

UNLEASHING HARMONIOUS GREEN PASSION IN HOSPITALITY ENTERPRISES: A MODERATED-MEDIATED ROLE OF PRO-ENVIRONMENTAL BEHAVIOR AND GREEN ORGANIZATIONAL CLIMATE

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Abstract: Environmental sustainability in the hospitality sector increasingly depends on the alignment between employees' intrinsic motivations, supportive organizational contexts, and environmentally responsible behaviors. Drawing on Self-Determination Theory, this study examines how Harmonious Green Passion influences environmental performance in Egypt's five-star hotels, focusing on the mediating role of pro-environmental behavior and the moderating effect of green organizational climate. Data were collected through a cross-sectional survey of 402 hotel employees and analyzed using Partial Least Squares Structural Equation Modeling. The findings demonstrate that Harmonious Green Passion positively influences both pro-environmental behavior and environmental performance, while pro-environmental behavior partially mediates the relationship between Harmonious Green Passion and environmental performance. Furthermore, green organizational climate significantly strengthens the positive relationship between Harmonious Green Passion and pro-environmental behavior, consequently reinforcing its indirect effect on environmental performance. These findings extend Self-Determination Theory by elucidating a motivation-behavior-performance mechanism through which employees' environmentally oriented passion translates into organizational outcomes, while demonstrating that this process is contingent upon contextual organizational conditions. Practically, the findings suggest that hotel managers should cultivate supportive green organizational climates, encourage employees' intrinsic environmental motivation, and facilitate pro-environmental behaviors through appropriate organizational practices. Such efforts can strengthen employees' environmental engagement and contribute to improved environmental performance, offering hospitality organizations a pathway toward more sustainable operations and long-term environmental value creation.

Keywords: Harmonious Green Passion, environmental performance, pro-environmental behavior, green organizational climate, hospitality, Egypt

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INTRODUCTION

Environmental performance, as one of the key factors influencing sustainability, has become a pressing issue in hospitality organizations, where employee attitudes, motivations, and behaviors play a decisive role (Bashir et al., 2021; Elshaer et al., 2021; Khamdamov et al., 2023; Al-Romeedy et al., 2025; Hasanein & Metwally, 2025; Vu et al., 2025). In service-intensive environments such as hotels, even minor lapses in environmental sustainability can negatively impact organizational image, performance, and stakeholder trust (Hasanein, 2024; Iftikhar et al., 2024; Oh & Lee, 2025). Among the drivers of sustainable conduct, Harmonious Green Passion (HGP) has emerged as a vital motivational force. HGP reflects an intrinsically driven enthusiasm that enables employees to embody strong dedication to environmentally oriented values and objectives (Peng et al., 2021). Unlike obsessive passion, which may cause conflict or stress, HGP fosters the integration of environmental interests into work practices in a self-determined and adaptive manner (Mughal et al., 2024). Employees with high HGP are more inclined to engage in Pro-Environmental Behavior (PEB), translating their environmental passion into tangible practices such as waste reduction, energy conservation, resource efficiency, and green innovation (Sobaih et al., 2022; Wei et al., 2023; Hasanein & Ayad, 2025).

PEB serves as a critical pathway linking personal motivation to organizational Environmental Performance (ENVP) (Naz et al., 2023; Hasanein & Elrayah, 2025). ENVP reflects an organization's success in pursuing sustainability objectives such as minimizing carbon emissions, complying with environmental quality standards, and implementing ecology-enhancing innovations (Peng et al., 2021; Perano et al., 2024; Metwally & Hasanein, 2026). Although the importance of ENVP in hospitality is increasingly recognized, limited research has examined how intrinsic motivations are translated into observable behaviors that drive organizational environmental outcomes. Moreover, existing studies have primarily

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emphasized individual attitudes or isolated actions, neglecting the mechanisms connecting personal passion to sustainability performance (Khamdamov et al., 2023; Perano et al., 2024). Green Organizational Climate (GOC), defined as employees' shared perceptions that their organization supports and prioritizes environmental practices, can function as a catalytic condition that amplifies the effects of intrinsic motivation (Zientara & Zamojska, 2016; Zafar et al., 2023; Singh et al., 2023; Kanwal et al., 2024). A supportive green climate legitimizes sustainability efforts, reinforces eco-friendly norms, and provides both psychological and structural resources that enable employees to translate their passion into pro-environmental behaviors. When employees perceive that environmental values are embedded in organizational policies, leadership expectations, and daily routines, they are more likely to act on their internalized environmental passion (Liu et al., 2024; Priatna et al., 2025). Such a climate not only fosters collective engagement in environmental initiatives but also strengthens the motivational pathway through which Harmonious Green Passion (HGP) manifests as Pro-Environmental Behavior (PEB) and, in turn, enhances Environmental Performance (ENVP) (Zafar et al., 2023).

This study is grounded in Self-Determination Theory (SDT) (Deci & Ryan, 1985), which posits that autonomous motivation drives voluntary and value-consistent behaviors. Under SDT, employees who possess HGP are more likely to enact PEB, as such actions align with their intrinsic values and self-determined goals. Positioning HGP and PEB within this framework explains how personal motivation can be transformed into organizational sustainability outcomes, offering a clear psychological mechanism underpinning improvements in ENVP. However, previous literature presents three key gaps. First, the role of personal environmental passion has been underexplored, with HGP seldom tested as an antecedent of ENVP in hospitality contexts. Second, the mediating role of PEB in converting intrinsic motivation into performance has not been sufficiently investigated, limiting understanding of behavioral pathways through which ENVP can be optimized. Third, contextual factors that may strengthen or weaken this mechanism—such as Green Organizational Climate (GOC)—have received limited empirical attention, despite evidence that organizational climate shapes the extent to which employees act on their environmental motivations (Iftikhar et al., 2024; Khamdamov et al., 2023; Seraj et al., 2025).

To address these gaps, the current study examines the direct effect of HGP on ENVP and the mediating role of PEB, while testing the moderating effect of GOC on the relationship between HGP and PEB among employees in five-star hotels in Egypt. By adopting a moderated–mediated model, this research moves beyond bivariate links and uncovers the process-oriented dynamics through which intrinsic passion, contextual climate, and behavioral engagement jointly influence organizational sustainability outcomes. Theoretically, the study extends SDT into the domain of environmental performance by integrating contextual moderators with motivational and behavioral mechanisms. Practically, it offers insights for hospitality managers on fostering green organizational climates, nurturing intrinsic passion, and designing interventions that enhance employees' pro-environmental behaviors to improve environmental performance in service-based settings.

