BUSINESS AND APPLIED MANAGEMENT JOURNAL
Vol. 4 No. 1 (2026), p. 33-46
Available online at https://serambi.org/index.php/bamj

The Dark Side of Green HRM: Multigroup Analysis of Employee Responses to Internal Greenwashing

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DOI: https://doi.org/10.61987/bamj.v4i1.2034

Article History:
Received: 8 March 2026
Revised: 3 May 2026
Accepted: 5 May 2026

Keywords:
Greenwashing, Green Fatigue, Green Creativity, Competitive Gamification, Green Human Resource Management

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Abstract :
This study aims to examine how internal greenwashing within Green Human Resource Management (GHRM) affects employee green creativity through the psychological mechanism of green fatigue, while also testing the moderating role of competitive green gamification and group differences based on green value orientation. Drawing on Conservation of Resources (COR) theory and Self-Determination Theory, this study conceptualizes perceived greenwashing as an internal organizational stressor that depletes employees' psychological resources and weakens intrinsic motivation. A quantitative survey was conducted among 556 hotel employees in the Java–Bali region, Indonesia, using a non-probability purposive sampling technique. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to test direct, mediating, moderating, and multigroup effects. The results show that perceived greenwashing increases green fatigue and reduces employee green creativity, both directly and indirectly. Competitive green gamification strengthens the effect of greenwashing on green fatigue. Multigroup analysis further reveals that these effects are stronger among employees with high green value orientation. This study contributes to GHRM literature by shifting the focus from external to internal greenwashing and highlighting its psychological and behavioral consequences.

INTRODUCTION

Increasing global environmental pressures have prompted organizations across industries, including the hospitality industry, to demonstrate their commitment to sustainability (Almeida et al., 2025; Moreno et al., 2025; Chadee & Bokhoree, 2024). As a resource-intensive and highly visible service sector, hotels face strong demands to not only adopt environmentally friendly practices (Elkhwesky et al., 2022), but also to communicate these commitments to various stakeholders (Shin et al., 2026; Sun & Nasrullah, 2024). In this context, green communication becomes a strategic instrument for building legitimacy and competitive advantage.

However, the literature shows that sustainability communications do not always reflect authentic practices. This phenomenon is known as greenwashing, a green communication strategy that is symbolic, exaggerated, and potentially misleading (Koch & Denner, 2025; Lublóy et al., 2025). Most greenwashing research to date has focused on

its impact on external stakeholders, such as consumers and investors, by assessing its consequences for trust, green brand equity, or a company's financial performance (Demerouti, 2025; Qayyum et al., 2023). This approach implicitly positions greenwashing as an external issue, while its implications for employees as internal actors within the organization remain relatively neglected.

In the context of HRM, employees not only receive sustainability messages, but are also required to implement green policies in their daily work practices (Bangwal et al., 2025; Xiao, 2025). When an organization's sustainability claims are perceived as inconsistent with actual practices, employees can potentially experience psychological distress and value dissonance. Although the green HRM literature generally emphasizes the positive impact of green practices on employee attitudes and behaviors, this approach tends to overlook the potential negative consequences that arise when such practices are perceived as inauthentic (Ahmad & Sadiq, 2025; Waeyenberg & Semeijn, 2025).

One of the increasingly relevant but under-researched psychological consequences in the HRM literature is green fatigue, a state of psychological exhaustion resulting from exposure to excessive and symbolic sustainability demands (Pol et al., 2023; Tang et al., 2024). In line with Conservation of Resources (COR) theory, greenwashing can be understood as an organizational stressor that drains employees' psychological resources (Elshaer et al., 2025; Gupta & Jangra, 2024). In the long term, this condition has the potential to reduce the quality of employee engagement in sustainability initiatives.

On the other hand, HRM digitalization is driving the adoption of gamification as a mechanism to increase employee participation in various organizational initiatives, including sustainability (Lan & Song, 2025; Mohanty & Christopher, 2024). Although gamification is often positioned as a motivational tool, literature is beginning to show that competitive forms of gamification can create additional stress (Hammedi et al., 2021; Pečiūra & Žukauskaitė, 2024). In the context of greenwashing, competitive green gamification—such as ranking systems and environmental performance competitions—has the potential to reinforce the negative impacts of greenwashing by intensifying pressure and accelerating the drain on employees' psychological resources (Bizzi, 2023; Khan et al., 2024). This perspective is also in line with Self-Determination Theory, which emphasizes that control-based mechanisms can undermine intrinsic motivation (Abril et al., 2024; Grenier et al., 2024).

