dynamic capability that enhances a firm's positional advantage, reinforcing its market standing and enabling it to achieve superior performance. This dynamic capability is particularly valuable in today's market, where environmental sustainability is increasingly recognized as a critical competitive differentiator (C.-c. Liu *et al.*, 2024). Firms that can integrate and leverage these capabilities not only improve their market position but also ensure long-term performance gains (Chaudhuri *et al.*, 2024). Thus, our study reaffirms the RBV perspective by demonstrating that the strategic utilization of unique resources, such as entrepreneurial creativity and green opportunity exploitation, is fundamental to achieving and sustaining competitive advantage in the contemporary business landscape.

Managerial Implication

The findings from this study carry significant managerial implications, emphasizing the critical need for managers to foster and harness entrepreneurial creativity within their

organizations to effectively exploit green opportunities. By prioritizing sustainability as a core strategic objective, managers can leverage the dual benefits of enhanced positional advantage and improved firm performance. This entails investing in training and development programs that encourage creative thinking and innovation, implementing sustainable practices that differentiate the firm in the marketplace, and actively seeking out green opportunities that align with the firm's strategic goals. Additionally, managers should focus on building dynamic capabilities that not only enable immediate performance gains through cost savings and innovation but also fortify the firm's competitive position over time. By doing so, firms can achieve a virtuous cycle of innovation, sustainability, and superior performance, ultimately securing long-term success in an increasingly environmentally conscious market.

Limitation and Future Research

Despite the compelling insights offered by this study, several limitations must be acknowledged. Firstly, the sample is limited to respondents from major cities in Indonesia who are members of Gapensi and REI, which may not fully capture the diversity of the housing contractor and developer industry in other regions or countries. Additionally, the cross-sectional nature of the data collection limits our ability to infer causality between the variables. The reliance on self-reported data may also introduce biases, as respondents might overestimate their entrepreneurial creativity or the effectiveness of their green opportunity exploitations. These factors suggest that caution should be exercised when generalizing the findings beyond the specific context of this study.

Future research should address these limitations by adopting a more diverse and comprehensive sampling approach, potentially including longitudinal data to better capture the dynamics of entrepreneurial creativity and sustainability practices over time. Expanding the geographical scope beyond Indonesia would also enhance the generalizability of the findings. Furthermore, incorporating objective measures of firm performance and sustainability practices could mitigate the biases associated with self-reported data. Future studies could also explore additional variables and mediating factors, such as organizational culture and external environmental pressures, to provide a more holistic understanding of the mechanisms driving the relationship between entrepreneurial creativity, green opportunity exploitation, and firm performance. By addressing these avenues, future research can build on the foundation laid by this study and contribute to a deeper, more nuanced understanding of sustainable entrepreneurship.

CONCLUSION

This study highlights the pivotal role of entrepreneurial creativity in driving the exploitation of green business opportunities, which positively impacts both positional advantage and firm performance within the environmentally friendly housing industry in Indonesia. The findings confirm that firms leveraging entrepreneurial creativity are better able to identify and capitalize on sustainable opportunities, leading to enhanced market positioning and performance gains, both directly and indirectly. Grounded in the Resource-Based View (RBV) theory, the study emphasizes that entrepreneurial creativity and the ability to exploit green opportunities are unique, valuable resources that foster competitive advantage in eco-conscious markets. These insights offer practical implications for managers aiming to integrate sustainability into their strategic planning, demonstrating that sustainability-driven innovation not only boosts immediate performance but also secures long-term market leadership and success.