LITERATURE REVIEW

Harmonious Green Passion and Environmental Performance

To-date studies (e.g., Bashir et al., 2021; Peng et al., 2021; Khamdamov et al., 2023; Zhang et al., 2023; Iftikhar et al., 2024; Mughal et al., 2024; Khan et al., 2024) suggested that HGP became a crucial trigger for better ENVP. Moreover, the increasing interest in green practices is not only changing people's lifestyles but also changing business strategies in different industries (Khamdamov et al., 2023; Hasanein & Rashwan, 2025). Furthermore, Zhang et al. (2023) found that employees with a high level of HGP are more likely to be engaged in BEP, resulting in better ENVP. Another important contribution made by Mughal et al. (2024) was the identification of organizations with a HGP culture demonstrating better enduring performance in environmental metrics such as ENVP compared to organizations with a lower HGP culture. In the context of hospitality, a recent study by Iftikhar et al. (2024) clarified that by facilitating employees' HGP, it may help improve their environmental performance, which will contribute to overall sustainability goals and improve organizational outcomes (i.e., ENVP). Hence, using insights gained from the preceding discussion, the following hypothesis was proposed:

H1: HGP is hypothesized to have a significant positive and direct influence on ENVP

Harmonious Green Passion and Pro-Environmental Behavior

The link between HGP and PEB has been well-documented in the literature emphasizing the importance of intrinsic motivation on sustainable behaviors (Bashir et al., 2021; Peng et al., 2021; Shah et al., 2023; Ali et al., 2023; Abbas & Tufail, 2024; Saifulina et al., 2024; Ayad & Hasanein, 2024). HGP is one of the strong motivators of PEB since it stems from individuals' authentic interest and commitment to environmental sustainability (Ali et al., 2023; Hasanein et al., 2025b). According to Abbas & Tufail (2024) who supported the argument that autonomous motivation like HGP results in more engagement in long-lasting and meaningful pro-environmental behavior. Another study by Shah et al. (2023) showed that employees with HGP have increased levels of PEB, which can help to facilitate the emergence of sustainable practices in organizations. As per a recent study in the hospitality sector by Perano et al. (2024), HGP helps hotel employees to adopt more green behaviors, which are essential to achieving hotels' sustainable goals. Therefore, based on the experience obtained by discussion, the following hypothesis was put forward:

H2: HGP is hypothesized to have a significant positive and direct influence on PEB

Pro-Environmental Behavior and Environmental Performance

There has been an increasing number of studies (e.g., Sobaih et al., 2022; Naz et al., 2023; Wei et al., 2023; Abbas & Tufail, 2024; Perano et al., 2024; Mughal et al., 2024; Hasanein et al., 2025a) investigating the link between PEB and

ENVP, a topic that has garnered significant attention in various contexts. Sobaih et al. (2022) study pointed out that employees' PEB such as energy conservation, waste reduction, and eco-innovation play an important role in improving ENVP, since employees' PEB reduces the use of resources and improves environmental regulations. In the context of the hospitality industry, Perano et al. (2024) have recently presented strong evidence on how employee-led PEB can be an essential instrument for realizing sustainability objectives. However, this study is the first attempt to investigate the mediating effect of PEB in this relationship between HGP and ENVP in the hospitality industry. Based on information gained from the previous discussion, the following hypotheses were offered:

H3: PEB is hypothesized to have a significant positive and direct influence on ENVP

H4: PEB is hypothesized to have a mediating effect on the relationship between HGP and ENVP

Moderating Role of Green Organizational Climate

Several RESEARCH (e.g., Zientara & Zamojska, 2016; Zafar et al., 2023; Priatna et al., 2025) indicates that the translation of HGP into PEB is not solely driven by individual motivation but is also contingent on organizational context. GOC, defined as employees' shared perceptions that their organization prioritizes, supports, and rewards environmentally responsible practices (Liu et al., 2024), can strengthen this relationship. Empirical studies have shown that employees are more likely to engage in pro-environmental behaviors when they perceive strong organizational support, normative reinforcement, and structural facilitation for sustainability initiatives (Zafar et al., 2023; Priatna et al., 2025). In service-intensive sectors such as hospitality, where employee behaviors are highly visible and directly impact environmental outcomes, a supportive green climate amplifies the effect of intrinsic motivation, allowing HGP to more effectively translate into PEB and, ultimately, improved ENVP (Zafar et al., 2023; Singh et al., 2023; Kanwal et al., 2024). Based on these theoretical and empirical insights, it is proposed that:

H5: GOC moderates the interaction between HGP and PEB.

The proposed research model illustrating the hypothesized relationships among the study variables is presented in Figure 1.

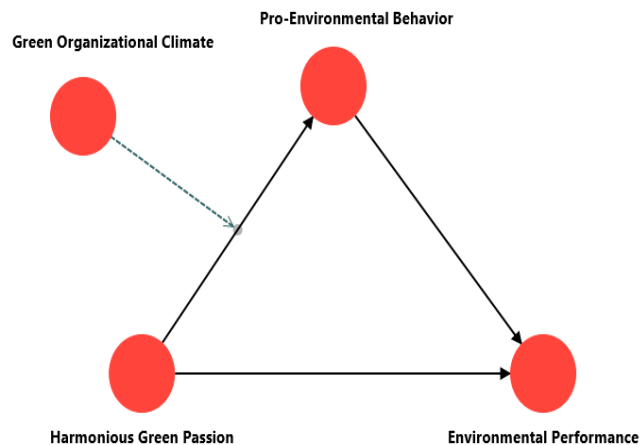


Figure 1. Conceptual Model of the Study

Research Methodology

The methodology of the study was conducted according to the following Figure 2.