The consequences of green fatigue are crucial in the hospitality industry, particularly in relation to green creativity. Green creativity reflects employees' ability to generate innovative ideas and solutions that support environmental sustainability (Dong & Han, 2025; Jiang et al., 2021). This type of creativity requires cognitive energy and intrinsic engagement, which are highly susceptible to erosion when employees experience psychological fatigue. Despite their importance, the relationship between internal greenwashing, green fatigue, and green creativity remains rarely explored in the HRM literature, particularly in the context of the service industry in developing countries.

Based on these gaps, this study develops and tests a model explaining how perceived greenwashing influences employee green creativity through green fatigue, as well as how competitive green gamification strengthens the relationship between greenwashing and green fatigue. Furthermore, to enhance the theoretical contribution, this study adopts a multigroup analysis based on employee green value orientation (high vs. low) to demonstrate that the negative impact of greenwashing is not homogeneous but rather depends on individual environmental value orientations. This research was

conducted in the hospitality industry in the Java–Bali region of Indonesia, involving 556 respondents and using data collected through interviews and online and offline surveys during 2025. By shifting the discourse of greenwashing to the realm of internal HRM, critiquing the positive assumptions of gamification, and highlighting the role of individual employee values, this research offers strong novelty to the HRM and sustainability literature, as well as practical implications for sustainable HR management in the hospitality industry.

This study examines the influence of perceived greenwashing on green fatigue and green creativity in the context of the hospitality industry. Specifically, perceived greenwashing is proposed to positively influence green fatigue (H1) and negatively influence green creativity (H2), while green fatigue is expected to negatively influence green creativity (H3). Furthermore, green fatigue is proposed to mediate the relationship between perceived greenwashing and green creativity (H4). This study also proposes that competitive green gamification strengthens the positive relationship between perceived greenwashing and green fatigue, such that the relationship becomes stronger when competitive green gamification is high (H5). In addition, green value orientation was included as a multigroup analysis variable to examine whether the strength of the relationships between variables, including direct effects, mediation, and moderation, differs significantly among employees with high, neutral, and low green value orientations (H6). Based on these theoretical arguments, the proposed overall relationships between variables are summarized in Figure 1.

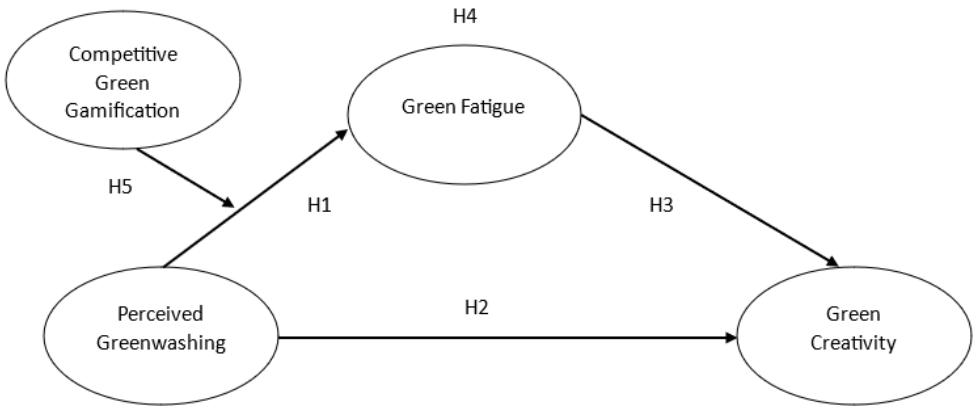

Figure 1. Conceptual Model

RESEARCH METHOD

Sampling and Data Collection

This study employed a quantitative approach with a survey method. The study population included hotel employees operating in the Java–Bali region, Indonesia. The study sample consisted of 556 respondents, selected using a non-probability purposive sampling technique, with the criteria being employees directly involved in operational activities and the implementation of sustainability policies at the hotel. Data collection was conducted throughout 2025 using a self-administered questionnaire distributed both online and offline, supported by preliminary interviews to gain contextual understanding and ensure the relevance of the research instruments. The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the help of SmartPLS 3.0, which allows for testing of structural models, mediation effects, and multigroup analysis (MGA). In the multigroup analysis, green value orientation was used

as a grouping variable, where respondents were classified into high, neutral, and low green value orientation groups based on the median split of the questionnaire scores. This approach allows for testing differences in the strength of relationships between variables across employee groups with different environmental value orientations. Respondent participation is voluntary and anonymous to minimize social bias and increase data reliability.