REFERENCES

Abbas, S., Xu, D., Yuna, G., Hussain, J., Abbas, H., & Rafique, K. (2024). The contribution of resource-based taxation, green innovation, and minerals trade toward ecological sustainability in resource-rich economies. *Resources Policy, 93*. doi:10.1016/j.resourpol.2024.105092

Abu Seman, N. A., Govindan, K., Mardani, A., Zakuan, N., Mat Saman, M. Z., Hooker, R. E., & Ozkul, S. (2019). The mediating effect of green innovation on the relationship between green supply chain management and environmental performance. *Journal of Cleaner Production, 229*, 115-127. doi:10.1016/j.jclepro.2019.03.211

Adabre, M. A., Chan, A. P. C., Darko, A., Osei-Kyei, R., Abidoye, R., & Adjei-Kumi, T. (2020). Critical barriers to sustainability attainment in affordable housing: International construction professionals' perspective. *Journal of Cleaner Production, 253*. doi:10.1016/j.jclepro.2020.119995

Agyabeng-Mensah, Y. (2020). Exploring financial performance and green logistics management practices: Examining the mediating influences of market, environmental and social performances. *Journal of Cleaner Production, 258*. doi:10.1016/j.jclepro.2020.120613

Alaloul, W. S., Musarat, M. A., Rabbani, M. B. A., Iqbal, Q., Maqsoom, A., & Farooq, W. (2021). Construction Sector Contribution to Economic Stability: Malaysian GDP Distribution. *Sustainability, 13*(9). doi:10.3390/su13095012

Andersén, J. (2021). A relational natural-resource-based view on product innovation: The influence of green product innovation and green suppliers on differentiation advantage in small manufacturing firms. *Technovation, 104*. doi:10.1016/j.technovation.2021.102254

Arbuckle, J. L. (2016). *IBM® SPSS® Amos™ User's Guide*.

Asghar, M., Ullah, I., & Bangash, A. H. (2023). Green inclusive leadership and green creativity in the manufacturing industry: do green human capital and employee voice matter? *International Journal of Innovation Science*. doi:10.1108/ijis-04-2023-0087

Atalay, M., Dirlik, O., & Sarvan, F. (2017). Impact of multilevel strategic alliances on innovation and firm performance. *International Journal of Innovation Science, 9*(1), 53-80. doi:10.1108/ijis-06-2016-0012

Bai, C. (2024). Financial development for sustainable resource efficiency: Fostering green growth in natural resource markets. *Resources Policy, 89*. doi:10.1016/j.resourpol.2023.104539

Bajra, U. Q., & Wagner, N. (2024). Analyzing the impact of eco-friendly bonds on economic growth and environmental sustainability. *Borsa Istanbul Review, 24*(4), 722-731. doi:10.1016/j.bir.2024.04.003

Baquero, A. (2024). Linking green entrepreneurial orientation and ambidextrous green innovation to stimulate green performance: a moderated mediation approach. *Business Process Management Journal, 30*(8), 71-98. doi:10.1108/bpmj-09-2023-0703

Barney, J. (2020). Measuring firm performance in a way that is consistent with strategic management theory. *Academy of Management Discoveries*. doi:10.5465/amd.2018.0219

Barney, J. B. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management, 27*(6), 625-641. doi:10.1177/014920630102700601

Barney, J. B., & Clark, D. N. (2007). *Resource-based theory: Creating and sustaining competitive advantage*: OUP Oxford.

Chanda, R. C., Vafaei-Zadeh, A., Hanifah, H., & Thurasamy, R. (2023). Modeling eco-friendly house purchasing intention: a combined study of PLS-SEM and fsQCA approaches. *International Journal of Housing Markets and Analysis*. doi:10.1108/ijhma-04-2023-0059

Chaudhuri, R., Chatterjee, S., & Vrontis, D. (2024). Assessing the role of dynamic capabilities to improve competitiveness and internationalization performance of organizations. *Competitiveness Review: An International Business Journal*. doi:10.1108/cr-03-2024-0051

Cheng, C. C. J., & Shiu, E. C. (2024). Leveraging employee green entrepreneurial orientation for enhancing environmental performance: The multi-level role of green creativity and green decision comprehensiveness. *European Management Journal*. doi:10.1016/j.emj.2024.06.002

