

Fostering Business Success Through Green Practices: The Role of Green Entrepreneurship and Innovation in Enhancing Firm Performance



Rofiaty Rofiaty^{1*}, Nindya Adha Yulianti², Bayu Ilham Pradana¹, Moh. Erfan Arif¹, Imanirrahma Salsabil³

¹ Department of Management, Faculty of Economics and Business, Universitas Brawijaya, Malang 65145, Indonesia

² Flazz Media Solutions, Malang 65141, Indonesia

³ Department of Management, Faculty of Economics and Business, Universitas Widyatama, Bandung 40125, Indonesia

Corresponding Author Email: rofiaty@ub.ac.id

Copyright: ©2024 The authors. This article is published by IETA and is licensed under the CC BY 4.0 license (<http://creativecommons.org/licenses/by/4.0/>).

<https://doi.org/10.18280/ijstdp.190326>

ABSTRACT

Received: 8 June 2023

Revised: 20 September 2023

Accepted: 23 November 2023

Available online: 29 March 2024

Keywords:

green business practice, business environment, firm performance, green entrepreneurship, green innovation

The tourist industry is one of the business actors that must be more astute and astute in their business field selection in response to changes in the business environment, particularly those brought about by external causes. Businesses must change their operations to become more ecologically friendly due to stakeholders' increased awareness of environmental issues, both internal and external. This research aims to examine and analyze how green entrepreneurship affects business performance and green innovation. Additionally, the moderating effect of the business environment and the mediating role of green innovation within the connections are also considered in this study. 245 business players and strategic decision-makers in green tourism enterprises based in four East Javan cities—Malang, Surabaya, Pasuruan, and Bojonegoro—responded to this study. Respondents are given online surveys to complete to gather data, further examined using the Smart PLS software and structural equation modeling with partial least squares. The conclusions show that green innovation drives company performance and that green entrepreneurship substantially impacts both. Additionally, this research validates that green innovation partially mediates the relationship between green entrepreneurship and company performance. It has been established that the business environment cannot enhance the impact of green entrepreneurship on firm performance, hence serving as a moderating factor. Ultimately, our research suggests that green entrepreneurship has a significant role in the eco-friendly tourism context since it can improve business performance and spur innovation.

1. INTRODUCTION

Green entrepreneurship is the execution of environmental protection ideas [1] Green entrepreneurship, according to Gao et al. [2], is the entrepreneurial activity that is manifested through product and service innovation, as well as environmentally friendly market development, in order to produce profit and safeguard the environment. Green entrepreneurs are those who build sustainable enterprises to protect the environment [3]. Investing in green entrepreneurship not only generates the desired return for the company, but also has a beneficial social impact [4]. Green entrepreneurship encourages green growth and creates sustainable development for industry. With the currently raising environmental issue and detrimental impact of business activities towards the natural environment, sustainability becomes a strategic foundation in making business decisions [5]. However, it cannot be neglected that several firms have not yet been consistent in seeking investment opportunities that are environmentally friendly to develop their firm performance.

Firms or organizations that already have the awareness to

environmental issues have the tendency to implement green practices in their business. It may first come from the realization of its owners or managers who acts as green entrepreneurs, thus leading their followers to implement other green practices such as green innovation. Green innovation, as an environmentally conscious approach, can not only avoid negative environmental consequences, but it can also generate commercial advantages that can be transferred to other resources, hence enhancing firm performance [6]. Firms and organizations that adopt environmental or green innovation is more likely to build new business model that fits to the external demands for preserving the environment and turn competition into new business opportunities [7]. Green innovation is linked to green product and green process innovation [8]. In their study, Yin et al. [9] proved that green entrepreneurship can improve performance.

Several prior research have sought to examine the correlation between green practice implementation and firm performance. Green entrepreneurship has a considerable positive impact on performance and business development, according to Elbrahimi and Mirbargkar [1]. Business development and performance are measured through growth

in financial performance, increasing the number of employees, and ability in creating new industries. In addition, Skordoulis et al. [4] investigated how green entrepreneurship leads to green innovation and found a significant influence in it. Huang and Li [7] investigated the impact of green innovation on performance further, focusing on the application of environmental innovation strategies in boosting business performance. Green innovation is defined in their study as the reduction of toxic waste, the decrease of energy utilization (water, electricity, and gas), and the use of ecologically friendly raw materials. In a similar line, Rezende et al. [10] did a study on the impact of green innovation on the financial performance of multinational corporations and discovered that this is significant for organizations that have been in operation for more than two years. Ullah and Danish [11] study in Pakistan explored how green entrepreneurship leads to firm performance through green innovation and obtained significant positive results. Green entrepreneurial orientation is measured through corporate behavior that is willing to face risks, be innovative, autonomous, and aggressive in competition [12].

