West Science Journal Economic and Entrepreneurship
Vol. 2, No. 04, November 2024, pp. 581~593

Effect of Green Transformational Leadership and Green Knowledge on Environmental Performance with Green Creativity as Intervening Variable in Tourism Villages in DIY

Nida Urrahma Hidayati[1], Mohamad Irhas Effendi[2], R Heru Kristanto HC[3]
[1,2,3]Management Departement, Economic and Business Faculty, Universitas Pembangunan Nasional "Veteran" Yogyakarta, Indonesia

Article Info

Article history:

Received November, 2024
Revised November, 2024
Accepted November, 2024

Keywords:

Green transformational leadership
Green knowledge
Green creativity
Environmental performance
Tourism village

ABSTRACT

The purpose of this study is to investigate how green transformational leadership and green knowledge affect the tourism village's environmental performance. It also looks at how their interaction is mediated by green creativity. Information was gathered from 69 tourist villages in Yogyakarta's Special Region (DIY). Primary data for this study was gathered using closed-ended questionnaires that were disseminated both locally and online using Google Forms. PLS was used to examine the actual data. The findings demonstrate that green transformational leadership and green knowledge improve the tourism village's environmental performance and green innovation. Additionally, it has been discovered that green creativity has a substantial mediating influence between environmental performance and green transformational leadership, as well as between environmental performance and green knowledge in the tourism village. The study's primary conclusion is that in order to advance sustainability and eventually improve environmental results, tourism villages must cultivate both green transformational leadership and green expertise.

Corresponding Author:

Name: Nida Urrahma Hidayati
Institution: Management Departement, Economic and Business Faculty, Universitas Pembangunan Nasional "Veteran" Yogyakarta, Indonesia
e-mail: nida2610mfd@gmail.com

1. INTRODUCTION

Indonesia currently focuses on developing modern tourism. However, this development itself is under criticism for the increasing environmental damage and carbon emissions caused by tourism activities [1]. This damage does not only occur in modern tourism, but also in alternative tourism, such as tourism villages, which also contribute a lot of waste and pollution [2].

Tourism villages, which consist of a combination of communities, produce a large amount of waste. Despite this, tourism is an industry that is prone to overconsumption [34]. The increasing number of tourists visiting tourism villages can put pressure on local waste management systems. Not to mention the problems of garbage, pollution and improper disposal of hazardous waste by both the local community and tourists. In addition making tourist destinations less attractive, waste and pollution can also have a negative impact on the environment and sustainability [44].

The issue of environmental management is one of the important aspects for tourism village managers to achieve a sustainable tourism village [5]. In its management, tourism village should not only focus on community empowerment to achieve economic performance, but environmental performance should also be considered. Environmental performance itself is a benchmark for the success of SDGs. In addition, it is also a benchmark for assessing the performance of tourism villages to achieve the highest classification of tourism villages, namely "Mandiri" tourism villages. Therefore, in order to achieve this, the operations of tourism villages need to improve their environmental performance in order to achieve sustainability.

Green transformational leadership (GTL) plays an important role in improving environmental performance [22]. Several researchers have investigated the relationship GTL on environmental management systems and environmental performance [38],[22]. According to [29], green transformational leadership has a significant positive impact on environmental performance in the Bangladesh hospitality industry. Some researchers argue that GTL has an indirect effect on environmental performance [22]. Some of these studies have been conducted in hospitality accommodation and SME businesses in developing countries, however, research on the green transformational leadership of tourism village managers in tourism village is yet to be seen. [39] proposed to study transformational leadership with a specific target environment. Therefore, the researcher hypothesises with a different environment from [29] research, namely that there is an effect of green transformational leadership on tourism village environmental performance.

As mentioned above, environmental problems need to be solved not only by the government, but organisations also need to contribute to the management of these problems. Solving environmental problems can be one of the strengths that can become a competitive advantage where organisational capabilities are needed as a strategic resource. [29] One of the organisational capabilities according to [56] is green knowledge. However, research conducted by [29] states that green knowledge does not have a significant influence on environmental performance and from several studies conducted on green knowledge, the influence of green knowledge of tourism village managers on environmental performance is still rarely seen.

It is generally acknowledged that creativity is another organizational talent that contributes to competitive advantage [29] and improved organizational performance, in addition to green knowledge as an organizational capability to enhance competitive advantage [56]. [59] asserts that despite the fact that the mediating role of green creativity is one of the most crucial subjects to be investigated in environmental performance and management systems, there are still few studies on green knowledge and green creativity [51], [29].

Environmental performance is linked to the sustainability of tourism villages, which is a fundamental concern of the government and stakeholders nowadays [3], [4]. However, the implementation of environmentally friendly practices to improve environmental performance that focuses on the managers of Tourism Villages is still inconclusive [5], [6]. More research is required to fully understand the role managers play in environmental sustainability across all sectors, despite the fact that the literature on managers and green hotel sustainability has been thoroughly studied [7]–[9]. [10].

Green creativity and environmental knowledge are essential for a larger goal in the framework of environmental management. Nevertheless, there aren't many research in environmental management that concentrate on organizational green creativity [11], [12]. This study will explore how green creativity mediates in the context of tourism villages to solve environmental difficulties, as well as the impact of green knowledge, green transformational leadership, and green creativity on environmental performance, in order to fill the gaps identified. Furthermore, it provides information to the government for

policymaking, serves as a guide for developing tourism village policies to achieve sustainability, and offers further references for next studies.