Cheng, Q., Lin, A.-P., & Yang, M. (2024). Green innovation and firms' financial and environmental performance: The roles of pollution prevention versus control. *Journal of Accounting and Economics*. doi:10.1016/j.jacceco.2024.101706

Chuweni, N. N., Fauzi, N. S., Che Kasim, A., Mayangsari, S., & Wardhani, N. K. (2024). Assessing the effect of housing attributes and green certification on Malaysian house price. *International Journal of Housing Markets and Analysis*. doi:10.1108/ijhma-10-2023-0145

Daly, N. E. (2020). Towards an Understanding of the Sources of Sustainable Competitive Advantage: A Literature Review and Conceptual Framework. *... Development and Social Responsibility—Volume 1*. doi:10.1007/978-3-030-32922-8_30

Dinibutun, S. R. (2024). From green inclusive leadership to green creativity: The mediating role of green passion and green absorptive capacity. *Journal of Open Innovation: Technology, Market, and Complexity, 10*(2). doi:10.1016/j.joitmc.2024.100272

Elliott, R. J. R., Kuai, W., Maddison, D., & Ozgen, C. (2024). Eco-innovation and (green) employment: A task-based approach to measuring the composition of work in firms. *Journal of Environmental Economics and Management, 127*. doi:10.1016/j.jeem.2024.103015

Elsner, C., & Neumann, M. (2023). Caught between path-dependence and green opportunities – Assessing the impetus for green banking in South Africa. *Earth System Governance, 18*. doi:10.1016/j.esg.2023.100194

Erlwein, S., Meister, J., Wamsler, C., & Pauleit, S. (2023). Governance of densification and climate change adaptation: How can conflicting demands for housing and greening in cities be reconciled? *Land Use Policy, 128*. doi:10.1016/j.landusepol.2023.106593

Fang, X., & Lv, Y. (2023). Housing prices and green innovation: evidence from Chinese enterprises. *Management Decision, 61*(11), 3519-3544. doi:10.1108/md-03-2023-0368

Fleck, E., & Asmuth, J. (2020). Building Capacity for Creativity: Rediscovering the Inner "Superhero" as a Mechanism for Developing a Creative Mindset for Entrepreneurial Problem-Solving. *Entrepreneurship Education and Pedagogy, 4*(1), 82-95. doi:10.1177/2515127420912503

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Franco, M. A. J. Q., Pawar, P., & Wu, X. (2021). Green building policies in cities: A comparative assessment and analysis. *Energy and Buildings, 231*. doi:10.1016/j.enbuild.2020.110561

Ganster, D. C., Hennessey, H. W., & Luthans, F. J. A. o. M. J. (1983). Social desirability response effects: Three alternative models. *26*(2), 321-331.

Garousi Mokhtarzadedeh, N., Jafarpanah, I., & Zamani Babgohari, A. (2022). Knowledge management capability, entrepreneurial creativity, entrepreneurial intensity and firm performance: the mediating role of ambidexterity. *British Food Journal, ahead-of-print*(ahead-of-print). doi:10.1108/bfj-08-2021-0942

Gu, H., & Jie, Y. (2024). Escaping from "dream city"? Housing price, talent, and urban innovation in China. *Habitat International, 145*. doi:10.1016/j.habitatint.2024.103015

Gueler, M. S., & Schneider, S. (2021). The resource-based view in business ecosystems: A perspective on the determinants of a valuable resource and capability. *Journal of Business Research, 133*, 158-169. doi:10.1016/j.jbusres.2021.04.061

Guo, M., Pang, D., & Dong, J. (2024). Promoting green growth: Resource management and reosurce efficiency in East Asian and Pacific ecnomies. *Resources Policy, 90*. doi:10.1016/j.resourpol.2024.104705