Although numerous studies have been carried out to find out how green practices such as green entrepreneurship and green innovation can lead to firm performance, this topic still needs to be explored further. Regarding the settings, most of the study are conducted in SMEs [1, 4, 11]. This study particularly discussed the concept of green practice in increasing firm performance within the context of tourism business, which are still quite underexplored. It needs to be realized that numerous parties and businesses contributes to environmental deterioration, including the tourism sector. Therefore, it is highly relevant for tourism business actors to start implementing green practices in their firms. In the literature, the discussion on tourism sustainability is still quite unclear and requires deeper explanation from different perspectives [13]. Furthermore, past research has not explored the moderating effect of variables that can improve or weaken the association between green practices and company success [1, 4, 7, 11]. In order to fill these research gaps, this study is carried out to investigate how green entrepreneurship can lead to firm performance both directly and indirectly through the mediating role of green innovation. In addition, we also consider the moderating role of business environment in strengthening the influence of green entrepreneurship on firm performance, in the context of green tourism business in Indonesia.

2. LITERATURE REVIEW

2.1 Green entrepreneurship

Green entrepreneurship is a subset of sustainable entrepreneurship that involves businesses using environmental management practices or greener manufacturing methods. This strategy involves the establishment of new businesses based on natural resources and environment, such as solar energy firms and ecotourism [14]. Green entrepreneurship is defined as the process of identifying, analyzing, and capitalizing on economic opportunities in the market that are environmentally relevant. Green entrepreneurship, according to Dean and McMullen [15], is a sequence of actions that tackle environmental or social problems through innovative and creative concepts that favorably impact the environment

and social life of the community, thereby offering benefits to corporate organizations.

It has long been recognized that entrepreneurship may be a driving force in improving organizational or corporate success [5]. In a similar vein, green entrepreneurship is also considered as an aspect that can lead to increased profits through carrying out a production process that are environmentally friendly [9]. The implementation of green entrepreneurship is a way to promote green economy [1]. This approach allows businesses to discover/develop environmentally friendly strategies, methods, or technology in order to boost production efficiency while minimizing environmental damage [3].

Several studies have confirmed that green entrepreneurship can lead to increased environmental sustainability and company performance [16, 17]. Green entrepreneurship is seen as the predictor of business performance in terms of profitability, expansion, and competitive advantage [18]. This is because firms that implement green entrepreneurship has the ability to broaden their market opportunities while also build their reputation and engagement with stakeholders who have similar value to the firms. As a result, this can lead to greater firm performance.

In addition, green entrepreneurship also plays an essential role in driving green innovation in firms. Green innovation itself refers to the creation and application of new goods, services, technology, and business models that are oriented to the environment [8]. Green entrepreneurship allows firms and individuals in it to develop a sustainable mindset that prioritizes environmental considerations. This motivates them to think creatively and critically in order to develop new products, services, processes, or procedures that are environmentally friendly [4, 6], thus increasing green innovation practice within the firms.

H1. Green entrepreneurship positively affects firm performance

H2. Green entrepreneurship positively affects green innovation

2.2 Firm performance

Firm performance is the firm's ability to achieve goals by using resources effectively and efficiently [19]. Firm performance is the result of achieving the company's internal and external goals [20]. In theory, firm performance is influenced by company size, liquidity, net interest margin, economic conditions, income and expenses, and financial development [21]. Furthermore, firm performance is influenced by industry performance, return volatility, expansion prospects, and firm size. The performance of a company is described as "the total value created by the firms through its activities, which is the sum of the utilities created for each legitimate stakeholder of the firms" [20]. Herciu [22] stated that profitability, growth, market value, total shareholder return, economic added value, customer satisfaction, and stakeholder expectations can be used to evaluate firm performance.

As stakeholders and communities currently have raised their awareness toward environmental issues, firms must look for different ways to increase their performance. Green innovation, which can be an innovation tool related to products and processes in the firm, can be an alternative to increase it [6, 8]. It includes technological innovations that can lead to greater energy savings, waste recycling, pollution prevention, as well as environmentally friendly product design [23]. Green

innovation can be defined as a strategy that considers the environmental impact of corporate activities and can increase economic performance by increasing energy and raw material efficiency, creating new market shares, and having superior products [24].

Through green innovation, firms can create market differentiation and obtain competitive advantage by developing products and services that fits to the stakeholders' preferences and oriented to the environment [6, 7]. Green innovation also enable firms to increase efficiency in running their business, yet also obtain the possibility to seize wider opportunities in the market [10]. Therefore, it is predicted that green innovation can lead to greater firm performance.