2. LITERATURE REVIEW

2.1 Environmental Performance

Environmental performance is an operating mechanism that reflects the organisation's ability to create environmental balance [13] which is used as an organisational strategy in achieving sustainability. [14] added that when an organisation implements an environmental strategy, it means that in achieving economic goals, organisational activities must also consider environmental balance. Conceptually, the Natural Resource Based View (NRBV) theory states that environmental performance is an important consideration for organisations who aim to improve reputation and increase profits by meeting the ecological and conservation expectations of stakeholders [15]. The NRBV theory was proposed by [18], and it states that an organisation's ability to compete in the future depends on the ability to manage its resources in a sustainable, innovative, and efficient ways [16]. This theory focuses on how organisations gain competitive advantage by implementing green strategies [18] within environmental performance that include pollution prevention and reduction such as reducing emissions and waste, designing greener products and services and sustainable development such as innovation that enables organisations to create new products and processes to minimise environmental impacts [17]. From this perspective, organisations create environmentally friendly strategies through their resources to achieve greater environmental performance that cannot be replicated by other competitors [18]. Environmental performance can be assessed by indicators of waste production, use of natural resources, compliance with regulations and standards of behaviour, conservation efforts, and reduction of emissions [19].

2.2 Green Transformational Leadership

A leadership approach known as "green transformational leadership" (GTL) encourages and motivates its followers to act in ways that advance environmental objectives [20]. According to [22], leadership is regarded as a crucial resource in environmental management within organizations, drawing on the Resource Based View (RBV). The RBV's creator, Barney, demonstrated that the foundation of a sustained competitive advantage is organizational resources that are uncommon, distinctive, and challenging to replicate [23]. As a rare and hard-to-replicate strategic leadership resource, GTL is a leadership trait that propels environmental change through sustainable vision, motivation, and creativity [24]. The development of an eco-friendly culture and transformational leadership in environmental preservation are the causes of GTL [25]. According to [21], [20] initially proposed GTL in relation to Bass and Steidlmeier's notion of transformational leadership. According to [26], charm, intellectual stimulation, inspirational motivation, and individualized consideration are the components of transformative leadership.

2.3 Green Knowledge

Knowledge of environmental concepts and facts, such as the idea of ecosystems, the harm that human activity causes to the environment, and the concept of responsibility in sustainable development, is referred to as "green knowledge" [8]. This information raises personal concern and environmental competency awareness [25], which affects managers' and consumers' decision-making [27] and aids in the creation of environmental protection rules [28].

Green-savvy managers are a valuable asset for creating and executing green innovations and marketing [29], which in turn motivates higher authorities to address more ecologically conscious issues [30]. Abstract and concrete knowledge are the two measures of green knowledge, according to [25].

2.4 Green Creativity

The capacity to come up with workable answers to problems is what is

known as creativity [31]. In a dynamic business climate, an organization with innovative human resources may maintain a competitive edge and add value [9]. Teresa Amabile initially talked about creativity in 1983. She claimed that three factors—expertise, critical thinking, and motivation—combine to produce innovation in organizations. Amabile emphasized the significance of an organizational climate that fosters creativity at the organizational level [32]. Being the primary force of innovation, [27] creativity benefits organizations greatly by allowing them to adjust to a constantly shifting environment [33]. New ideas produced by creativity have the potential to improve organizational performance and development [34]. Since it serves as the foundation for organizational innovation, creativity is a crucial first stage in the innovation process in the tourism sector [27]. According to [35], the application of novel concepts, creative acts, problem-solving, goal and objective achievement, performance improvement, and quality improvement are some of the indicators used to evaluate this variable. In contrast to ordinary creativity, green creativity emphasizes ecologically friendly goods, procedures, and services [36]. Green competitiveness is thus the result of this divergence [37].

CONCEPTUAL MODEL AND HYPOTHESIS DEVELOPMENT

Green knowledge and green creativity

The creation of novel, practical concepts that lead to eco-friendly procedures, methods, goods, or services is known as "green creativity" [12], [38]. In an environmental management system, green ingenuity is regarded as the cornerstone of all green initiatives and practices [39]. While some people can develop their creativity without the assistance of experts, others require the assistance of experts in order to obtain the necessary knowledge [59]; [40]; [41]; [42]. The relative significance of information for creative thinking has been the subject of several research [43]; [42]; [44]. The development of organizational creativity depends on the efficient management of knowledge, technical skills, and human capital, all of which together enable the creation of creative outputs, according to [42] and [44] [43].

[45] research show that the content of knowledge serves as the foundation for new knowledge, which can assist managers in developing creative ideas for organisational development [29], while enhancing the capabilities of the group [44]. Based on this description, the hypothesis in this study is as follows: H1: Green knowledge has a positive and significant influence on green creativity

Green transformational leadership and green creativity

One important predictor of green behavior [46], which can inspire innovation [38], is the idea of responsible leadership. By interacting with staff members and establishing an environment that encourages creativity, leaders can help them become more creative [35]. Her research has examined the social and environmental elements that affect employee behavior. For instance, the influence of green intrinsic drive on green creative behavior may be lessened by green extrinsic motivation (leadership) [38]. This description leads to the following hypothesis for this study:

H2 : Green transformational leadership has a positive and significant influence on green creativity

Green creativity and environmental performance

[47] assert that organizations must aggressively encourage green creativity among their workforce in order to decrease production waste and accomplish sustainable growth. One skill that is connected to environmental performance is green inventiveness [29]. One way to think of organizational effectiveness is as the result of processes that foster creativity [40]. An organization's ability to be creative is crucial to its ongoing development, and its environmental performance must be taken into account when gauging any changes that take place [42]. This description leads to the following hypothesis for this study:

H3 : Green creativity has a positive and significant influence on environmental performance

Green knowledge and environmental performance

[8] claim that green knowledge demonstrates an organization's members' environmental awareness. Knowledge serves as a catalyst for excellence, enabling managers and staff with the necessary expertise to lead their organizations in meeting demands and adapting to changing conditions [8]. Although green knowledge still has a limited influence on the decision-making process, it aids organizations in creating rules that can act as standards for environmental stewardship and improvement [27]; [48]; [29].