Halicioglu, F. H., & Gurel, K. (2023). The perceived quality of green buildings: from a review of occupant satisfaction towards a conceptual framework. *International Journal of Quality & Reliability Management, 41*(3), 757-777. doi:10.1108/ijqrm-10-2022-0307

han, J., Prabhakar, G., Luo, X., & Tseng, H.-T. (2024). Exploring generation Z consumers' purchase intention towards green products during the COVID-19 pandemic in China. *e-Prime - Advances in Electrical Engineering, Electronics and Energy, 8*. doi:10.1016/j.prime.2024.100552

Ho, K. L. P., Nguyen, C. N., Adhikari, R., Miles, M. P., & Bonney, L. (2019). Leveraging innovation knowledge management to create positional advantage in agricultural value chains. *Journal of Innovation & Knowledge, 4*(2), 115-123. doi:10.1016/j.jik.2017.08.001

Ivcevic, Z., Lin, S., Liu, X., & Brackett, M. (2024). Creativity and affect: A person-centered analysis. *Learning and Individual Differences, 113*. doi:10.1016/j.lindif.2024.102481

Jacob, J., Chully, A. A., Godwin, B. J., & George, J. P. (2023). Young consumers' green marketing orientation: role of customer citizenship behaviour in determining real estate purchase intention in India. *International Journal of Housing Markets and Analysis, 17*(4), 1086-1103. doi:10.1108/ijhma-01-2023-0002

Jiang, H., Wang, S., Wang, L., & Li, G. (2020). Golden Apples or Green Apples? The Effect of Entrepreneurial Creativity on Green Entrepreneurship: A Dual Pathway Model. *Sustainability, 12*(15). doi:10.3390/su12156285

Jiao, J., Wu, X., Chen, Y., & Farahi, A. (2023). How the single-family residence housing market capitalizes green property upgraded features: evidence from city of Austin. *International Journal of Housing Markets and Analysis*. doi:10.1108/ijhma-07-2023-0095

Kedir, F., & Hall, D. M. (2021). Resource efficiency in industrialized housing construction – A systematic review of current performance and future opportunities. *Journal of Cleaner Production, 286*. doi:10.1016/j.jclepro.2020.125443

Khan, S. A. R., Tabish, M., & Zhang, Y. (2023). Embracement of industry 4.0 and sustainable supply chain practices under the shadow of practice-based view theory: Ensuring environmental sustainability in corporate sector. *Journal of Cleaner Production, 398*. doi:10.1016/j.jclepro.2023.136609

Kim, D., Choi, K., Jean, R.-J. B., & Cadogan, J. (2020). Ethno-national ties and international business opportunity exploitation: The role of environmental factors. *International Business Review, 29*(4). doi:10.1016/j.ibusrev.2018.08.001

Lei, H., Zhu, Y., Tan, J., & Zhang, X. (2024). Blending financial innovation with natural resource utilization: Pathways to green economic expansion. *Resources Policy, 89*. doi:10.1016/j.resourpol.2023.104568

Liang, H., Yan, Y., Yan, Q., & Zhang, Q. (2024). Development of green space provision for housing estates at metropolitan scale: A spatiotemporal assessment of proximity in a rapidly urbanizing Chinese city during the last 10 years. *Land Use Policy, 140*. doi:10.1016/j.landusepol.2024.107119

Liu, C.-c., Wang, M., Niu, Z., & Mo, X. (2024). Moderating effect of dynamic capabilities on the relationship between lean practices and operational performance. *International Journal of Lean Six Sigma*. doi:10.1108/ijlss-02-2022-0034

Liu, S., & Zhong, C. (2024). Green growth: Intellectual property conflicts and prospects in the extraction of natural resources for sustainable development. *Resources Policy, 89*. doi:10.1016/j.resourpol.2023.104588

Lyu, C., Peng, C., Li, R., Yang, X., & Cao, D. (2022). Ambidextrous leadership and sustainability performance: serial mediation effects of employees' green creativity and green product innovation. *Leadership & Organization Development Journal*, *43*(8), 1376-1394. doi:10.1108/lodj-01-2021-0037