H3. Green innovation positively affects firm performance

2.3 Green innovation

Green innovation is a critical aspect for businesses to continue to expand and offer higher-quality products. Green innovation is understood and implemented as a result of the connection between innovation and sustainability [25]. Green innovation is a critical component of achieving environmental sustainability [26]. Green product development is one option for businesses to help achieve environmental sustainability goals. Green innovation merits more examination due to the nature of numerous externalities and the relevance of sustainable development [26, 27].

In this study, green innovation serves as an intermediary that links green entrepreneurship to firm performance. Green entrepreneurship allows firms to establish and run their business by focusing on both social and environmental responsibility [16, 17]. Through this understanding, green entrepreneurs encourage and promote green innovation within their firms by focusing on sustainability and environmental responsibility. Green entrepreneurship can drive firms to implement green innovation by making investment in research and development, testing out new technology, as well as looking at alternative business models, processes, and procedures [1, 3, 9]. As a result, these will provide firms with competitive advantage, cost savings, and access to new markets, which ultimately contributes to enhanced performance of firms [7, 10].

H4. Green innovation mediates the influence of green entrepreneurship on firm performance

2.4 The moderating role of business environment

The business environment is the setting in which the organization operates and must be considered while making business choices. Interactions with the work environment are part of organizational daily tasks [27]. The business environment encompasses all of the conditions and factors that exist both inside and outside of each business unit and will influence a firm's policy orientation in managing its business activities [27]. According to the Canadian International Development Agency, the business environment is defined as the existence of a competitive domestic market linked to the global economy, managed by a clear legal and regulatory environment, and equipped with a strong and developed human resource base and adequately developed infrastructure. The identification and breakdown of significant elements and viewpoints can be used to identify a certain business environment. The business environment includes all of the factors that influence a company, such as its strengths and

weaknesses, internal power relations and organizational orientation, government policies and regulations, economic nature and economic conditions, socio-cultural factors, demographic trends, natural factors, and global trends and cross-border developments [28-30].

In this study, the business environment is regarded as a moderating component, with the ability to boost or reduce the impact of green entrepreneurship on firm performance. As previously stated, external business environment elements can alter the degree or direction of the association between green entrepreneurship and firm performance. Green entrepreneurship can have a more positive impact on firm performance in a favorable market context with high demand for green products and minimal competition [30]. Conversely, a challenging market environment with low demand or intense competition may weaken the relationship. Furthermore, industries with a strong emphasis on sustainability and environmental responsibility, such as renewable energy or organic food, provide a supportive context for green entrepreneurs [28, 29]. In such industries, green entrepreneurship is more likely to lead to improved firm performance. Green entrepreneurship's impact on business performance, on the other hand, may be less obvious in industries where sustainability is less prioritized or traditional techniques predominate. According to these explanations, the hypothesis proposed is as follows:

H5. Business environment moderates the influence of green entrepreneurship on firm performance

Figure 1 presents the study framework based on the proposed hypotheses.

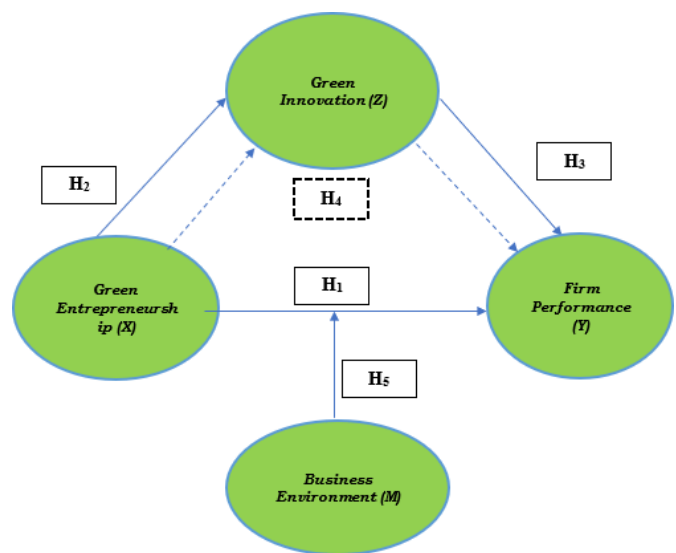


Figure 1. Research framework

3. METHODOLOGY

This form of research is known as explanatory research. This study is conducted on the green tourism business (green economy) in four cities in East Java Provinces, Indonesia, which includes Malang Raya, Surabaya, Pasuruan, and Bojonegoro. The reason for choosing the four regions is because they represent businesses in the field of green tourism or environmentally friendly tourism objects. The data is

collected within a period of April-October 2022. The reason for choosing a green tourism business (green economy) in these four regions as research objects is because there is a high tourist attraction from the community and this tour is a safe choice for health because this tourist attraction will nourish all stakeholders which include actors, employees, customers, as well as the surrounding environment.