Although in a study conducted [29] green knowledge did not have a significant relationship with performance, managers with environmental knowledge remain as an important resource for developing, adopting, and implementing green innovations. In addition, the green knowledge of managers encourages higher authorities to solve problems in a more environmentally oriented manner [30]. Based on this description, the hypothesis in this study is as follows:

H4: Green knowledge has a positive and significant influence on environmental performance

Green transformational leadership and environmental performance

According to strategic leadership theory, the success of environmental social responsibility [20] is determined by the presence of transformational leadership in organizations, which fosters higher levels of commitment, trust, and performance [49]. Green transformational leadership, according to [24], is crucial in assisting organizations in realizing ecological goals and strategies, which eventually results in environmentally friendly organizational performance [50]. By establishing environmental standards, motivating followers with environmental objectives and standards, and articulating a more comprehensive environmental vision, transformational leadership improves the effectiveness of green product development [11].

[22] identified several barriers to adopting and implementing green marketing practices such as a lack of professional advice for adopting green practices and a lack of management willingness to distribute knowledge about green practices and skills [22]. Based on this description, the hypothesis in this study is as follows:

H5 : Green transformational leadership has a positive and significant influence on environmental performance

Green creativity as mediator

Green Creativity is a variable that encourages sustainable innovation through the development of environmentally friendly products and services [39]. Creativity allows organisations to find new ways to achieve better environmental performance by creating added value for the organisation[36]. Therefore, green creativity is an important mediating variable because it can create innovative solutions to environmental challenges [29].

As [51], points out, environmental problems themselves can actually be reduced by green creativity, where this creativity motivates employees to solve problems in creative, unique, and renewable ways. Green creativity also allows leaders with a green transformational leadership style [34] and possess green knowledge [29] to actually generate real changes in environmental performance, making it a key element in the green process. In light of this discussion on the relationship between green knowledge, green transformational leadership and environmental performance, green creativity is hypothesised to act as a mediator. Based on this description, the hypothesis in this study is as follows:

H6: Green creativity mediates the relationship between green knowledge and environmental performance

H7: Green creativity mediates the relationship between green transformational leadership and environmental performance

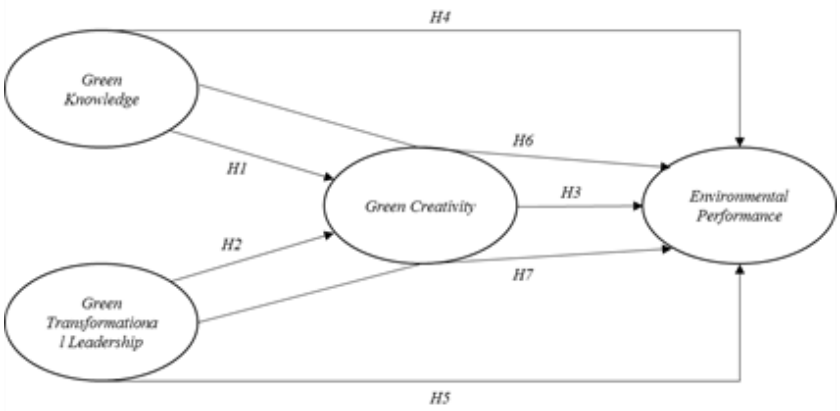

Figure 1. Research Framework

3. METHODS

This study is cross-sectional and employs quantitative techniques to assess the hypothesis. Closed questionnaires pertaining to environmental performance, green transformational leadership, green knowledge, and green innovation were sent in order to gather the data. With an uncontrolled study setting in which researchers will merely monitor the relationship between current variables without actively altering or intervening in the environment, the degree of researcher intervention in this study is minimal. Tourist settlements in the Daerah Istimewa Yogyakarta (Special Region of Yogyakarta (DIY)) that were registered in the Dinas Pariwisata Daerah Istimewa Yogyakarta 2023 comprise the study's population. After estimating the sample size using the Slovin formula, 69 tourism villages were included in the sample, with the manager or head of each serving as a representative of the village.

Four items were used to test the green knowledge component [25], five items were used to measure the green transformational leadership [36], and seven items were used to measure the green creativity. environmental performance using six items [6], [52], and [53], [36]. This study uses a 5-point Likert scale. Convergent validity, discriminant validity, and Average Variance Extracted (AVE) predictions with a limit over 0.50 are used in instrument testing. In the meantime, reliability testing was conducted using Cronbach alpha and composite reliability. Path analysis is then carried out in this study utilizing PLS-SEM with latent variables.

4. RESULTS AND DISCUSSION

4.1 Descriptive Analysis

The questionnaire return rate is 100% and it is suitable for testing. It show that male respondents more dominant than women, namely 55 respondents or equivalent to 80% of the total respondents. Respondents who have a level of education are dominated at the high school level with 33 respondents (48%) even though the total of respondent that have higher level education than high school level (D3, S1, S2, and S3) are 36 respondent or equivalent to 52%. The position of respondents representing tourism village as head of management is 47 respondents and managers as many as 22 respondents. The type of tourism village come from different classification (Independent = 5, Advanced = 20, Developing = 22, Pioneer = 22,). The length of business is grouped into three categories: less than 3 years, 4 respondents, 3-6 years, 24 respondents, and more than 6 years, 41 respondents. Furthermore, tourism village that are located in Yogyakarta City with 7 respondents (10%), Sleman with 25 respondents (36%), Bantul with 16 (23%), Kulonprogo with 7 respondents (10%), and Gunung Kidul with 14 respondents (20%). This finding shows that developing and pioneer tourism village, operating for more than 6 years and located in Sleman are the most dominant. The characteristics of respondent are presented in Table 1.