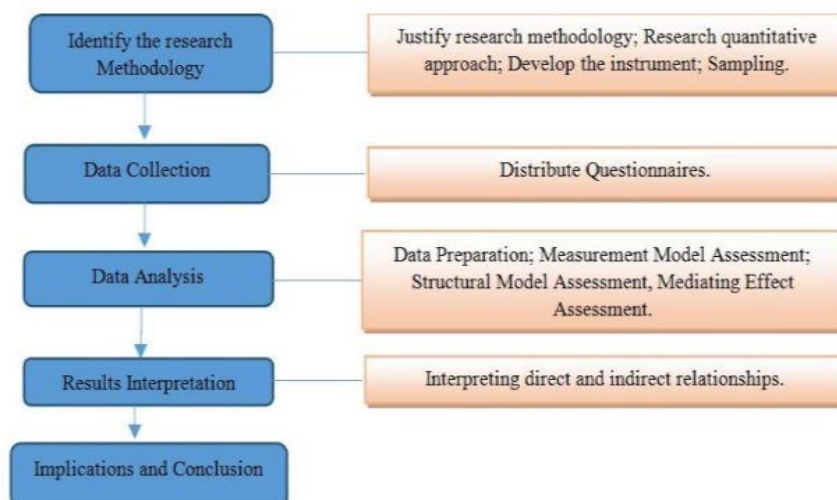


Figure 2. Research Methodology Flowchart

MATERIALS AND METHODS

Study constructs

Within the research context, the measurement scales for the study variables were derived from the relevant literature. To measure harmonious green passion was, this study used a ten-item scale originally created by Robertson & Barling (2013).

The specific items included in the measurement scale are: Deeply committed to the environment; taking pleasure in engaging in environmentally conscious practices; Enjoying engaging in environmentally friendly actions; enjoying contributing to the environment; enjoying to engage in conversations about environmental issues with others; Happy to look after the environment; actively encourage others to be more environmentally responsible; I am a volunteer in an environmental group; having willingly donated time or money to support environmental causes; and my environmental values are something I feel strongly about. The measurement scale developed by Melnyk et al. (2003) was employed to assess environmental performance. The measurement scale has five statements that examine: Environmental initiatives significantly improved the hospitality enterprises company's reputation; Environmental initiatives led to a significant decrease in total costs; Environmental initiatives greatly reduced waste throughout the entire value chain process; Environmental initiatives notably improved the product and process quality; Environmental initiatives greatly decreased lead times. In this study, "Pro-Environmental Behavior" was utilized as a mediating variable, measured using the scale developed by Robertson & Barling (2013). This scale comprises seven items evaluating behaviors such as properly disposing of compostable materials, engaging in environmentally friendly initiatives, recycling appropriately, bringing reusable utensils to work, turning off unnecessary lights, printing on both sides when possible, and providing suggestions to management or environmental committees to enhance the organization's environmental performance.

The measurement scale developed by Norton et al. (2014) was employed to assess green organizational climate, as a moderator variable for the study. The measurement scale has four statements that examine: Our hotel is keen to be more environmentally friendly; our hotel makes efforts to reduce its impact on the environment; our hotel emphasizes sustainable practices in its policies; and our hotel highly supports any environmental responsible behavior.

Research Population and Sampling

The study focuses on employees within the hospitality industry in Egypt as the target population for the study. Given the difficulty in accurately determining the workforce size in the hospitality industry, and following Veal's recommendations for large or undefined populations, the sample size is estimated based on a population of 20,000 individuals (Dillman et al., 2014; Etikan et al., 2016; Taherdoost, 2016; Ayad, 2024). The suitable sample size was calculated using the Herbert Larkin equation (Hasanein & Rashwan, 2025), yielding 377 responses.

Data collection and Analysis Techniques

This study employed a quantitative research methodology, utilizing self-administered questionnaires to collect primary data. To enhance the questionnaire's credibility and ensure its suitability for the hospitality sector, it underwent multiple reviews and evaluations by a panel of academics and hospitality experts to verify its reliability and usability in achieving the study's objectives. Furthermore, the confidentiality of the collected data was emphasized, ensuring its use solely for scientific research purposes (Podsakoff et al., 2003; Presser et al., 2004; Veal, 2017). Respondents were free to withdraw from the questionnaire at any time. Data were collected during October and November 2025, the questionnaires were distributed to 414 employees working in the hospitality enterprises in Egypt. In the end, 399 completed surveys were returned, yielding a response rate of 96.4%, and were analyzed statistically. To meet the objectives of the study, the questionnaire was divided into four sections. The demographic data was collected in the first section, and the three sections that follow concentrate on the three research variables: harmonious green passion (HGP), environmental performance (ENVP) and pro-environmental behavior (PEB). On a 5-point Likert scale, respondents evaluate items related to these criteria. As for data analysis techniques, the descriptive statistical analyses were employed using SPSS v.29.2022 and Microsoft Excel v.15.2013. In addition, the structural equation modeling (Smart-PLS-SEM.V.4.1.1.6) was used to examine the study hypotheses.

RESULTS

The Outer Model: Validation of Measurement Constructs

To determine whether items created to measure a particular construct were related to other items measuring the same construct, convergent validity was assessed. As all standardized factor loadings met the thresholds suggested by Hair et al. (2022) and Henseler et al. (2015), with all values surpassing the lowest acceptable level of 0.50 and the majority approaching or surpassing the ideal threshold of 0.70, the results confirmed satisfactory construct validity. Also, the internal consistency was examined for all measurement scales of the study, and all results meet the recommended cut-off point (0.70) by Bryman & Cramer (2011); Hair et al. (2017); and Hair et al. (2022), confirming the composite reliability for all constructs. Additionally, the average variance extracted (AVE) was conducted to examine the measurement model's convergent validity. All results exceed the recommended value of 0.50 by Fornell & Larcker (1981) (Table 1).

According to the results shown in Table 1, "HGP" demonstrates strong internal consistency and acceptable convergent validity. All items load well, range 0.686–0.915, and AVE is above 0.50, indicating the construct is measured reliably. "ENVP" has very strong construct validity; AVE is above 0.50 and factor loading range 0.761–0.922. "PEB" demonstrates excellent reliability. Although the reliability is high ($\alpha = 0.874$ and $\rho_a = 0.914$), the AVE shows a little small score, but above the threshold (0.566), meaning the convergent validity is acceptable. Additionally, "GOC" demonstrates good internal consistency and acceptable convergent validity. All items load well, range 0.614–0.799, and AVE is above 0.50,

indicating the construct is measured reliably. Which means that all the three constructs (HGP, ENVP, PEB, and GOC) demonstrate acceptable to excellent convergent validity, strong internal consistency and adequate factor loadings. Thus, the measurement model for these latent constructs is strong and statistically valid.