The population of this study is the green economy business managers who are environmentally friendly in Malang Raya, Surabaya, Pasuruan, and Bojonegoro region. Purposive sampling method is used to determine the sample. The respondents to the survey are strategic decision makers in the green tourism industry. Data collection techniques is carried out using surveys by using a questionnaire, which is distributed online by utilizing Google Forms. Furthermore, the organization of green economy tourist entrepreneurs and pertinent government agencies have documented the research object and gathered paperwork from the already available data. In this investigation, SEM-PLS with WarpPLS software was the analytical instrument. A five-point Likert scale is used to measure the variables.

There were 245 respondents in the study's sample size, chosen by purposive sampling. Through this method, we deliberately choose green tourism businesses that meet the sample criteria according to the research objectives, namely: (1) Operates in Malang Raya, Surabaya, Pasuruan, and Bojonegoro; (2) have employees ≥ 3 people; (3) keeping a profitable and expanding business around; (4) willing to be interviewed, available, and proactive in answering questions.

4. RESULTS

4.1 Respondents' description

Most of the study's respondents—100% male and focused on eco-friendly tourism—have bachelor's degrees (81%), have been in business for more than five years (87%), and are eco-friendly travelers.

4.2 Hypothesis test

This study uses an outer and inner model analysis, two steps

in the analysis process. The outer model evaluation aims to assess the measurement tool's validity and reliability for the research model. It is done to ascertain the degree to which the questionnaire items accurately capture the essence and notion of the variables and the degree to which they remain consistent while assessing the same variables over time and space. The structural model, also known as the inner model evaluation, is used to interpret the findings of the hypothesis test.

Table 1. Results of validity test

Indicator	Outer Loadings	Conclusion	AVE	Conclusion
X1.1	0.693	Valid		
X1.2	0.747	Valid		
X1.3	0.558	Invalid		
X1.4	0.759	Valid		
X1.5	0.719	Valid		
X2.1	0.752	Valid	0.569	Valid
X2.2	0.773	Valid		
X2.3	0.814	Valid		
X2.4	0.795	Valid		
X3.1	0.702	Valid		
X3.2	0.457	Invalid		
Z1.1	0.707	Valid		
Z1.2	0.637	Valid		
Z1.3	0.846	Valid		
Z1.4	0.859	Valid	0.569	Valid
Z2.1	0.735	Valid		
Z2.2	0.718	Valid		
Z2.3	0.754	Valid		
M1.1	0.676	Valid		
M1.2	0.799	Valid		
M2.1	0.713	Valid		
M2.2	0.848	Valid		
M2.3	0.738	Valid	0.626	Valid
M3.1	0.936	Valid		
M3.2	0.905	Valid		
M4.1	0.904	Valid		
M4.2	0.501	Invalid		
Y1.1	0.933	Valid		
Y1.2	0.928	Valid		
Y1.3	0.814	Valid		
Y2.1	0.884	Valid	0.713	Valid
Y2.2	0.806	Valid		
Y3.1	0.883	Valid		
Y3.2	0.620	Valid		

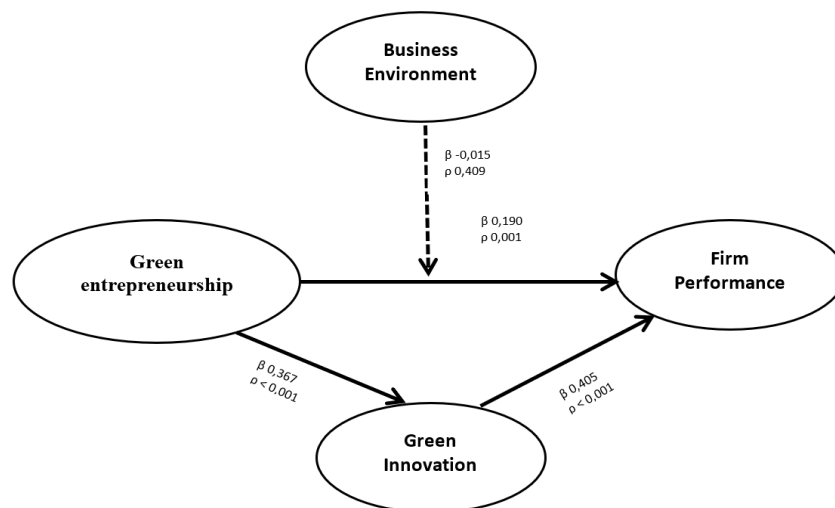


Figure 2. Output of inner model evaluation

4.3 Validity test

Convergent validity for indicator and construct validity for variable validity are the two testing phases that comprise the validity test. The value of the loading factor, which has a minimum limit of 0.6 for each indication, can be used to examine convergent validity. As a result, it is possible to identify legitimate and incorrect indications, and the study must remove the latter. Using the $AVE \geq 0.5$ criterion, the Average Variance Extracted (AVE) value is used to examine the construct validity. The construct validity results are also shown in Table 1, where every variable has an AVE value greater than 0.5.