Makhloufi, L., Zhou, J., & Siddik, A. B. (2023). Why green absorptive capacity and managerial environmental concerns matter for corporate environmental entrepreneurship? *Environ Sci Pollut Res Int*, *30*(46), 102295-102312. doi:10.1007/s11356-023-29583-6

Martin, S. L., Javalgi, R. G., & Cavusgil, E. (2017). Marketing capabilities, positional advantage, and performance of born global firms: Contingent effect of ambidextrous innovation. *International Business Review, 26*(3), 527-543. doi:10.1016/j.ibusrev.2016.11.006

Martwong, E., Yingshataporn-a-nan, T., Minanandana, T., Puksuwan, K., Junthip, J., & Sukhawipat, N. (2024). Sound absorption and thermal insulation materials from waste palm oil for housing application: Green polyurethane/water hyacinth fiber sheet composite. *Construction and Building Materials, 438*. doi:10.1016/j.conbuildmat.2024.137007

Meirun, T., Ahmed, Z., Alzoubi, R. H., Khosa, M., & Nguyen, N. T. (2024). The road to eco-excellence: How does environmentally specific empowering leadership foster hospitality employees' green creativity through green creative self-efficacy and green learning orientation. *International Journal of Hospitality Management, 120*. doi:10.1016/j.ijhm.2024.103790

Nachtigall, C., Kroehne, U., Funke, F., & Steyer, R. J. M. P. R. O. (2003). Pros and cons of structural equation modeling. *8*(2), 1-22.

Ozdemir, S., Carlos Fernandez de Arroyabe, J., Sena, V., & Gupta, S. (2023). Stakeholder diversity and collaborative innovation: Integrating the resource-based view with stakeholder theory. *Journal of Business Research, 164*. doi:10.1016/j.jbusres.2023.113955

Prihapsari, S. D., Utari, M., Rosadi, A. S. Z., Azaki, N., Fathurrochim, R. A., Azhari, N. F., & Nisaa, S. A. (2024). *Informasi Statistik Infrastruktur PUPR 2023*: Kementrian Pekerjaan Umum dan Perumahan Rakyat Pusat Data dan Teknologi Informasi.

Putro, A. K., & Takahashi, Y. (2024). Entrepreneurs' creativity, information technology adoption, and continuance intention: Mediation effects of perceived usefulness and ease of use and the moderation effect of entrepreneurial orientation. *Heliyon, 10*(3), e25479. doi:10.1016/j.heliyon.2024.e25479

Qu, L., Wang, J., & Li, Y. (2024). Housing-industry transformation development and rural revitalization path based on complex adaptive system in Three Gorges Reservoir Area of China. *Ecological Indicators, 162*. doi:10.1016/j.ecolind.2024.112008

Rehman, S., Asif, T., Nasir, A., Ullah, A., & Noor, N. (2024). Harnessing knowledge management for green product competitive advantage with green process innovation as a mediator. *Journal of Open Innovation: Technology, Market, and Complexity, 10*(2). doi:10.1016/j.joitmc.2024.100274

Sapuan, N. M., Haron, N. F., Vija Kumaran, V., Saudi, N. S., & Ridzuan, A. R. (2022). Green Building Best Practices in Achieving Energy and Environmental Sustainability. *Environmental Management and Sustainable Development, 11*(4). doi:10.5296/emsd.v11i4.21052

Savastano, M., Samo, A. H., Channa, N. A., & Amendola, C. (2022). Toward a Conceptual Framework to Foster Green Entrepreneurship Growth in the Agriculture Industry. *Sustainability, 14*(7). doi:10.3390/su14074089

Shafait, Z., & Huang, J. (2024). Examining the impact of sustainable leadership on green knowledge sharing and green learning: Understanding the roles of green innovation and green organisational performance. *Journal of Cleaner Production, 457*. doi:10.1016/j.jclepro.2024.142402