Measurement Indicators

This study used a measurement instrument that has been widely used in previous literature, with minor adjustments to suit the internal HRM context of the hospitality industry. All constructs were measured using a self-administered questionnaire with a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Perceived greenwashing was measured using five items adapted from (Elshaer et al., 2025; Xiang et al., 2024), with editorial modifications to reflect employees' perceptions of the organization's sustainability claims. Green fatigue was measured using five items adapted from the psychological fatigue literature related to sustainability and value tension (Ahmad & Sadiq, 2025), with an emphasis on fatigue resulting from the demands of internal green practices. Green creativity was measured using five items adapted from the employee green creativity scale developed by (Afridi et al., 2023; Tang et al., 2024) as well as from follow-up studies in the context of pro-environmental behavior in the workplace. Competitive green gamification was measured using five items developed based on the literature on gamification and competition-based control in HRM, with a focus on the use of ranking systems, performance comparisons, and competitions in sustainability initiatives (Capatina et al., 2024). Meanwhile, green value orientation was measured using five items adapted from the biospheric value scale and individual environmental value orientation, which were used as the basis for multigroup analysis (high vs low) (Egan & Zigarmi, 2023).

RESULTS AND DISCUSSION

Results

Descriptive Statistics

Table 1 presents descriptive statistics indicating that all study variables are at a moderate level, with mean values relatively close to the midpoint of the Likert scale. Descriptive statistics are important to understand the general tendency of respondents' perceptions regarding perceived greenwashing, competitive green gamification, green fatigue, and green creativity, as well as to evaluate whether the data are appropriate for further analysis.

Table 1. Descriptive Statistics Analysis

Variable	Min	Max	Mean	Median	Std Dev
Perceived Greenwashing	1	5	2.97	3.00	1.04
Competitive Green Gamification	1	5	3.03	3.00	1.07
Green Fatigue	1	5	2.96	2.80	0.92
Green Creativity	1	5	3.02	3.00	0.85

Perceived greenwashing has a mean value of 2.97 (SD = 1.04) and a median of 3.00, indicating a moderate level of employee perception toward the organization's sustainability practices. Competitive green gamification records a mean of 3.03 (SD =

1.07), suggesting a moderate level of perceived gamification practices, with some variation across respondents. Green fatigue has a mean of 2.96 with a relatively lower standard deviation (SD = 0.92), indicating a moderate level of fatigue; the slightly lower median value (2.80) compared to the mean suggests a mild asymmetry in the data distribution. Meanwhile, green creativity shows a mean of 3.02 (SD = 0.85), indicating a moderate level of employee green creativity with relatively low variation.

Respondents' Demographics

Table 2 shows that the characteristics of the respondents reflect a diverse and representative profile of hotel employees within the context of the hotel industry in the Java–Bali region. Respondents are predominantly female (56.1%), which aligns with the characteristics of the service industry, where women are more frequently involved in customer-facing and operational roles that are directly exposed to organizational sustainability practices, thereby increasing the relevance of their perceptions toward greenwashing and green fatigue. In terms of age, the majority of respondents are in the productive age group of 25–54 years (72.2%), particularly those aged 35–44 years (26.8%) and 45–54 years (24.5%), indicating that perceptions of greenwashing, green fatigue, and green creativity are largely shaped by employees with relatively mature work experience, higher job responsibility, and stronger cognitive evaluation of organizational policies. Respondents' educational level is dominated by undergraduate and postgraduate graduates (53.2%), suggesting that respondents possess adequate analytical capacity to critically assess inconsistencies between organizational sustainability claims and actual practices, which is essential in shaping perceptions of greenwashing.

Their relatively long tenure, with 56.2% of respondents having worked for more than four years, indicates prolonged exposure to organizational routines, HR practices, and sustainability initiatives, strengthening the validity of their psychological responses to green burnout and creativity. In terms of position, the proportion of managers and supervisors reached 66.4%, indicating that most respondents held roles that not only received but also interpreted, implemented, and monitored green HR practices, making their responses highly relevant for capturing both strategic and operational perspectives of sustainability implementation. The relatively even distribution of departments, particularly in Food & Beverage, Engineering, and HR/Administration, strengthens the robustness of the findings across functional areas with varying levels of involvement in environmental practices, from operational implementation to policy support.