Table 1. The Measurement Model Validity Analysis

Factors	Items	" λ "	"AVE"	" α "	"rho_a"
Harmonious Green Passion "HGP"	HGP1	0.915	0.690	0.952	0.975
	HGP2	0.687			
	HGP3	0.911			
	HGP4	0.714			
	HGP5	0.904			
	HGP6	0.686			
	HGP7	0.915			
	HGP8	0.707			
	HGP9	0.898			
	HGP10	0.903			
Environmental Performance "ENVP"	ENVP1	0.922	0.693	0.888	0.906
	ENVP2	0.808			
	ENVP3	0.807			
	ENVP4	0.761			
	ENVP5	0.793			
Pro-Environmental Behavior "PEB"	PEB1	0.743	0.567	0.874	0.900
	PEB2	0.831			
	PEB3	0.808			
	PEB4	0.800			
	PEB5	0.799			
	PEB6	0.732			
	PEB7	0.792			
Green Organizational Climate "GOC"	GOC1	0.614	0.626	0.832	0.837
	GOC2	0.794			
	GOC3	0.793			
	GOC4	0.799			

Evaluation of Construct Distinctiveness

To determine the distinctiveness of each model construct, discriminatory validity was examined. This validity assumes the independence of the constructs, or in other words, the absence of statistically significant correlations between them (Leguina, 2016). Based on the procedures described by Kock (2020) and Do Valle & Assaker (2016), the cross-loading method and the Fornell & Larcker (1981) were applied to verify the discriminatory validity of the model constructs. The statistical results confirmed the distinctiveness of the model constructs, showing that each construct differs sufficiently from the others. See Table 2 and Figure 2 for further details.

Table 2 shows that each factor in the proposed model is clearly empirically distinct from the others factors. As all the diagonal values (the square root of the AVE. "HGP" = 0.830; "ENVP" = 0.833; "PEB" = 0.753; and "GOC" = 0.722) are higher than the correlations values (off-diagonal), confirming the discriminant validity across all constructs, which is in line with the standards set by Hair et al. (2022) and Fornell & Larcker (1981) and Chin's (1998) guidelines for the sufficient discriminant validity. Accordingly, "HGP"; "ENVP"; "PEB"; and "GOC" are empirically distinct constructs, the observed correlations are theoretically meaningful without indicating multicollinearity or construct overlap, and the measurement model is valid and suitable for testing the hypothesized direct effects and mediation relationships. Furthermore, the discriminant validity was more investigated using the heterotrait-monotrait ratio (Table 3).

Table 2. Construct Discriminant Validity Assessment (Fornell-Larcker Criterion)

Factors	HGP	ENVP	PEB	GOC
HGP	0.830			
ENVP	0.522	0.833		
PEB	0.512	0.579	0.753	
GOC	0.435	0.408	0.455	0.722

Table 3. HTMT Results

Factors	ENVP	HGP	PEB
ENVP			
HGP	0.737		
PEB	0.707	0.730	
GOC	0.690	0.722	0.764
GOC x HGP	0.351	0.274	0.381

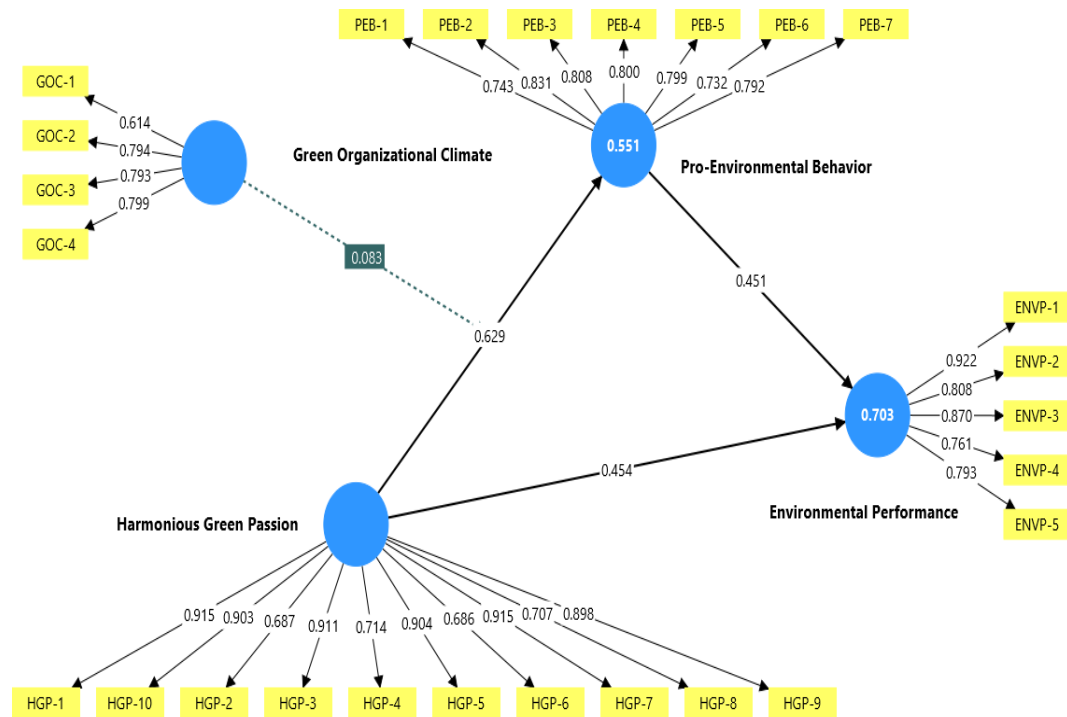


Figure 2. Structural Equation Measurement Model

The Inner Model: Explanation Power of the Model (R^2)

To test the explanatory power of the suggested model and the variance in the dependent variables accounted for by the independent variables, the coefficient of determination (R^2) was utilized. This number varies from 0 to 1, with a value of 1 signifying perfect prediction accuracy and a value of 0 denoting a lack of explanatory ability. Based on the thresholds established by Chin (1998) and Nunnally (1994), the R^2 values in Table 4 demonstrate that the independent variables significantly impact the dependent variables, exhibiting predictive power from weak to moderate. These statistical data indicate that the model has enough explanatory power. According to results in Table 3, (ENPV) is strongly predicted by independent variable, as the model explains 70% of the variation in environmental performance. Additionally, (PEB) is moderately explained 51.5% of the variation in pro-environmental behavior, which is an acceptable explanatory power. Therefore, it can be pointed out that the model has good explanatory power overall.