Table 1. Respondent Characteristic

Characteristics	Classification	Total	Percentage
Gender	Male	55	80%
	Female	14	20%
Education Level	High School	33	48%
	Associate Degree	4	6%
	Bachelor	27	39%
	Master	4	6%
	Doctoral	1	1%
Respondent's position	Head of tourism village management	47	68%
	Manager of tourism village	22	32%
Classification of Tourism Village	Independent	5	7%
	Advanced	20	29%
	Developing	22	32%
	Pioneer	22	32%
Length of time the tourism village has been established	< 3 years	4	6%
	3 – 6 years	24	35%
	> 6 years	41	59%
Tourism village location	Sleman	25	36%
	Yogyakarta City	7	10%
	Bantul	16	23%
	Gunung Kidul	14	20%
	Kulon Progo	7	10%
Total			100%

4.2 Measurement Model Analysis

When the initial assessment was carried out, all variables were found to have reliability and validity. The outer loading of each item surpassed 0.7. To assess discriminant validity, the cross loading (for each item) was used. in the variable, the cross loading (for each item) is higher than the cross-loading factor of other variables. Furthermore, the Average Variance Extracted (AVE) surpassed 0,5, and each Cronbach Alpha, and Composite Reliability values exceeded the respective thresholds of 0.70 [54]. These findings are displayed in Table 2.

Table 2. Validity and Reliability

Variable	Item	Outer Loading	Cross Loading	Cronbach alpha	Composite Reliability	AVE
Green transformational leadership	GTFL 1	0,876	0,876	0,906	0,930	0,728
	GTFL 2	0,909	0,909			
	GTFL 3	0,840	0,840			
	GTFL 4	0,745	0,745			
	GTFL 5	0,887	0,887			
Green knowledge	GK 1	0,862	0,862	0,931	0,950	0,828
	GK 2	0,952	0,952			
	GK 3	0,901	0,901			
	GK 4	0,921	0,921			
Green creativity	GC 1	0,819	0,819	0,922	0,937	0,679
	GC 2	0,828	0,828			
	GC 3	0,791	0,791			

	GC 4	0,882	0,882			
	GC 5	0,879	0,879			
	GC 6	0,793	0,793			
	GC 7	0,772	0,772			
Environmental performance	EP 1	0,832	0,832	0,931	0,946	0,745
	EP 2	0,927	0,927			
	EP 3	0,838	0,838			
	EP 4	0,899	0,899			
	EP 5	0,836	0,836			
	EP 6	0,841	0,841			

4.3 Structural Model Analysis

The second step of the PLS process is to analyze the structural model. The structural model was evaluated using R-squared, f-squared, and path coefficient values to examine the degree to which the independent factors influence the dependent variable [54]. Bootstrapping is used to assess the structural model (5000 samples).

The R^2 value (R- square) is serves to differentiate and evaluate the research model, if the value of R^2 is 0.75, then the model is rated as strong, if it is 0.50, then rated as moderate, and if it is 0.25, then rated as weak[55]. Table 3 shows that the R^2 for variables with regard on environmental performance is 0.786. This shows that the model can explain about 78.6% of the variation in Environmental Performance. This high value indicates that the model has a good fit in predicting this variable, and indicates that the independent variables used in this study contribute significantly to the variation in Environmental Performance. R^2 value for green creativity is 0.468. This indicates that the model can explain about 46.8% of the variation in green creativity. Although this value is lower than the R^2 for Environmental Performance, it still indicates that the model has a fairly good fit or acceptable.

Table 3. **R-Square (R^2)**

	R-Square
Environmental performance	**0,786**
Green Creativity	**0,468**

Another crucial aspect is determining how important the independent variable is in explaining the dependent variable, and value is important in this process. To classify the effect of f2 A value is deemed large if it is greater than or equal to 0.35, medium if it is between 0.15 and 0.35, and small if it is between 0.15 and 0.02 [55]. The lack of any influence is indicated when the f2value is less than 0.02 [54]. Green Transformational Leadership on Environmental Performance is 0.231 (medium), Green Creativity on Environmental Performance is 0.307 (medium), Green Transformational Leadership on Green Creativity is 0.211 (medium), and Green Creativity on Environmental Performance is 0.584 (strong) according to the data shown in Table 4.

Table 4 **f^2 Effect Size**

	Environmental performance	Green creativity
Green creativity	0,584	
Green knowledge	0,274	0,307
Green transformational leadership	0,231	0,211

Using that figure from Table 4, it can be said that Green Creativity plays a major role in affecting Environmental Performance, while Green Knowledge also plays a substantial role, but not as much as Green Creativity alone. Green Transformational

Leadership contributes significantly, albeit not as much as Green Creativity or Green Knowledge. Green transformational leadership also plays a significant role in influencing green creativity, though its influence is less than that of green creativity itself. Green knowledge also plays a significant role in influencing green creativity, but it is not as strong as the influence of green creativity on environmental performance.