The majority of respondents were contract and permanent employees (84.4%), indicating a relatively stable working relationship that allows for consistent interaction with the organization's sustainability system. Most respondents also worked in 3- to 5-star hotels (58.1%), which typically have higher formalization of sustainability policies and stronger exposure to green communication, increasing the likelihood of encountering both authentic and symbolic environmental practices. The high level of respondents' involvement in sustainability programs (61.1% moderately to highly involved) indicates that the measured perceptions are based on actual experiences rather than superficial awareness, thus strengthening the contextual validity, explanatory power, and empirical credibility of the research findings.

Table 2. Demographic Distribution of Respondents (N Total = 556 respondents)

Respondent		Frequency	Percentage (%)
Gender	Male	244	43.9
	Female	312	56.1
Age	< 25 years	91	16.4
	25 – 34 years	116	20.9
	35 – 44 years	149	26.8
	45 – 54 years	136	24.5
	> 54 years	64	11.5
Latest Education Level	Senior/Vocational High School	139	25.0
	Diploma	121	21.8
	Bachelor's Degree	228	41.0
	Postgraduate Degree	68	12.2
Length of Employment in Hotel	< 1 year	63	11.3
	1 – 3 years	180	32.4
	4 – 6 years	231	41.5
	> 6 years	82	14.7
Position in Hotel	Operational Staff	187	33.6
	Supervisor	156	28.1
	Managerial	213	38.3
Department	Engineering	103	18.5
	Food & Beverage	125	22.5
	Front Office	77	13.8
	Housekeeping	75	13.5
	HR/Administration	103	18.5
	Marketing	73	13.1
Employment Status	Daily Worker	87	15.6
	Contract	244	43.9
	Permanent	225	40.5
Hotel Star Classification	1 – 2 Star Hotel	111	20.0
	3- Star Hotel	122	21.9
	4- Star Hotel	193	34.7
	5-Star Hotel	130	23.4
Hotel Location	Bali	287	51.6
	Jawa	269	48.4
Involvement in Sustainability Programs	Not Involved	104	18.7
	Less Involved	112	20.1
	Moderately Involved	157	28.2
	Highly Involved	183	32.9

Convergent Validity Test and Reliability Test

The outer loading values for all indicators range from 0.890 to 0.940, exceeding the minimum threshold, thus confirming that each indicator strongly represents the latent construct. Internal consistency is also confirmed by Cronbach's alpha values ranging from 0.939 to 0.962, and composite reliability values ranging from 0.953 to 0.971, indicating very high reliability for all constructs. Furthermore, the average variance extracted (AVE) values ranged from 0.803 to 0.869, indicating that most of the indicator variance is successfully explained by their respective latent constructs and not by measurement error. Overall, the results in Table 3 confirm that the measurement instrument has strong convergent validity and reliability, making it suitable for use in structural model testing and further analysis in this study.

Table 3. Convergent Validity Test and Reliability Test

Construct	CA	CR	AVE	Items	Loading
Competitive Green Gamification (CGG)	0.962	0.971	0.869	CGG1	0.939
				CGG2	0.940
				CGG3	0.932
				CGG4	0.930
				CGG5	0.920
Green Creativity (GC)	0.939	0.953	0.803	GC1	0.890
				GC2	0.893
				GC3	0.898
				GC4	0.904
				GC5	0.894
Green Fatigue (GF)	0.945	0.958	0.821	GF1	0.894
				GF2	0.915
				GF3	0.911
				GF4	0.910
				GF5	0.899
Perceived Greenwashing (PGW)	0.961	0.970	0.865	PGW1	0.931
				PGW2	0.931
				PGW3	0.932
				PGW4	0.928
				PGW5	0.928

Discriminant Validity and Collinearity Evaluation

Table 4 shows that all constructs in the research model meet the criteria for discriminant validity and are free from collinearity issues. The square root of the AVE values for each construct ranged from 0.896 to 0.932, and were consistently higher than the inter-construct correlations, which ranged from −0.732 to 0.545, thus confirming adequate conceptual differentiation between the latent variables. This result is supported by the heterotrait–monotrait ratio (HTMT) values, which ranged from 0.018 to 0.770, all below the recommended threshold, thus confirming discriminant validity. Collinearity evaluation using internal VIF values showed low VIF values, ranging from 1.002 to 1.423, which is still well below the critical limit, so there is no indication of multicollinearity that could affect the estimation of relationships in the structural model.