Table 4. Explanation Power of the Model Results (R^2)

Factors	R^2	Level
ENVP	0.703	High
PEB	0.551	Moderate

Variance Explained (f^2)

An effect size test (f^2) was performed to evaluate the extent of influence that each independent variable (IV) had on the dependent variable (DV) in the proposed model. According to Cohen's (1988) criteria, the statistical results in Table 5 demonstrate that the effect sizes of the independent factors on the dependent variables range from small to strong level. These findings offer more understanding of the comparative impact and practical importance of each predictor within the model.

The results in Table 5 indicate that (HGB) is moderately predictor of environmental performance ($f^2 = 0.338$) and a strong predictor of pro-environmental behavior ($f^2 = 0.708$). Therefore, it can be pointed out that employee harmonious green passion (HGP) is a key driver of both environmental performance and pro-environmental behavior. In addition, (PEB) has a moderate effect on (ENVP) ($f^2 = 0.334$), which mean it's not the sole driver, highlighting its role as a partial mediator or complementary predictor. In addition, The interaction between "GOC" and "HGP" demonstrated a substantial effect on "PEB". The score of " f^2 " was 0.29, which meet Cohen's (1988) recommendations for a medium effect and it is very close to a large effect (0.35). This result indicates that the interaction between "GOC" and "HGP" explains a meaningful portion of the variance in "PEB". Thus, the moderating role of "GOC" in strengthening the positive influence of "HGP" on "PEB" is statistically significant.

Table 5. Variance Explained/ Squared Effect Size (f^2)

Factors	ENVP	PEB
HGP	0.338(Medium)	0.708(Large)
PEB	0.334(Medium)	
GOC x HGP	0.29 (Medium)	

Model Fit Evaluation

A model fit evaluation test (GoF test) was carried out to evaluate the suitability and adequacy of the suggested model across the measurement model, structural model, and the overall model framework. This assessment aimed to determine whether the model meets the criteria for a comprehensive global fit, as recommended by Chin (2009):

$$\text{GoF} = \sqrt{R^2 \times \text{AVE}} \quad \text{Model fit assessment} = 0.635$$

Based on the model fit evaluation test findings and the benchmark criteria established by Wetzels et al. (2009), it can be concluded that the proposed structural model demonstrates a large goodness of fit (0.635, above the 0.36 threshold), confirming that the measurement model is valid and reliable, based on the satisfactory AVE and reliability values, and the structural model explains a substantial proportion of variance in the dependent constructs, based on the high R^2 values for "INRV" and "PATT". Accordingly, the model exhibits strong predictive and explanatory adequacy, confirming that the theoretical framework fits the empirical data well.

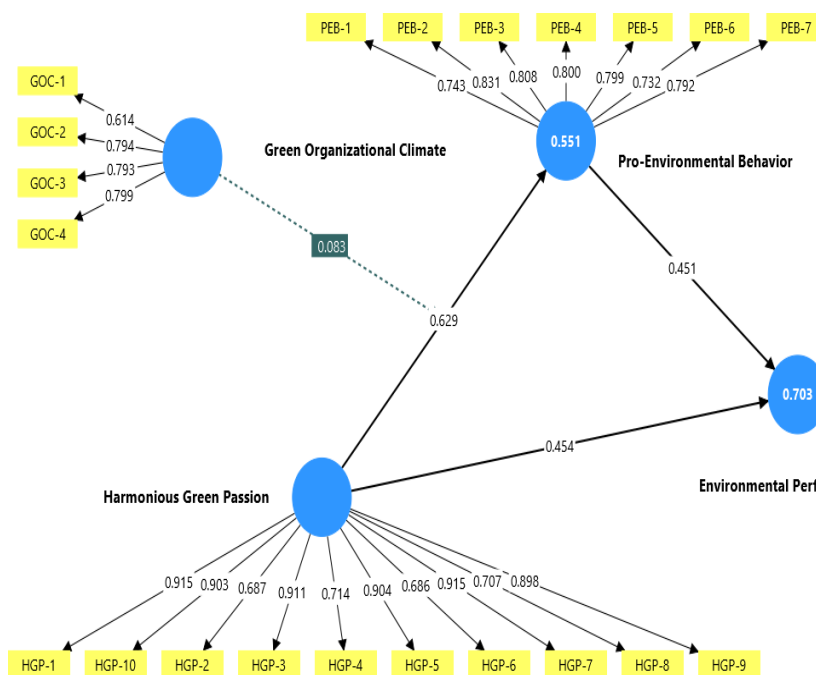


Figure 3. Final Structural Equation Model

Structural Model Hypotheses Evaluation-Significance of Path Coefficients

The test of path coefficient significance was conducted to assess how effectively the proposed theoretical model is compatible with the primary data. The results of each hypothesis test are presented in Table 5, 6 and 7. According results of the study's hypothesis testing at Table 6 and Figure 3. Harmonious Green Passion "HGP" has a positive direct effect on "ENVP" [$f^2 = 0.338$; Std. $\beta = 0.454$; $p = 0.000$], and "PEB" [$f^2 = 0.708$; Std. $\beta = 0.629$; $p = 0.000$], indicating that employees with high level of harmonious green passion are more motivated to engage in pro-environmental behaviours and to achieve high level of environmental performance. Additionally, "PEB" has a positive direct effect on "ENVP" [$f^2 = 0.334$; Std. $\beta = 0.451$; $p = 0.000$], confirming that employees' engagement in pro-environmental behaviours directly acts to improve their environmental performance outcomes. Accordingly, hypotheses H1, H2, and H3 were empirically supported.