4.4 Reliability test

Cronbach's alpha and composite reliability values show the reliability test results. A construct with a Cronbach's alpha value of ≥ 0.6 is considered reliable. According to Table 2, every construct in this study had a composite reliability value of ≥ 0.7 and a Cronbach's alpha value of ≥ 0.6 . It follows that all of the constructs in the study model have internal consistency in the instrument reliability test, indicating that all constructs are reliable.

Table 2. Results of reliability test

Indicator	GE	GI	BE	FP	BE* GE	Cut- Off Value
Composite Reliability	0.914	0.914	0.992	0.940	0.902	0.7
Cronbach's Alpha	0.902	0.879	0.935	0.995	0.995	0.6

GE: Green Entrepreneurship; GI: Green Innovation; BE: Business Environment; FP: Firm Performance

4.5 Inner model evaluation

An inner or structural model is evaluated to forecast the causal relationship between variables or comprehend the findings of a hypothesis test. Fit models, route analysis, predictive relevance, determinant coefficient value, and fit models reveal the evaluation's findings. Figure 2 displays the PLS output results for this study model.

4.6 Coefficient of determination

The model's ability to predict outcomes is indicated by the coefficient of determination (R^2). The greater the predictive power of external latent variables compared to endogenous latent variables, the closer the value of (R^2) is to 1. The overall determinant coefficient (R^2) for this investigation is displayed in Table 3 at 0.351, which indicates a 35.1% prediction accuracy for the model. However, the remaining 64.9% is due to factors not included in the model; thus, additional factors not included in the model could be the reason for the 64.9%.

Table 3. Coefficient of determination (R^2) value

GE	GI	BE	FP
0.123		0.351	

GE: Green Entrepreneurship; GI: Green Innovation; BE: Business Environment; FP: Firm Performance

4.7 Results of hypothesis test

The path coefficient and degree of significance are measured to conduct the hypothesis test. The path coefficient is between -1 to 1 temporarily significant level of 5% if the value of the t statistic is > 1.96 . The complete test results using the bootstrapping technique are presented in Table 4 as follows.

The study's stated goal, determining how green innovation acted as a mediator between green entrepreneurship and business performance, can be addressed by looking at the results in Table 4. From these findings, it can be concluded that green entrepreneurship (X) impacts firm performance (Y). Results for the path coefficient and p-value are shown in Table 4. The first hypothesis is accepted since the path coefficient of the relationship between green entrepreneurship and business success is 0.190, with a p-value of 0.001 (< 0.05). Additionally, Table 4 indicates that green entrepreneurship impacts green innovation; the path coefficient is 0.367, and the p-value is 0.001 (< 0.05), supporting the acceptance of H2. With a path coefficient value of 0.405 and a p-value of 0.001 (< 0.05), it is also found that green innovation has a direct impact on company performance. It is suggested that H3 is acceptable.

Table 4. Results of hypothesis test

Hypothesis	Path Coefficient	p-value	Result
Direct Influence			
Green Entrepreneurship on Firm Performance (H1)	0.190	0.001	H1 accepted
Green Entrepreneurship on Green Innovation (H2)	0.367	0.001	H2 accepted
Green Innovation on Firm Performance (H3)	0.405	0.001	H3 accepted
Indirect Influence			
Green Entrepreneurship on Firm Performance mediated by Green Innovation (H4)	0.149	0.001	H4 accepted
Moderation			
Green Entrepreneurship on Firm Performance moderated by Business Environment (H4)	-0.015	0.409	H5 rejected

As for the indirect impact of green entrepreneurship on firm performance via green innovation's mediating role, the hypothesis test findings show that the fourth hypothesis—which has a path coefficient value of 0.149 and a p-value of 0.001 (< 0.05) is accepted. The results, however, also demonstrate that the business environment cannot moderate the impact of green entrepreneurship on company performance. It is supported by the -0.015 negative path coefficient value and the p-value of 0.409 (< 0.05), which leads to the rejection of H5.

5. DISCUSSION AND IMPLICATION

This study aims to identify the factors of firm performance in Indonesia's green tourism industry in response to the growing demand and awareness for sustainable tourism literature. It is established by the hypothesis test results that green entrepreneurship improves business performance. The findings of this investigation corroborate those of earlier

studies [14-16, 23, 24]. Put differently, it has been demonstrated that green entrepreneurship improves the performance of green tourism. By implementing green entrepreneurship, firms can increase their responsiveness to green business practices through environmentally friendly business processes that encourage social responsibility. Green entrepreneurship can help businesses develop original and imaginative concepts with a beneficial environmental impact to promote sustainable tourism. Being a beneficial solution, it allows firms to gain profits while protecting and preserving the environment, thus increasing their performance.