Table 4. Discriminant Validity and Collinearity Evaluation

Fornell-Larcker Criterion				
Latent Variable	CGG	GC	GF	PGW
CGG	0.932			
GC	0.141	0.896		
GF	0.356	-0.580	0.906	
PGW	0.010	-0.732	0.545	0.930
Heterotrait Monotrait Ratio (HTMT)				
CGG				
GC	0.149			
GF	0.373	0.615		
PGW	0.018	0.770	0.571	
Inner VIF Values (Collinearity Evaluation)				
CGG			1.002	
GC				
GF		1.423		
PGW		1.423	1.005	

Model Feasibility Test

Table 5 presents the results of the model fit test, indicating that the research model has an adequate level of fit. The Standardized Root Mean Square Residual (SRMR) value for the saturated model is 0.025, indicating an excellent level of fit between the observed and estimated covariance matrices. Meanwhile, the SRMR value of 0.073 in the estimated model is still below the recommended threshold, indicating that the estimated structural model has acceptable goodness of fit. Overall, the results in Table 5 confirm that the measurement and structural models used in this study are statistically sound and suitable for testing the proposed causal relationships between variables.

Table 5. Model Feasibility Test

	Saturated Model	Estimated Model
SRMR	0.025	0.073

Structural Model and Hypothesis Testing

The results of the hypothesis testing indicate that all the relationships proposed in the research model are empirically supported with a very strong level of significance, as summarized in Table 6. Perceived greenwashing is proven to have a positive and strong effect on green fatigue ($\beta = 0.573$; $t = 20.252$; $p < 0.001$), which confirms that the perception of inauthentic sustainability claims functions as an organizational stressor that significantly drains employees' psychological resources. In addition, perceived greenwashing also has a very strong direct negative effect on green creativity ($\beta = -0.592$; $t = 19.502$; $p < 0.001$), indicating that internal greenwashing not only impacts psychological fatigue, but also directly inhibits employees' creative capacity in generating environmentally friendly ideas. Furthermore, green fatigue is proven to have a negative effect on green creativity ($\beta = -0.257$; $t = 8.019$; $p < 0.001$), which confirms that psychological fatigue limits the cognitive energy and intrinsic motivation needed for the creative process.

The indirect effect of perceived greenwashing on green creativity through green fatigue is also significant ($\beta = -0.147$; $t = 7.271$; $p < 0.001$), indicating that green fatigue acts as an important psychological mechanism that bridges the negative impact of greenwashing on employees' green creativity. Finally, the interaction effect between perceived greenwashing and competitive green gamification on green fatigue is positive and significant ($\beta = 0.457$; $t = 15.619$; $p < 0.001$), indicating that the implementation of competition-based gamification strengthens the detrimental impact of greenwashing on employees' psychological fatigue. Overall, these findings provide strong support for the research's theoretical framework and confirm that internal greenwashing, especially when combined with competitive control mechanisms, has significant psychological and creative consequences in the context of sustainable HRM.

Table 6. Structural Model Coefficients

	Hypothesis	Beta	Std Dev	T-Value	p-Value	Result
H1	PGW → GF (direct)	0.573	0.028	20.252	0.000	Accepted
H2	PGW → GC (direct)	-0.592	0.030	19.502	0.000	Accepted
H3	GF → GC (direct)	-0.257	0.032	8.019	0.000	Accepted
H4	PGW → GF → GC (mediation)	-0.147	0.020	7.271	0.000	Accepted
H5	PGW x CGG → GF (moderation)	0.457	0.029	15.619	0.000	Accepted

Notes: PGW = Perceived Greenwashing; GF = Green Fatigue; GC = Green Creativity; CGG = Competitive Green Gamification

Multigroup Analysis

In this study, Multigroup Analysis (MGA) was used to test whether the strength of the relationships between variables in the model—including perceived greenwashing, green fatigue, green creativity, and the role of competitive green gamification—differed significantly among employee groups with high, neutral, and low green value orientations. All constructs were specified as reflective measurement models, as the indicators were assumed to reflect the underlying latent variables. The use of MGA is relevant because green value orientation is positioned as a categorical moderator variable that has the potential to shape differences in structural relationship patterns between employee groups. Prior to the MGA, this study first tested the Measurement Invariance of Composites (MICOM) to ensure that cross-group comparisons were valid and not distorted by differences in how each group understood the construct being measured. The MICOM procedure was carried out in stages, including testing configurational invariance, compositional invariance, and equality of mean and variance. The analysis results show that all stages meet the required criteria. With the fulfillment of measurement invariance in all MICOM steps, the differences in MGA results can be interpreted as substantive structural differences between green value orientation groups, so that the multigroup analysis in this study is feasible and methodologically reliable.