Table 6. Structural Model – Direct Path Estimates (PLS-SEM) (Significant at $P^{**} = 0.000$)

Pathway	Standardized coefficient	σ	Observed t-value	Sig.	Result
H-1: HGP → ENVP	0.454	0.039	11.701	0.000	√**
H-2: HGP → PEB	0.629	0.047	13.472	0.000	√**
H-3: PEB → ENVP	0.451	0.032	14.049	0.000	√**

Table 7. Structural Model – Indirect Path Estimates (PLS-SEM) (Significant at $P^{**} = 0.000$)

Pathway	Standardized coefficient	σ	Observed t-value	Sig.	Result
H-4: HGP → PEB → ENVP	0.284	0.036	7.972	0.000	√**
H5: GOC x HGP → PEB → ENVP	0.083	0.013	6.385	0.003	√

With regard to the indirect relationship, Pro-Environmental Behavior (PEB) showed statistically significant mediating effect on the relationship between Harmonious Green Passion (HGP) and Environmental Performance (ENVP) [Standardized coefficient = 0.284; observed t-value = 7.972; $p < 0.000$]. This suggests that employee intrinsic passion for environmental sustainability mediates its association with improved organizational environmental outcomes through employee pro-

environmental behavior rather than through employee attitudes or knowledge. In other words, the passion is not fully realized into ENVP when only HGP is implemented; it is the realization of PEB that translates this passion into the actual ENVP performance. Hence, both the mediating relationship is significant and meaningful and hypothesis H4 is accepted. These results are presented in Table 7 and Figure 4 which show the crucial importance of PEB as a mechanism from the individual motivation to organization environmental performance. As for moderated mediation relationship, the result indicates that the interaction between "GOC" and "HGP" would cause an indirect effect on "ENVP" through "PEB", (Standardized coefficient = 0.083; Observed t-value = 6.385, $p < 0.003$), the strong scores of p and t-value are confirming this pathway, although the low score of the standardized coefficient. So the Hypothesis (H5) is accepted, confirming that that organizational green climate does not only moderate the direct pathways but also would produce a critical effect in the indirect pathways chain leading from employees harmonious green passion to organizational environmental performance (Figure 4 and 5).

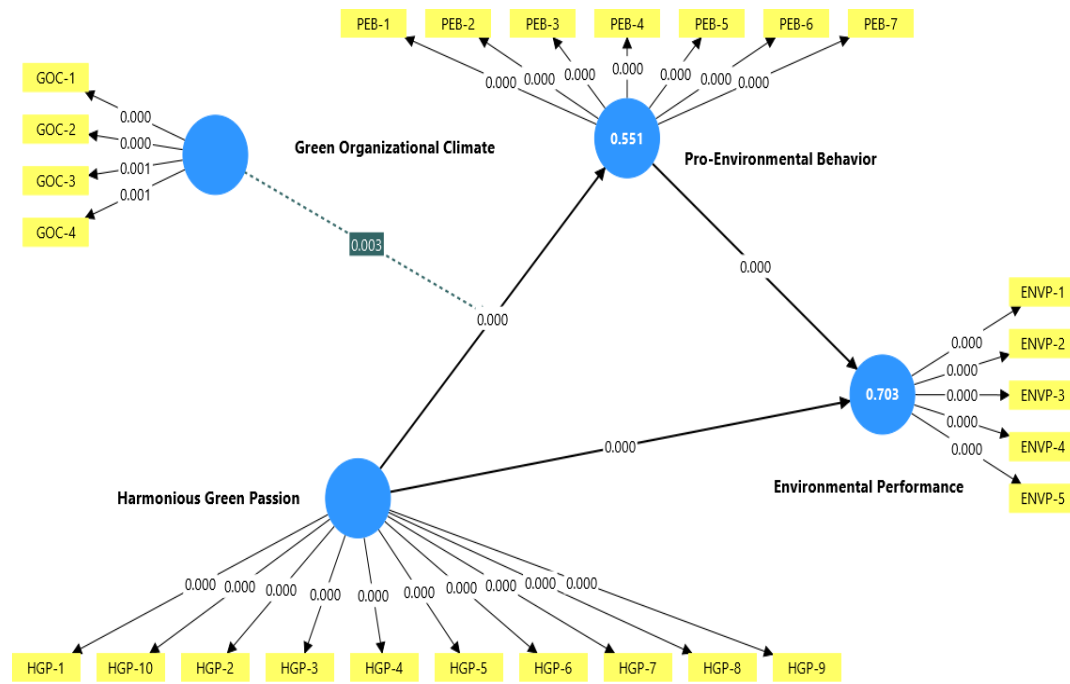


Figure 4. Structural Model- Significance of Hypothesized Paths

Simple Slope Examination:

To further examine the moderating effect, the simple slope examination was conducted to investigate moderating impact of "GOC" on the relationship between "HGP" and "PEB" based the procedures recommended by Aiken & West (1991), Dawson (2014), and Hayes (2018) (Table 8 and Figure 5).

Table 8. Simple Slope Results

Levels of "GOC"	Harmonious Green Passion -> Pro-Environmental Behavior
Green Organizational Climate at +1 SD	0.546
Green Organizational Climate at -1 SD	0.711
Green Organizational Climate at Mean	0.629

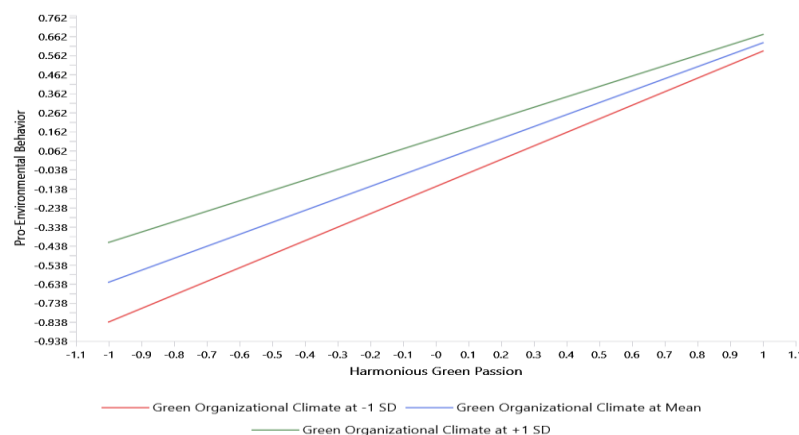


Figure 5. Interaction Plot of Green Organizational Climate and Harmonious Green Passion Predicting Pro-Environmental Behavior

As presented in Table 8 and Figure 5, "HGP" was positively related to "PEB" at all levels of "GOC". When "GOC" was high (+1 SD), the relationship between "HGP" and "PEB" was weak compared with other results (simple slope = 0.546), which suggests that when the organizational climate is already green-supportive, employees' harmonious green passion is less critical in driving behavior. At the mean level of GOC, the relationship remained significant but slightly stronger (simple slope = 0.629). Interestingly, at low levels of "GOC" (−1 SD), the "HGP" has the strongest effect (simple slope = 0.711) on "PEB", which suggests that in less supportive organizational green climates, employees rely more heavily on their own harmonious green passion to engage in pro-environmental behavior.