Table 5. Hypothesis testing

		Original sample (O)	T statistics	P values	Ket.
H1	Green Knowledge -> Green Creativity	0,444	5,162	0,000	Accepted
H2	Green Transformational Leadership -> Green Creativity	0,368	3,999	0,000	Accepted
H3	Green Creativity -> Environmental Performance	0,484	4,714	0,000	Accepted
H4	Green Knowledge -> Environmental Performance	0,304	3,790	0,000	Accepted
H5	Green Transformational Leadership -> Environmental Performance	0,268	2,896	0,004	Accepted
H6	Green Knowledge -> Green Creativity -> Environmental Performance	0,215	3,559	0,000	Accepted
H7	Green Transformational Leadership -> Green Creativity -> Environmental Performance	0,178	3,003	0,003	Accepted

Based on the results that obtained through the bootstrapping, as presented in Table 5, the final step reveals that all hypothesis was accepted and supported. It shows that green knowledge has a direct and positive impact on green creativity (β = 0,444, t < 5,162, p < 0.000), green transformational leadership also has a direct and positive effect on green creativity (β = 0,368, t < 3,999, p < 0.000), green creativity has a direct and positive effect on environmental performance (β = 0,484, t < 4,714, p < 0.000), green knowledge has a direct and positive impact on environmental performance (β = 0,304, t < 3,790, p < 0.000), green transformational leadership also has a direct and positive effect on environmental performance (β = 0,268, t < 2,896, p < 0.004), and it was shown that the relationship between green knowledge and environmental performance was significantly mediated by green creativity (β = 0,215, t < 3,559, p < 0.000), Combining environmental performance with the value of green transformational leadership and (β = 0,178, t < 3,003, p < 0.003).

DISCUSSION

The results of our study offer valuable perspectives on the elements that impact the success of environmental performance of tourism village in Special Regency of Yogyakarta.

The hypothesis testing above shows that the H1 and H2 is supported, which indicates that green knowledge and green transformational leadership has a positive and significant impact on tourism village's green creativity. These findings are also supported by previous research that propound that green knowledge [41] and green transformational leadership can have a positive impact on green creativity and can enhance it [34], [38]. This is in line with RBV where unique internal resources such as HR and knowledge become rare resources that can increase competitive advantage, namely creativity [29] Green knowledge becomes an organizational capability [56] which the content of knowledge itself provides raw materials or ideas to generate new knowledge where the knowledge possessed by tourism village leader and manager can generate organizational creativity which is crucial for tourism village. Not only that, Leader who had green transformational leadership are crucial to the organization's ability to adapt to environmental changes [57]. This study show

that leader foster manager's and tourism village member's green creativity through interactions with them and through creating a work climate that supports creativity. This is in line with social identity theory where when leaders internalize traits that have environmental values, followers will feel motivated to identify with their leader's standards and demonstrate positive behaviors that make significant contributions to the organization through creative and innovative behavior that can improve performance [58] This leadership style motivate tourism village managers to obtain information and doing green process, where they then behave in an environmentally friendly manner and have activities that improve their green creativity [50].

Green creativity, green expertise, and green transformational leadership have a positive and significant impact on the environmental performance of the tourism village, as demonstrated by the preceding hypothesis testing, which supports H3, H4, and H5. Prior studies on the effects of green transformational leadership [24], green creativity [59], and green knowledge [48] on environmental performance also corroborate these findings. Despite the fact that research by He et al. (2022) and [29] indicates that green knowledge has little effect on environmental performance, they maintain that green knowledge can still be used to improve environmental performance through the use of green transformational leadership and green creativity.

In line with RBV, human resources and knowledge are two predictors that can assess the high and low environmental performance of an organization [60] where green transformational leadership [24] and green knowledge [48] are strategic assets to channel its resource potential towards environmental performance improvement [22]. Green creativity itself become one important thing when organization want to reach inovation and better environmental performance where it encourages the emergence of new ideas related to sustainability. Tourism village that possess green creativity create creative solution to environmental problem with new environmental friendly ideas and concepts, and this can lead to increased environmental performance. This also applies to Tourism village that have leaders who have green insight and have a green leadership pattern. Tourism village that have both of these things are able to improve environmental performance which provides a competitive advantage.

The testing results are corroborated by H6 and H7, indicating that green creativity mediates the relationship between environmental performance and green transformational leadership as well as between green knowledge and environmental performance. Green creativity itself can foster new beneficial ideas that can increase the services provided by the tourism village, its products, and its processes. This study demonstrates how tourism village leaders' green transformational leadership and green expertise help the organization achieve environmental performance and foster green creativity. This creativity is consistent with the organizational creativity idea, which holds that creativity is essential to coming up with novel answers to environmental problems. Green innovation offers a fresh approach when the tourism village wishes to improve environmental performance and the efficacy of the environmental management system [29]. Influenced by green knowledge, green creativity in the tourism village facilitates the development of innovative concepts and initiatives to improve environmental performance. Leaders of the tourism village and other pertinent authorities might use this mediation to help create and execute a suitable creative culture.

5. CONCLUSION

This study demonstrates that human capital has an impact on the tourism village's environmental management system's efficacy. The environmental performance of tourism villages is positively and significantly impacted by green knowledge, green transformational leadership, and green creativity, as this study analyzes and

illustrates several previously published data. This study also demonstrates that green creativity can act as a mediator in the relationship between green knowledge and environmental performance, as well as between green transformational leadership and environmental performance. This means that managers and leaders of tourism villages should try to invest in and cultivate a strong transformational leadership style that focuses on the environment in order to guide managers and members of the tourism village to improve their environmental performance and green creativity. To improve the tourism village's creative and environmental performance, it is necessary to hire people with a deeper grasp of the environment to help create internal codes that can be applied to programs and activities. This study provides insightful information about how to apply environmental management techniques in a tourist village. Therefore, it is advised to support managers in implementing green practices, such as efficiently managing waste, fostering relationships with the tourism village community for environmental preservation, pursuing green creativity, and creating eco-friendly goods and services, in order to improve the environmental performance of the tourism village.

There are a number of drawbacks to this study, including the fact that it is cross-sectional and cannot record shifts in managers' perspectives; as a result, longitudinal research can be carried out in particular tourist communities. Since the Special Region of Yogyakarta's tourism villages are the sole subject of this study, in-depth investigations into other sectors and domains may be conducted in the future to inform national sustainability. Only the views of the head of the tourism village management are the subject of this investigation. As a result, the study's scope can be extended to include every member of every tourism community. This is due to the fact that tourist villages are made up of several communities, and each community needs to cooperate in order to attain its particular environmental performance.