Table 7. Multigroup Analysis of Green Value Orientation

Green Value Orientation	Hypothesis	Path Coefficients Diff	p-Value New
High vs Low	PGW → GF	-0.117	0.089
	PGW → GC	0.226	0.022
	GF → GC	-0.316	0.002
	PGW → GF → GC	-0.178	0.012
	PGW x CGG → GF	0.682	--
High vs Neutral	PGW → GF	-0.047	0.496
	PGW → GC	0.157	0.042
	GF → GC	-0.237	0.004
	PGW → GF → GC	-0.134	0.009
	PGW x CGG → GF	0.404	--
Low vs Neutral	PGW → GF	0.070	0.154
	PGW → GC	-0.069	0.437
	GF → GC	0.079	0.405
	PGW → GF → GC	0.044	0.513
	PGW x CGG → GF	-0.279	-

In the comparison of high vs. low green value orientation, the results presented in Table 7 show that most of the structural relationships differ significantly between the two groups. Significant differences in path coefficients are found in the relationships of perceived greenwashing → green creativity ($\Delta\beta$ = 0.226; p-value new = 0.022), green fatigue → green creativity ($\Delta\beta$ = −0.316; p-value new = 0.002), as well as in the mediation effect of perceived greenwashing → green fatigue → green creativity ($\Delta\beta$ = −0.178; p-value new = 0.012). These findings indicate that employees with a high green value orientation experienced a sharper decline in creativity in response to greenwashing than employees with a low green value orientation. In contrast, the direct path from perceived greenwashing to green fatigue showed no significant difference, implying that initial levels of fatigue were relatively similar in both groups, but their consequences for creativity differed substantially.

The pattern of results in Table 7 shows consistent differences but with more moderate intensity. The relationship between perceived greenwashing → green creativity (Δβ = 0.157; p-value new = 0.042), green fatigue → green creativity (Δβ = −0.237; p-value new = 0.004), and the mediation path (Δβ = −0.134; p-value new = 0.009) differ significantly between the two groups. This finding confirms that although the neutral group has not fully internalized environmental values, employees with a high green value orientation still show greater sensitivity to the psychological implications of greenwashing, particularly in terms of reduced green creativity capacity.

In contrast, in the comparison of low versus neutral green value orientations, the results presented in Table 7 indicate that all structural relationships do not differ significantly. Neither the direct effect of perceived greenwashing on green fatigue and green creativity, the effect of green fatigue on green creativity, nor the indirect effect show significant differences. This suggests that employees with low and neutral green value orientations respond to internal greenwashing with relatively similar psychological patterns, where sustainability issues have not yet become a strong enough personal value to produce significant differences in psychological mechanisms.

It should be noted that in the moderation relationship (PGW × CGG → GF), the analysis focused on the path coefficients difference without reporting the p-value to avoid false significance due to the high risk of Type I error, namely the error in concluding that there is a significant difference in the moderating effect between groups when in fact the difference is random. The difference in interaction coefficients shows a clear pattern, where the largest difference in moderation effect appears in the comparison of high vs. low green value orientation (Δβ = 0.682), followed by high vs. neutral (Δβ = 0.404), while the difference between low vs. neutral is relatively small and in the opposite direction (Δβ = −0.279). This pattern indicates that competitive green gamification substantively strengthens the impact of greenwashing on green fatigue, especially among employees with a high green value orientation, while the effect is weakened or even irrelevant among groups with a lower green value orientation (Hypothesis 6 is accepted).