Shamsuzzoha, A., Suihkonen, A.-M., Wahlberg, C., Jovanovski, B., & Piya, S. (2023). Development of value proposition to promote green innovation for sustainable organizational development. *Cleaner Engineering and Technology, 15*. doi:10.1016/j.clet.2023.100668

Shi, R., Zhou, H., Li, X., Miao, X. e., & Zhao, X. (2024). Green finance, investor preferences, and corporate green innovation. *Finance Research Letters, 66*. doi:10.1016/j.frl.2024.105676

Shi, Y., Tsai, K.-H., & Practice. (2022). A sequential process from external stakeholder pressures to performance in services. *Journal of Service Theory, 32*(5), 589-619.

Si, R., Wang, Y., Cao, M., & Wen, H. (2024). Does green technology innovation promote green economic growth? –Examining regional heterogeneity between resource-based and non-resource-based cities. *International Review of Economics & Finance, 94*. doi:10.1016/j.iref.2024.103406

Simpeh, E. K., Adade, N. A. S., Pim-Wusu, M., Mensah, H., Asante-Antwi, A. S., & Aazore, F. K. (2024). Assessing homeowners' awareness of green technologies in residential housing development: evidence from Ghana. *Technological Sustainability*. doi:10.1108/techs-02-2024-0013

Sun, Q. (2024). Smart city and green innovation: Mechanisms and industrial emission reduction effect. *Heliyon, 10*(9), e30115. doi:10.1016/j.heliyon.2024.e30115

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using Multivariate Statistics* (Vol. 5): Pearson Boston, MA.

Tan, W., Zhang, Z., Chu, Z., & Chen, P. (2024). Unlocking green potential: The digital government-driven revolution in corporate green innovation. *Economic Analysis and Policy, 83*, 60-79. doi:10.1016/j.eap.2024.06.010

Uddin, M. A., Akter, A., Rashed, M. S., Mamun, A. A., & Munira, K. S. (2024). Predicting creativity in a moderated-mediation situation. *Journal of Open Innovation: Technology, Market, and Complexity, 10*(3). doi:10.1016/j.joitmc.2024.100337

Uzar, U. (2024). The critical role of green innovation technologies and democracy in the transition to sustainability: A study on leading emerging market economies. *Technology in Society, 78*. doi:10.1016/j.techsoc.2024.102622

Varadarajan, R. (2020). Customer information resources advantage, marketing strategy and business performance: A market resources based view. *Industrial Marketing Management*. doi:10.1016/j.indmarman.2020.03.003

Wu, S., Hu, Z., Li, Y., & Yuan, Y. (2024). How brand familiarity affects green product purchase intention: The moderating role of streamers' environmental knowledge. *Technology in Society, 77*. doi:10.1016/j.techsoc.2024.102572

Xuan, S., Wu, K., & Deng, J. (2024). The effect of producer service agglomeration externalities on urban green innovation efficiency in China. *Heliyon, 10*(3), e25085. doi:10.1016/j.heliyon.2024.e25085

Yang, S., Jahanger, A., & Usman, M. (2024). Examining the influence of green innovations in industrial enterprises on China's smart city development. *Technological Forecasting and Social Change, 199*. doi:10.1016/j.techfore.2023.123031

Zameer, H., Wang, Y., & Yasmeen, H. (2024). Strengthening green competitive advantage through organizational learning and green marketing capabilities in a big data environment: a moderated-mediation model. *Business Process Management Journal*. doi:10.1108/bpmj-09-2023-0691

Zhang, R., Wang, Z., Tang, Y., & Zhang, Y. (2020). Collaborative Innovation for Sustainable Construction: The Case of an Industrial Construction Project Network. *IEEE Access, 8*, 41403-41417. doi:10.1109/access.2020.2976563