REFERENCES

[1] B. A. Saputro *et al.*, "Digital Press Social Sciences and Humanities Preserving Harmony in Bali : An Environmental Philosophy Approach to Tackling Over-tourism Preserving Harmony in Bali : An Environmental Philosophy Approach to Tackling Over-tourism," *Soc. Sci. Humanit.*, vol. 11, 2004.

[2] B. Kiswantono *et al.*, "Penanganan Sampah untuk Mendukung Pariwisata Desa Labuhan Kertasari Kecamatan Taliwang Kabupaten Sumbawa Barat," *Semin. Nas. Tek. Kim. Ecosmart*, pp. 65–70, 2018.

[3] A. Wirdayanti *et al.*, *Pedoman Desa Wisata*, II. Kementrian Koordinasi Bidang Kemaritiman dan Investasi, 2021.

[4] N. Dalidjo, *Desa Wisata: Paradigma Pembangunan Alternatif untuk Pariwisata Berkelanjutan*. DI. Yogyakarta: INSISTPress, 2024.

[5] I. Nugroho, *Ekowisata dan pembangunan berkelanjutan. Pustaka Pelajar, 2011*. Pustaka Pelajar, 2011.

[6] A. Wijayanti and Y. Purwoko, "Identifikasi indikator kinerja pengelolaan desa wisata rintisan, study kasus desa wisata Karang, Trimulyo, Sleman," *J. Tour. Econ.*, vol. 5, no. 2, pp. 130–146, 2022, doi: 10.36594/jtec/qmv6rk38.

[7] S. Roscoe, N. Subramanian, C. J. C. Jabbour, and T. Chong, "Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development," *Bus. Strateg. Environ.*, vol. 28, no. 5, pp. 737–749, 2019, doi: 10.1002/bse.2277.

[8] A. Martinez-Martinez, J. G. Cegarra-Navarro, A. Garcia-Perez, and A. Wensley, "Knowledge agents as drivers of environmental sustainability and business performance in the hospitality sector," *Tour. Manag.*, vol. 70, no. October 2017, pp. 381–389, 2019, doi: 10.1016/j.tourman.2018.08.030.

[9] C. J. Wang, H. T. Tsai, and M. T. Tsai, "Linking transformational leadership and employee creativity in the hospitality industry: The influences of creative role identity, creative self-efficacy, and job complexity," *Tour. Manag.*, vol. 40, pp. 79–89, 2014, doi: 10.1016/j.tourman.2013.05.008.

[10] N. T. Pham, T. Vo Thanh, Z. Tučková, and V. T. N. Thuy, "The role of green human resource management in driving hotel's environmental performance: Interaction and mediation analysis," *Int. J. Hosp. Manag.*, vol. 88, no. October 2019, 2020, doi: 10.1016/j.ijhm.2019.102392.

[11] J. Jia, H. Liu, T. Chin, and D. Hu, "The continuous mediating effects of GHRM on employees' green passion via transformational leadership and green creativity," *Sustain.*, vol. 10, no. 9, 2018, doi: 10.3390/su10093237.

[12] W. Song and H. Yu, "Green Innovation Strategy and Green Innovation: The Roles of Green Creativity and Green Organizational Identity," *Corp. Soc. Responsib. Environ. Manag.*, vol. 25, no. 2, pp. 135–150, 2018, doi: 10.1002/csr.1445.

[13] M. Yasir, A. Majid, and H. Qudratullah, "Promoting environmental performance in manufacturing industry of developing countries through environmental orientation and green business strategies," *J. Clean. Prod.*, vol. 275, p.