For the second hypothesis, this study proposed that green entrepreneurship positively influences green innovation. According to the hypothesis test results, the hypothesis is accepted, corroborating earlier researches [3, 4, 6, 17]. It has been demonstrated that stronger green entrepreneurship boosts green innovation by motivating businesses to create ecologically friendly products with easily recyclable and biodegradable raw materials. This study proved that green entrepreneurship stimulated firms and their employees to cultivate a sustainable mindset emphasizing environmental concerns. This mindset makes firms more likely to think critically and creatively about green innovation. Therefore, green entrepreneurship is a driving force for firms to create different kinds of useful goods, services, processes, or methods that do not damage the environment.

Furthermore, according to this study, green innovation improves business performance. This outcome is consistent with several other research projects [6, 8, 10]. It is recognized that the business actors in green tourism have improved firm performance based on the distribution of replies, especially in natural and green tourism, as they realize environmental and community health. Green innovation can be an alternative for increasing firm performance through the efficient use of energy, mindful utilization of raw materials, its ability to create new market share, and the production of superior goods that differ from any in the market. These innovations allow firms to differentiate their products and obtain a competitive advantage by considering stakeholders' and community preferences for a better environment. The shift from traditional innovation to green innovation took work to be carried out, yet it eventually led firms to have greater performance.

In the fourth hypothesis, we predicted that green innovation mediates the influence of green entrepreneurship towards firm performance. The findings of this study indicate that this hypothesis is accepted, meaning that green entrepreneurship can influence firm performance both directly and indirectly through the role of green innovation. Since the direct influence is also proven, the mediation that occurs in this relationship is partial mediation. This finding is consistent to the studies [1, 7, 9]. In green tourism, firms that implement green entrepreneurship has the ability to boost their performance through carrying out green innovation. With a new mindset built from green practices such as green entrepreneurship and green innovation, firms can seize new opportunities, creating new alternatives for environmentally-oriented products and services, and obtain competitive advantage. With all aspects combined, it all plays an essential role in enhancing firm performance.

The final hypothesis claimed that the business environment modifies the impact of green entrepreneurship on firm performance. However, the hypothesis test findings show that this hypothesis is rejected, as evidenced by the negative path coefficient and the number of p-values that exceed the

requirements. This means that the influence of green entrepreneurship on company performance cannot be strengthened by business environment variables. It comes from the problems in the internal business environment. In the internal environment, the condition is not quite well as the green tourism actors have not yet optimally transferred their knowledge to employees. An organization must establish trust-based relationships with employees, learning attitude, as well as create and maintain proper relationships between superiors and subordinates [29]. Furthermore, it is known that the speed of innovation has the lowest loading factor of the business environment variable, implying that green tourism actors have not yet maximized their invention. It occurs since the product development that is carried out using the conventional vegetative method has not been profitable. After all, the results are minimal, yet other ways to develop products through more modern methods are complex. In addition, to get new products, they currently only rely on supplier information and information from online media.

From this finding, firms can carry out several actionable steps to assure that they can boost performance through the practice of green entrepreneurship and green innovations, such as: (1) encouraging innovation in sustainable technologies and processes; (2) rewarding employees for green ideas and initiatives; (3) investing in eco-friendly product research & development; and (4) creating innovative and sustainable business models. By embracing these principles and practice, as well as integrating it into their business operations, firms can enhance their performance while contributing to a greener and more sustainable future.

6. CONCLUSION

6.1 Conclusion

In conclusion, the relationship between green innovation, green entrepreneurship, and company performance emphasizes the critical role that environmental sustainability plays in supporting corporate success, particularly in the green tourism industry. Through this relationship, this study tried to answer the basic research questions and objective of whether green entrepreneurship leads to firm performance via green innovation in the context of a green tourism business in an Indonesian province. It has been proven that green innovation within the firm is stimulated by green entrepreneurship, which is defined by a commitment to sustainability and environmental responsibility. Green entrepreneurs actively seek out chances to create and adopt environmentally friendly goods, services, technologies, and business processes by identifying market gaps, issues, and opportunities. In the context of eco-friendly tourism business, stronger green entrepreneurship is also proven to increase performance. The key role of green entrepreneurship, namely responsiveness to business practices, aligned with environmentally friendly social responsibility, encourage firms and its employees to be responsible to their work, promoting greater performance improvement. Furthermore, green entrepreneurship is proven to increase green innovation by designing environmentally friendly products and services using safe raw materials that are easily recycled and decomposed.