Discussion

This discussion confirms that perceived greenwashing plays a major role in triggering psychological stress and reducing employee creative capacity. The test results show that perceived greenwashing directly increases green fatigue and simultaneously decreases green creativity, while green fatigue itself is proven to weaken green creativity, with all relationships demonstrating strong statistical significance (see Table 6). These findings strengthen the Conservation of Resources (COR) theory argument that greenwashing functions as an organizational stressor that drains employees' psychological resources, such as emotional energy and sense of work meaning, thereby limiting the cognitive engagement needed for the creative process. This pattern aligns with the findings of Miao et al. (2023), who shows that mismatches between an organization's environmental claims and practices trigger value conflicts and reduce employee environmental performance, and with Grenier et al. (2024), who emphasized that greenwashing negatively impacts employee behavior and cannot be understood solely as an external marketing issue.

Furthermore, the mediation results indicate that green fatigue is a key psychological mechanism explaining how perceived greenwashing reduces green creativity (see Table 6). This finding suggests that the impact of greenwashing on green

creativity occurs not only through a loss of trust in the organization, but primarily through the accumulation of psychological fatigue due to perceived symbolic and meaningless sustainability demands. This condition aligns with previous research emphasizing that green creativity relies heavily on intrinsic motivation and the availability of psychological resources. Therefore, when employees experience fatigue, mental energy is diverted to maintaining basic work functions rather than exploring innovative ideas.

The role of competitive green gamification as a moderating variable further underscores the complexity of the psychological dynamics in Green HRM practices. The results show that competition-based gamification strengthens the influence of perceived greenwashing on green fatigue (see Table 6), indicating that competitive mechanisms function as a pressure amplifier when combined with inauthentic sustainability claims. This finding is consistent with the literature that has begun to criticize the dark side of gamification, where elements of competition and social comparison can shift motivation from intrinsic to controlled, increase stress, and reduce meaningful employee engagement. This result is in line with the finding of Hammedi et al. (2021) that shows that gamification does not always improve performance and well-being, and can have negative consequences when designed in a competitive and control-oriented manner.

Multigroup analysis further enriches the discussion by showing that the negative impact of greenwashing is not homogeneous but rather depends on employees' green value orientation (see Table 7). Significant differences in most structural paths between high, neutral, and low green value orientation groups indicate that employees with strong internalization of environmental values are more sensitive to discrepancies between organizational sustainability claims and practices. This group experienced a sharper decline in green creativity in response to green fatigue, reflecting more intense value conflict and moral disappointment. This finding aligns with previous research showing that environmental value orientations serve as interpretive lenses in responding to organizational signals, as well as with studies highlighting the double-edged nature of green engagement, where high value internalization can both foster creativity and increase vulnerability to psychological distress when organizations fail to act authentically (Tang et al., 2024). In contrast, the lack of significant differences between the low and neutral green value orientation groups suggests that when sustainability is not yet an internalized personal value, greenwashing tends to be perceived more pragmatically and does not trigger substantially different psychological mechanisms.

This discussion confirms that greenwashing in the context of internal HRM is a complex and multi-layered psychological phenomenon, which depends not only on the organizational practices themselves, but also on the design of motivational mechanisms and individual employee value orientations. By integrating direct influence, mediating mechanisms, moderating effects, and heterogeneity across value groups, this study expands the theoretical understanding of the dark side of Green HRM and enriches the sustainability literature with a more critical and employee-experience-oriented perspective.

CONCLUSION

The findings indicate that perceived greenwashing increases green fatigue and directly and indirectly reduces green creativity through the mechanism of psychological exhaustion, confirming that inauthentic sustainability practices serve as organizational stressors that drain employees' psychological resources and weaken their creative

engagement in environmental initiatives. Competitive green gamification strengthens the positive relationship between perceived greenwashing and green fatigue, suggesting that competition-based gamification can be a source of additional psychological stress when sustainability practices are perceived as merely symbolic rather than authentic. Employees with a high green value orientation experienced stronger negative psychological and creative impacts compared to employees in the neutral and low groups, highlighting the important role of individual environmental values in shaping employee responses to organizational sustainability claims. The study has limitations, including the use of a cross-sectional design that limits causal interpretation, the focus on the hospitality industry that may reduce generalizability to other sectors, and the reliance on self-reported data that may be susceptible to common method bias. Therefore, future research is recommended to employ longitudinal or experimental designs to provide a broader understanding of how sustainability practices influence employee behavior and creativity in organizations.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to all respondents who participated in this study and shared their valuable insights and experiences. The authors acknowledge the contribution of all parties involved in facilitating data collection and the completion of this study.

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