123003, 2020, doi: 10.1016/j.jclepro.2020.123003.
[14] S. Suripto and U. Pamulang, *Corporate Social Responsibility i CORPORATE SOCIAL RESPONSIBILITY (CSR) CORPORATE SOCIAL RESPONSIBILITY (CSR) Penyusun : H . Suripto Jl . Surya Kencana No . 1 Pamulang Gd . A , Ruang 212 Universitas Pamulang Tangerang Selatan – Banten Corporate Social*, no. February. 2024.
[15] E. Battisti, N. Nirino, E. Leonidou, and A. Thrassou, "Corporate venture capital and CSR performance: An extended resource based view's perspective," *J. Bus. Res.*, vol. 139, no. December 2020, pp. 1058–1066, 2022, doi: 10.1016/j.jbusres.2021.10.054.
[16] R. Y. K. Chan, "Does the natural-resource-based view of the firm apply in an emerging economy? A survey of foreign invested enterprises in China," *J. Manag. Stud.*, vol. 42, no. 3, pp. 625–672, 2005, doi: 10.1111/j.1467-6486.2005.00511.x.
[17] T. A. Chin, N. F. I. A. Malik, H. H. Tat, Z. Sulaiman, and T. L. Choon, "Green purchasing practices and environmental performance," *Int. J. Supply Chain Manag.*, vol. 9, no. 1, pp. 291–297, 2020.
[18] S. L. Hart, "A natural-resource-based view of the firm," *Acad. Manag. Rev.*, vol. 20, no. 4, pp. 986–1014, 1995.
[19] M. H. Shahbaz, S. Ahmad, and S. A. Malik, "Green intellectual capital heading towards green innovation and environmental performance: assessing the moderating effect of green creativity in SMEs of Pakistan," *Int. J. Innov. Sci.*, 2024, doi: 10.1108/IJIS-08-2023-0169.
[20] Y. S. Chen, C. H. Chang, and Y. H. Lin, "Green transformational leadership and green performance: The mediation effects of green mindfulness and green self-efficacy," *Sustain.*, vol. 6, no. 10, pp. 6604–6621, 2014, doi: 10.3390/su6106604.
[21] S. Zhou, D. Zhang, C. Lyu, and H. Zhang, "Does seeing 'mind acts upon mind' affect green psychological climate and green product development performance? The role of matching between green transformational leadership and individual green values," *Sustain.*, vol. 10, no. 9, 2018, doi: 10.3390/su10093206.
[22] S. K. Singh, M. Del Giudice, R. Chierici, and D. Graziano, "Green innovation and environmental performance: The role of green transformational leadership and green human resource management," *Technol. Forecast. Soc. Change*, vol. 150, no. May 2019, p. 119762, 2020, doi: 10.1016/j.techfore.2019.119762.
[23] J. Barney, "Firm Reources ad Sustained Competitive Advantege," *Journal of Management*, vol. 17, no. 1. pp. 99–120, 1991.
[24] X. Sun, A. El Askary, M. S. Meo, N. ul A. Zafar, and B. Hussain, "Green transformational leadership and environmental performance in small and medium enterprises," *Econ. Res. Istraz.* , vol. 35, no. 1, pp. 5273–5291, 2022, doi: 10.1080/1331677X.2021.2025127.
[25] N. Subramanian, M. D. Abdulrahman, L. Wu, and P. Nath, "Green competence framework: Evidence from China," *Int. J. Hum. Resour. Manag.*, vol. 27, no. 2, pp. 151–172, 2016, doi: 10.1080/09585192.2015.1047394.
[26] B. M. Bass and P. Steidlmeier, "Ethics, character, and authentic transformational leadership behavior," *Leadersh. Q.*, vol. 10, no. 2, pp. 181–217, 1999, doi: 10.1016/S1048-9843(99)00016-8.
[27] S. Wang, J. Wang, Y. Wang, J. Yan, and J. Li, "Environmental knowledge and consumers' intentions to visit green hotels: the mediating role of consumption values," *J. Travel Tour. Mark.*, vol. 35, no. 9, pp. 1261–1271, 2018, doi: 10.1080/10548408.2018.1490234.
[28] Y. J. Kim, W. G. Kim, H. M. Choi, and K. Phetvaroon, "The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance," *Int. J. Hosp. Manag.*, vol. 76, no. May 2018, pp. 83–93, 2019, doi: 10.1016/j.ijhm.2018.04.007.
[29] F. Riva, S. Magrizos, and M. R. B. Rubel, "Investigating the link between managers' green knowledge and leadership style, and their firms' environmental performance: The mediation role of green creativity," *Bus. Strateg. Environ.*, vol. 30, no. 7, pp. 3228–3240, Nov. 2021, doi: 10.1002/bse.2799.
[30] B. Bin Saeed, B. Afsar, S. Hafeez, I. Khan, M. Tahir, and M. A. Afridi, "Promoting employee's proenvironmental behavior through green human resource management practices," *Corp. Soc. Responsib. Environ. Manag.*, vol. 26, no. 2, pp. 424–438, 2019, doi: 10.1002/csr.1694.
[31] V. M. Y. Cheng, "Developing individual creativity for environmental sustainability: Using an everyday theme in higher education," *Think. Ski. Creat.*, vol. 33, no. May, p. 100567, 2019, doi: 10.1016/j.tsc.2019.05.001.
[32] teresa M. Amabile, *A model of creativity and innovation in organizations*. 1988.
[33] J. Chen, D. O. Neubaum, R. R. Reilly, and G. S. Lynn, "The relationship between team autonomy and new product development performance under different levels of technological turbulence," *J. Oper. Manag.*, vol. 33–34, pp. 83–96, 2015, doi: 10.1016/j.jom.2014.10.001.
[34] S. Mittal and R. L. Dhar, "Effect of green transformational leadership on green creativity: A study of tourist hotels," *Tour. Manag.*, vol. 57, pp. 118–127, 2016, doi: 10.1016/j.tourman.2016.05.007.
[35] A. Rego, F. Sousa, M. Pina e Cunha, A. Correia, and I. Saur-Amaral, "Leader Self-Reported Emotional Intelligence and Perceived Employee Creativity: An Exploratory Study," *Creat. Innov. Manag.*, vol. 16, no. 3, pp. 250–264, 2007, doi: 10.1111/j.1467-8691.2007.00435.x.
[36] Y. S. Chen and C. H. Chang, "The Determinants of Green Product Development Performance: Green Dynamic Capabilities, Green Transformational Leadership, and Green Creativity," *J. Bus. Ethics*, vol. 116, no. 1, pp. 107–119, 2013, doi: 10.1007/s10551-012-1452-x.
[37] C. Baah, Y. Agyabeng-Mensah, E. Afum, and J. A. Lascano Armas, "Exploring corporate environmental ethics and green creativity as antecedents of green competitive advantage, sustainable production and financial performance: empirical evidence from manufacturing firms," *Benchmarking*, vol. 31, no. 3, pp. 990–1008, 2024, doi: 10.1108/BIJ-06-2022-0352.
[38] W. Li, T. A. Bhutto, W. Xuhui, Q. Maitlo, A. U. Zafar, and N. Ahmed Bhutto, "Unlocking employees' green creativity: The effects of green transformational leadership, green intrinsic, and extrinsic motivation," *J. Clean. Prod.*, vol. 255, p. 120229, 2020, doi: 10.1016/j.jclepro.2020.120229.

[39] Y. S. Chen, T. W. Chang, C. Y. Lin, P. Y. Lai, and K. H. Wang, "The influence of proactive green innovation and reactive green innovation on green product development performance: The mediation role of green creativity," *Sustain.*, vol. 8, no. 10, 2016, doi: 10.3390/su8100966.