Greater green innovation can boost natural and green tourism performance while also improving environmental and community health. Green innovation is also proven to

moderate the impact of green entrepreneurship on performance. The study's findings show that green entrepreneurship, either directly or indirectly, can boost performance through green innovation as a strategy. Overall, including green innovation and green entrepreneurship into business is not only morally right, but also a means to improve firm performance. Businesses may thrive in a changing world, meet the changing needs of consumers and stakeholders, and contribute to a more sustainable future by making environmental sustainability a core value and taking advantage of entrepreneurial opportunities to encourage green innovation.

6.2 Limitations and future study recommendations

Although this study's findings suggest a connection between green innovation, green entrepreneurship, and firm success, more investigation is needed to pinpoint the specific processes and limitations that characterize this relationship. This study has limitations because it only looks at green tourism industry actors in the cities and regions of Malang Raya, Surabaya, Pasuruan, and Bojonegoro, which are the fourth areas and cities in Indonesia's East Java Province. As a result, the scope of the study goal limits how broadly the conclusions can be applied. In the future, similar research with diverse objects and circumstances should be undertaken to ensure the generalizability of the findings.

Additionally, this study suggests that R&D costs, market trends, and business models be included in future research as factors of adaptive innovation. Future research on this topic should include the organizational green commitment as a mediating variable, as shown by this study.

ACKNOWLEDGMENT

This research was supported by the Department of Management, Faculty of Economics and Business, Universitas Brawijaya. We thank our colleagues from the Department of Management, Faculty of Economics and Business, Universitas Brawijaya, who provided insight and expertise that greatly assisted the research.

REFERENCES

- [1] Ebrahimi, P., Mirbargkar, S.M. (2017). Green entrepreneurship and green innovation for SME development in market turbulence. *Eurasian Business Review*, 7(2): 203-228. <https://doi.org/10.1007/s40821-017-0073-9>
- [2] Gao, Y., Tsai, S.B., Zhang, S., Li, G. (2019). Green entrepreneurship in transitional economies: Breaking through the constraints of legitimacy. In *Green Business: Concepts, Methodologies, Tools, and Applications*, IGI Global, pp. 1136-1160. <https://doi.org/10.4018/978-1-5225-7915-1.ch056>
- [3] Shafique, I., Kalyar, M.N., Mehwish, N. (2020). Organizational ambidexterity, green entrepreneurial orientation, and environment performance in SMEs context: Examining the moderating role of perceived CSR. *Corporate Social Responsibility and Environment Management*, 28(1): 446-456. <https://doi.org/10.1002/csr.2060>
- [4] Skordoulis, M., Kyriakopoulos, G., Ntanos, S., Galatsidas, S., Arabatzis, G., Chalikias, M., Kalantonis, P. (2022). The mediating role of firm strategy in the relationship between green entrepreneurship, green innovation, and competitive advantage: The case of medium and large-sized firms in Greece. *Sustainability*, 14: 3286. <https://doi.org/10.3390/su14063286>
- [5] Rofiaty. (2019). The relational model of entrepreneurship and knowledge management toward innovation, strategy implementation and improving islamic boarding school performance. *Journal of Modelling in Management*, 14(3): 662-685. <https://doi.org/10.1108/JM2-05-2018-0068>
- [6] Yi, Y., Zeng, S., Chen, H., Shi, J.J. (2021). When does it pay to be good? A meta-analysis of the relationship between green innovation and financial performance. *IEEE Transactions on Engineering Management*, 70(9): 3260-3270. <https://doi.org/10.1109/TEM.2021.3079098>
- [7] Huang, J.W., Li, Y.H. (2018). How resource alignment moderates the relationship between environmental innovation strategy and green innovation performance. *Journal of Business & Industrial Marketing*, 33(3): 316-324. <https://doi.org/10.1108/JBIM-10-2016-0253>
- [8] Singh, S.K., Giudice, M.D., Chierici, R., Graziano. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting & Social Change*, 150: 119762. <https://doi.org/10.1016/j.techfore.2019.119762>
- [9] Yin, C., Salmador, M.P., Li, D., Lloria, M.B. (2022). Green entrepreneurship and SME performance: The moderating effect of firm age. *International Entrepreneurship and Management Journal*, 18: 255-275. <https://doi.org/10.1007/s11365-021-00757-3>
- [10] Rezende, L.D.A., Bansi, A.C., Alves, M.F.R., Galina, S.V.R. (2019). Take your time: examining when innovation affect financial performance in multinationals. *Journal of Cleaner Production*, 233: 993-1003. <https://doi.org/10.1016/j.jclepro.2019.06.135>
- [11] Ullah, S., Danish, R.Q. (2020). The impact of green entrepreneurial orientation on firm performance through green innovation: The moderating role of strategic green marketing orientation. *European Online Journal of Natural and Social Sciences*, 9(2): 306-317.
- [12] Covin, J.G., Miller, D. (2014). International entrepreneurial orientation: Conceptual considerations, research themes, measurement issues, and future research directions. *Entrepreneurship theory and practice*, 38(1): 11-44. <https://doi.org/10.1111/etap.12027>
- [13] Sharpley, R. (2020). Tourism, sustainable development and the theoretical divide: 20 years on. *Journal of Sustainable Tourism*, 28(11): 1932-1946. <https://doi.org/10.1080/09669582.2020.1779732>
- [14] Nikolaou, E.I., Ierapetritis, D., Tsagarakis, K.P. (2011). An evaluation of the prospects of green entrepreneurship development using a SWOT analysis. *International Journal of Sustainable Development & World Ecology*, 18(1): 1-16. <https://doi.org/10.1080/13504509.2011.543565>
- [15] Dean, T.J., McMullen, J.S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, 22(1): 50-76. <https://doi.org/10.1016/j.jbusvent.2005.09.003>
- [16] Abu-Rumman, A., Al Shraah, A., Al-Madi, F., Alfalah,