Accordingly, it can be pointed that harmonious green passion reliably predicts pro-environmental behavior, but its strength of impact depends on the level of green organizational climate, and employees' harmonious green passion plays a compensatory role in less green supportive environments, while in highly green supportive climates, employees' pro-environmental behavior may be sustained more by organizational structures than by personal harmonious green passion.

DISCUSSION

The results of the study provide critical insights into how Harmonious Green Passion (HGP) influences Environmental Performance (ENVP) in Egyptian hospitality businesses, mediated through Pro-Environmental Behavior (PEB). In line with theoretical expectations grounded in Self-Determination Theory (SDT), the findings confirm that HGP acts as a key intrinsic motivator that drives employees to engage in sustainable practices, which subsequently translate into measurable organizational environmental outcomes. Although employees with HGP are intrinsically motivated to contribute to sustainability, the enactment of these behaviors through PEB is essential to achieve tangible ENVP. This aligns with prior research indicating that organizational green passion must be operationalized through behavior to produce performance gains (Perano et al., 2024; Sobaih et al., 2022; Naz et al., 2023). The direct positive effect of HGP on ENVP confirms that internalized motivation not only shapes personal attitudes but can also contribute to organizational sustainability outcomes when appropriately leveraged (Mughal et al., 2024; Zhang et al., 2023).

The analysis further demonstrates that HGP significantly predicts PEB, reinforcing the notion that intrinsic motivation is a fundamental driver of sustained environmental behavior in the hospitality sector. Employees who internalize green values are more likely to adopt behaviors such as energy conservation, waste reduction, and resource efficiency, aligning their personal goals with organizational sustainability objectives (Abbas & Tufail, 2024; Shah et al., 2023). The mediation results indicate that while HGP directly enhances ENVP, a substantial portion of its impact is transmitted through PEB.

This layered mechanism highlights the necessity of translating passion into observable actions, echoing the findings of Perano et al. (2024), and underscores that employee engagement in sustainable practices is the behavioral conduit linking motivation to performance outcomes. Importantly, the study also highlights the moderating role of Green Organizational Climate (GOC) in strengthening the relationship between HGP and PEB. The results show that employees' intrinsic passion for environmental sustainability more effectively translates into pro-environmental behaviors when they perceive a supportive green climate, which provides structural resources, normative reinforcement, and psychological encouragement (Singh et al., 2023; Kanwal et al., 2024). This finding is consistent with research emphasizing that even highly motivated employees may fail to act on their green intentions if the organizational context is unsupportive (Zientara & Zamojska, 2016; Zafar et al., 2023; Priatna et al., 2025). In hospitality settings, where service processes are highly visible and employee-driven, GOC legitimizes sustainability initiatives and reinforces eco-friendly norms, ensuring that intrinsic motivation is effectively operationalized into day-to-day pro-environmental practices. Consequently, GOC acts as a critical contingency factor that amplifies the HGP–PEB pathway, highlighting the importance of an enabling organizational environment in translating employee passion into measurable environmental outcomes.

This study makes several contributions to the literature on organizational behavior and sustainability, particularly by advancing theoretical understanding in the context of hospitality and emerging economies. First, it builds on Self-Determination Theory (Deci & Ryan, 1985) to extend insights into autonomous motivation in sustainability contexts. Whereas most prior studies have examined green behavior primarily through extrinsic incentives, this research conceptualizes Harmonious Green Passion (HGP) as an intrinsically motivated employee commitment to sustainability-oriented behavior. This theoretical contribution emphasizes the role of internalized values and passion in driving environmental outcomes, providing a more anthropocentric and behaviorally grounded perspective on organizational environmental performance.

Second, the confirmation of Pro-Environmental Behavior (PEB) as a mediator deepens theoretical understanding by elucidating the mechanism through which HGP translates into Environmental Performance (ENVP). Previous studies often treated green passion and ENVP as directly linked (e.g., Zhang et al., 2023; Mughal et al., 2024), but the present findings highlight that passion alone is insufficient for sustainable outcomes. Rather, PEB operates as an explanatory construct, translating intrinsic motivation into observable and effective organizational behaviors. This layered mechanism provides a nuanced understanding of the passion–performance relationship, showing that motivation requires behavioral enactment to achieve meaningful environmental outcomes.

Third, the study extends sustainability research in hospitality by situating SDT principles within service-intensive settings in Egypt, addressing a gap where most green passion literature has been conducted in Western or manufacturing contexts. By demonstrating the usefulness of HGP and PEB in this setting, the research enhances the cross-cultural applicability of SDT and theorizes how intrinsic motivation and behavior interact in different institutional and cultural environments.

Fourth, this study introduces Green Organizational Climate (GOC) as a moderating construct, thereby enriching theoretical insights into the boundary conditions of HGP's influence on PEB. The findings show that employees' intrinsic passion more

effectively translates into pro-environmental behavior when supported by a strong GOC, which provides structural, normative, and psychological resources for sustainability. This aligns with socio-contextual perspectives suggesting that motivation alone may be insufficient without enabling organizational conditions (Zientara & Zamojska, 2016; Zafar et al., 2023; Singh et al., 2023; Priatna et al., 2025). By incorporating GOC, the research demonstrates that organizational climate is not merely a background factor but an active catalyst that strengthens the motivation–behavior link, revealing the conditional nature of intrinsic motivation in driving environmental performance. This theoretical extension highlights the need to integrate organizational context into SDT-based models of sustainability, showing that micro-level motivations and behaviors interact dynamically with macro-level organizational environments to produce ENVP.

Finally, the study contributes to conceptualizing ENVP as both an individual and collective outcome, bridging micro- and macro-level perspectives. It illustrates how individual-level antecedents (employee passion and behavior) aggregate into organizational-level sustainability outcomes, providing a more holistic framework for understanding the interplay between motivation, behavior, and performance. Collectively, these insights offer a refined theoretical model in which intrinsic motivation, enacted behavior, and organizational context interact to drive environmental performance, paving the way for future research that examines other potential moderators and cross-level dynamics in sustainability studies.

From a practical management perspective, the study offers several actionable insights for hospitality organizations aiming to enhance sustainability performance. First, managers should recognize Harmonious Green Passion (HGP) as a strategic organizational asset that can be nurtured through culture, policies, and leadership practices. Recruitment and selection processes should prioritize candidates with strong environmental values, such as evaluating applicants' past involvement in sustainability initiatives or volunteer environmental work. Training programs can further cultivate employees' intrinsic motivation by offering workshops on energy-efficient practices, waste reduction, or eco-friendly guest service innovations. Leadership behaviors that visibly model enthusiasm for green initiatives—such as personally participating in sustainability projects or publicly celebrating eco-friendly achievements—can inspire employees to align their personal actions with organizational environmental goals.