[40] G. Soda, D. Stea, and T. Pedersen, "Network Structure, Collaborative Context, and Individual Creativity," *J. Manage.*, vol. 45, no. 4, pp. 1739–1765, 2019, doi: 10.1177/0149206317724509.

[41] D. He, A. Raza, M. Chen, Y. Xu, and O. Morake, "Examining the green factors affecting environmental performance in small and medium–sized enterprises: A mediating essence of green creativity," *Front. Psychol.*, vol. 13, no. December, pp. 1–13, Dec. 2022, doi: 10.3389/fpsyg.2022.1078203.

[42] R. Indriartiningtias, Subagyo, and B. Hartono, "Creativity of small firms in creative industry: Initial evidence from Indonesia," *Int. J. Eng. Bus. Manag.*, vol. 11, p. 184797901984913, Jan. 2019, doi: 10.1177/1847979019849135.

[43] R. W. Woodman, J. E. Sawyer, and R. W. Griffin, "Toward a Theory of Organizational Creativity," *Acad. Manag. Rev.*, vol. 18, no. 2, pp. 293–321, 1993, doi: 10.5465/amr.1993.3997517.

[44] H. J. Ureña-Espaillat, A. J. Briones-Peñalver, J. A. Bernal-Conesa, and J. R. Córdoba-Pachón, "Knowledge and innovation management in agribusiness: A study in the Dominican Republic," *Bus. Strateg. Environ.*, vol. 32, no. 4, pp. 2008–2021, 2023, doi: 10.1002/bse.3233.

[45] S. Y. Sung and J. N. Choi, "Effects of team knowledge management on the creativity and financial performance of organizational teams," *Organ. Behav. Hum. Decis. Process.*, vol. 118, no. 1, pp. 4–13, 2012, doi: 10.1016/j.obhdp.2012.01.001.

[46] J. Zhang, S. Ul-durar, M. Naseer, Y. Zhang, and L. Lu, "How does responsible leadership affect employees ' voluntary workplace green behaviors ? A multilevel dual process model of voluntary workplace," vol. 296, no. June, 2021, doi: 10.1016/j.jenvman.2021.113205.

[47] B. M. Al-Ghazali and B. Afsar, "Green human resource management and employees' green creativity: The roles of green behavioral intention and individual green values," *Corp. Soc. Responsib. Environ. Manag.*, no. February, pp. 1–18, 2020, doi: 10.1002/csr.1987.

[48] A. Amoah and T. Addoah, "Does environmental knowledge drive pro-environmental behaviour in developing countries? Evidence from households in Ghana," *Environ. Dev. Sustain.*, vol. 23, no. 2, pp. 2719–2738, 2021, doi: 10.1007/s10668-020-00698-x.

[49] G. Tang, Y. Chen, Y. Jiang, P. Paillé, and J. Jia, "Green human resource management practices: scale development and validity," *Asia Pacific J. Hum. Resour.*, vol. 56, no. 1, pp. 31–55, 2018, doi: 10.1111/1744-7941.12147.

[50] J. A. E. Perez, F. Ejaz, and S. Ejaz, "Green Transformational Leadership, GHRM, and Proenvironmental Behavior: An Effectual Drive to Environmental Performances of Small- and Medium-Sized Enterprises," *Sustain.*, vol. 15, no. 5, 2023, doi: 10.3390/su15054537.

[51] L. T. Tuan, "Environmentally-specific servant leadership and green creativity among tourism employees: dual mediation paths," *J. Sustain. Tour.*, vol. 28, no. 1, pp. 86–109, 2020, doi: 10.1080/09669582.2019.1675674.

[52] S. A. Melnyk, R. P. Sroufe, and R. Calantone, "Assessing the impact of environmental management systems on corporate and environmental performance," vol. 21, pp. 329–351, 2003.

[53] T. Y. Chiou, H. K. Chan, F. Lettice, and S. H. Chung, "The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan," *Transp. Res. Part E Logist. Transp. Rev.*, vol. 47, no. 6, pp. 822–836, 2011, doi: 10.1016/j.tre.2011.05.016.

[54] J. F. Hair, J. J, Risher, M. Sarstedt, and C. M. Ringle, "Article information : When to use and how to report the results of PLS-SEM," 2018.

[55] I. Ghozali and H. Latan, *Partial least squares konsep, teknik dan aplikasi menggunakan program smartpls 3.0 untuk penelitian empiris*. 2015.

[56] K. Jermsittiparsert, P. Siriattakul, and N. Sangperm, "Predictors of environmental performance: Mediating role of green supply chain management practices," *Int. J. Supply Chain Manag.*, vol. 8, no. 3, pp. 877–888, 2019.

[57] K. L. Unsworth, M. C. Davis, S. V. Russell, and C. Bretter, "Employee green behaviour: How organizations can help the environment," *Curr. Opin. Psychol.*, vol. 42, pp. 1–6, 2021, doi: 10.1016/j.copsyc.2020.12.006.

[58] A. K. Das, S. R. Biswas, M. M. A. K. Jilani, and M. A. Uddin, "Corporate environmental strategy and voluntary environmental behavior-mediating effect of psychological green climate," *Sustain.*, vol. 11, no. 11, 2019, doi: 10.3390/su11113123.

[59] C. C. J. Cheng and E. C. Shiu, "Leveraging employee green entrepreneurial orientation for enhancing environmental performance: The multi-level role of green creativity and green decision comprehensiveness," *Eur. Manag. J.*, no. November 2023, 2024, doi: 10.1016/j.emj.2024.06.002.

[60] P. Omondi-ochieng, "Financial performance trends of United States Hockey Inc : a resource-dependency approach," vol. 24, no. 48, pp. 327–344, 2019, doi: 10.1108/JEFAS-02-2018-0022.