- T. (2021). Entrepreneurial networks, entrepreneurial orientation, and performance of small and medium enterprises: Are dynamic capabilities the missing link? *Journal of Innovation and Entrepreneurship*, 10(1): 1-16. <https://doi.org/10.1186/s13731-021-00170-8>
- [17] Sellappan, P., Shanmugam, K. (2021). Delineating entrepreneurial orientation efficacy on retailer's business performance. *Management Decision*, 59(4): 858-876. <https://doi.org/10.1108/MD-01-2019-0062>
- [18] Dangelico, R.M., Pujari, D. (2010). Mainstreaming green product innovation: Why and how companies integrate environmental sustainability. *Journal of Business Ethics*, 95: 471-486. <https://doi.org/10.1007/s10551-010-0434-0>
- [19] Daft. (2010). *Era Baru Manajemen*. Jilid 1. Edisi Sembilan. Salemba Empat. Jakarta.
- [20] Linton, G., Johan, K. (2016). Configurations of entrepreneurial orientation and competitive strategy for high performance. *Journal of Business Research*, 70: 168-176. <https://doi.org/10.1016/j.jbusres.2016.08.022>
- [21] Bhagat, S., Bolton, B. (2019). Corporate governance and firm performance: The sequel. *Journal of Corporate Finance*, 58: 142-168. <https://doi.org/10.1016/j.jcorpfin.2019.04.006>
- [22] Herciu, M. (2017). Drivers of firm performance: Exploring quantitative and qualitative approaches. *Studies in Business and Economics*, 12(1): 79-84. <https://doi.org/10.1515/sbe-2017-0006>
- [23] Chen, Y.S., Lai, S.B., Wen, C.T. (2006). The influence of green innovation performance on corporate advantage in Taiwan. *Journal of Business Ethics*, 67: 331-339. <https://doi.org/10.1007/s10551-006-9025-5>
- [24] Ahmad Faiz, A.R. (2012). Pengaruh Minat Mengikuti Ekstrakurikuler Kepramukaan Terhadap Kedisiplinan Pada Siswa Kelas V SD Se Gugus II Kecamatan Pengasih Kabupaten Kulon Progo. Skripsi. UNY.
- [25] Dangelico, R.M. (2016). Green product innovation: Where we are and where we are going. *Business Strategy and the Environment*, 25(8): 560-576. <https://doi.org/10.1002/bse.1886>
- [26] Rennings, K. (2000) Redefining innovation—Eco-innovation research and the contribution from ecological economics. *Ecological Economics*, 32(2): 319-332. [https://doi.org/10.1016/S0921-8009\(99\)00112-3](https://doi.org/10.1016/S0921-8009(99)00112-3)
- [27] Wheelen, T.L., Hunger, J.D., Hoffman, A.N., Bamford, C.E. (2018). *Strategic Management and Business Policy: Globalization, Innovation, and Sustainability*. Essex: Pearson Education Limited.
- [28] Cherunilam, F. (2021). *Business Environment*. Himalaya Publishing House Pvt. Ltd.
- [29] Bawany, S. (2018). *Leading in a Disruptive VUCA World*. Business Expert Press (BEP).
- [30] Hamid, S. (2019). The strategic position of human resource management for creating sustainable competitive advantage in the VUCA world. *Journal of Human Resources Management and Labor Studies*, 7(2): 1-4. <https://10.15640/jhrmls.v7n2a1>