Second, the mediating effect of Pro-Environmental Behavior (PEB) highlights the importance of establishing structures and processes that enable environmentally responsible behavior. Organizations should embed sustainability into core operational practices, for example, implementing automated energy-saving systems, establishing zero-waste kitchens, or offering reusable guest amenities. Supporting infrastructure, such as clearly labeled recycling stations, digital dashboards tracking energy consumption per department, and internal green innovation marketplaces, can help employees translate passion into tangible action. Recognition programs—like “Green Employee of the Month” awards or bonuses for departments reducing water and energy usage—reinforce the importance of these behaviors beyond traditional performance metrics.

Third, the partial mediation of PEB in the HGP–ENVP relationship suggests that behavioral engagement programs remain essential. Initiatives such as gamified resource-saving challenges (e.g., competitions to reduce paper or electricity usage), participatory green committees, and sustainability task forces enable employees to channel intrinsic motivation into concrete actions while promoting shared ownership of sustainability goals. When combined with a supportive Green Organizational Climate (GOC), these programs are even more effective, as employees perceive that the organizational environment actively endorses and rewards their eco-behaviors.

Fourth, a supportive GOC is critical in amplifying the translation of HGP into PEB. Managers should foster a climate where sustainability is visible, normative, and institutionally supported. Policies, social cues, and organizational encouragement can reinforce eco-friendly behaviors. For example, senior management can visibly endorse sustainable purchasing decisions, include sustainability KPIs in performance evaluations, and encourage interdepartmental collaboration on energy-saving or waste-reduction projects. Regular internal communications—such as newsletters highlighting sustainability achievements or green project updates—also strengthen the perception that the organization values and rewards environmental initiatives.

Fifth, in the context of Egypt, where the hospitality sector is expanding alongside national sustainability strategies (e.g., Egypt's Green Economy Strategy), managers should align organizational practices with broader regulatory and societal expectations. Emphasizing employee-driven green practices as part of compliance and corporate reputation can enhance legitimacy and competitive advantage, especially in markets with environmentally conscious consumers and regulators. Examples include partnering with local environmental NGOs, hosting guest workshops on sustainability practices, and publicly reporting the organization's environmental performance. Finally, long-term environmental performance requires integrating passion, behavior, and organizational context. Leadership development programs should cultivate future managers as environmentally conscious change agents who can maintain a GOC, monitor sustainability outcomes, provide feedback to staff, and institutionalize green practices. Programs can include mentoring systems for green initiatives, training in environmental change management, and periodic sustainability audits to ensure accountability. By combining intrinsic employee motivation with enabling organizational structures and a supportive climate, hospitality organizations can convert individual passion into systemic, enduring environmental performance.

CONCLUSION

This study investigated the impact of Harmonious Green Passion (HGP) on Environmental Performance (ENVP) in the Egyptian hospitality industry, emphasizing the mediating role of Pro-Environmental Behavior (PEB) and the moderating effect of Green Organizational Climate (GOC). The findings indicate that HGP exerts a significant positive influence on both PEB and ENVP, confirming that intrinsically motivated employees are pivotal drivers of organizational sustainability.

PEB was found to mediate this relationship, highlighting that environmental passion must be operationalized through concrete behaviors to achieve tangible performance outcomes. Moreover, GOC was identified as a critical boundary condition, strengthening the effect of HGP on PEB by providing structural, normative, and psychological support that enables employees to translate their green motivations into action. Practically, these insights suggest that hospitality organizations can enhance sustainability by recruiting and developing employees with strong environmental values, implementing incentive structures for pro-environmental behaviors, and cultivating a supportive green climate through leadership practices, policies, and resource allocation. By simultaneously fostering intrinsic motivation, facilitating behavioral enactment, and reinforcing organizational support, hospitality firms can optimize their environmental performance, align with broader sustainability objectives, and gain competitive advantage in eco-conscious markets.

Theoretically, this research contributes to literature by integrating intrinsic motivation, behavioral enactment, and organizational context into a unified framework, demonstrating that organizational environmental performance emerges from the synergistic interaction of employee passion, enacted behaviors, and a supportive organizational climate.

Limitations and Future Research

The study had several limitations that should be considered when interpreting the findings. First, the sampling frame was restricted to employees in five-star hotels and Class-A travel agencies in Egypt, which may limit the generalizability of the results to other hospitality segments, service industries, or international contexts with different cultural, institutional, or regulatory environments. Second, the study employed a cross-sectional and self-reported design, which may be susceptible to common method bias and social desirability effects; although procedural and statistical remedies were applied, residual bias cannot be entirely ruled out. Third, the analysis focused on Pro-Environmental Behavior (PEB) as the sole mediator between Harmonious Green Passion (HGP) and Environmental Performance (ENVP), overlooking other potential mechanisms such as green organizational citizenship behavior, environmental commitment, or ecological identity. Fourth, ENVP was treated as a unidimensional construct, while in reality, it encompasses multiple facets including regulatory compliance, resource efficiency, waste management, and green innovation. Lastly, while demographic characteristics were controlled for, their potential moderating effects were not examined, and the role of Green Organizational Climate (GOC) was only tested in one pathway; other contextual factors, such as departmental culture or managerial practices, may also influence how HGP translates into PEB and ENVP. Future research should expand the scope and methodology to address these limitations. Cross-national or cross-industry studies with stratified sampling could provide more generalizable evidence on the HGP–PEB–ENVP framework and the moderating effect of GOC across cultural and organizational contexts. Longitudinal or experimental designs would allow for the examination of temporal dynamics and causal relationships, particularly in the evolution of employee passion, behavior, and performance outcomes. Studies could also explore multiple mediators in parallel, such as green commitment or organizational citizenship behaviors, to clarify the psychological and behavioral mechanisms underlying sustainability outcomes. Additionally, future research should disaggregate ENVP into its subcomponents to assess whether HGP, PEB, and GOC exert differential effects across specific environmental outcomes. Finally, more nuanced analyses of demographic moderators—such as age, tenure, education, and employment status—could reveal subgroup differences in the translation of passion into behavior and performance, offering actionable insights for targeted sustainability interventions.

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