

# Examining proactive pro-environmental behaviour through green inclusive leadership and green human resource management: an empirical investigation among Malaysian hotel employees

Investigation  
among  
Malaysian hotel  
employees

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## Abstract

**Purpose** – Despite the significant economic contributions of the tourism and hospitality industry, it is also considered an emerging concern for its negative impact on the environment. This study investigated the association between green inclusive leadership (GIL), green human resource management (GHRM), and employee proactive pro-environmental behaviour (PEB). The study also investigated the mediating effect of GHRM between GIL and proactive PEB.

**Design/methodology/approach** – Hotel employees in Malaysia were the respondents in this study. The researchers used a cross-sectional approach and partial least squares-structural equation modeling (PLS-SEM) to analyse the data.

**Findings** – Results found a significant relationship between GIL, GHRM and proactive PEB. Findings of the study revealed that GHRM significantly mediates the relations between GIL and proactive PEB.

**Practical implications** – This study presents practical implications for the hotel industry by encouraging employees' environmentally responsible behaviour. Enlightening the role of environmentally open and accepting ways to promote positive employee behaviour is of considerable practical use not solely for the organisations but additionally for culture as a whole.

**Originality/value** – Theoretical contributions are made by constructing a new structural model supported by the theory of planned behaviour (TPB) and the induction of GIL, GHRM, and proactive PEB and measuring the factors simultaneously. The study further established the mediating role of GHRM between GIL and proactive PEB.

**Keywords** Green inclusive leadership, Green human resource management, Employees' proactive pro-environmental behaviour, Theory of planned behaviour, Green practices in hotel industry, Malaysia

**Paper type** Research paper

## Introduction

Despite being highly regarded commercial activity for stimulating the economy of a particular country, tourism is also becoming an emerging concern for its negative impact on



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the environment. Tourism and hospitality are among the most prominent contributors (Abeydeera and Karunasena, 2019). This industry's rapid expansion is expected to significantly impact long-term emissions of carbon dioxide and other greenhouse gases (Ahmad *et al.*, 2021). Scholars have argued that companies should develop and implement green innovations to reduce carbon emissions and mitigate environmental threats (Amabile and Pratt, 2016).

Previous research suggests that stimulating green creative behaviour among employees depends on leadership awareness of ecological or green issues (Elkhwesky *et al.*, 2022; Patwary *et al.*, 2022a, b). Therefore, the current research focuses on discovering how green leadership can help counteract the adverse effects of tourism on our environment. Arici and Uysal (2022) indicated that studies investigating the effect of different leadership styles on the green behaviour of employees are inadequate. Thus, we argue that leadership influence should also be considered (Kim and Lee, 2022; Mubarak and Yusoff, 2019).

Previous environmental management studies focused on how hotels manage their environmental impacts (Ouyang *et al.*, 2019). The hospitality industry can use the environmental management attributes established to conduct audits of green hotels (Alom *et al.*, 2019). There are two distinct approaches to the hotel industry's environmental research: consumer and employee. However, scholars mainly focused on green marketing from the consumer's perspective (Groening *et al.*, 2018). A company's strategic vision and goal can benefit from human resource management (HRM). Human resources traditionally serve as a conduit for executives' strategic vision to be communicated to employees and for employees to understand the vision (Su *et al.*, 2021). According to Hamid *et al.* (2022), HRM directly influences the success of a company's strategic vision and the efficiency of its operations. According to this study, HRM is linked to environmental conservation in the hospitality industry. Environmentally friendly employees are hired and retained, and their contributions to the company's environmental efforts are reflected in employee performance evaluations (Li *et al.*, 2022; Karatepe *et al.*, 2022). Because the HR function is critical to achieving environmental-friendly corporate goals, green human resource management (GHRM) is a vital component of environmental management (Bombiak and Kluska, 2018; Mohammad *et al.*, 2020; Muisyo *et al.*, 2022).

Rather than looking at how traditional leadership styles affect green behaviour, we believe relational leadership (RL) would be insightful in the hospitality industry (Karatepe *et al.*, 2021). Green inclusive leadership (GIL) style is visible when the leaders in the organisation pose openness, availability and accessibility when interacting with green-related activities and its implication (Patwary *et al.*, 2020; Karatepe *et al.*, 2020). Leaders can use RL to think about others and how they might collaborate with others (Nicholson and Kurucz, 2019). According to our interpretations, RL is inclusive leadership (IL). The literature suggested that IL is a prerequisite for environmentally friendly behaviour, such as toxic waste disposal following regulatory requirements (Brantmeier and Webb, 2020). In this study, GIL is defined as supportive leaders who believe in open communication while interacting in green-related activities and its implication in the hospitality industry. Leaders, who are open to including all of their team members, also foster an environment that encourages their employees to deliberate innovatively (Bhutto *et al.*, 2021). Thus, we propose the previously unexplored variable of GIL to promote environmentally responsible behaviour of tourism and hospitality employees.

GIL and HRM help to create a safe and confident workplace. Also, we argue that GIL in the tourism and hospitality industry has a complicated mechanism to explain its impact (Vakira *et al.*, 2022). The relationship between GIL and green HRM has mainly been overlooked when promoting environmentally friendly behaviour in the hotel sector (Karatepe *et al.*, 2021). More investigation into the association of leadership and employee motivation to address ecological and environmental issues in the workplace is required. This study examined how

green HRM practices contribute to pro-environmental proactive behaviour development to close the knowledge gap.

The hotel industry is responsible for environmental issues to improve employees' environmental performance and be environmentally friendly (Kim *et al.*, 2019). Over the years, hotel businesses have been under pressure to be environmentally friendly and promote awareness (Clark *et al.*, 2021). However, the significant increase in hospitality organisations has caused some environmental problems as they use more energy and water for heating, cooling, and lighting, leading to a deterioration of the global environment (Abdou *et al.*, 2020; Öğretmenoğlu *et al.*, 2021). Therefore, the hotel sector is implementing comprehensive green leadership and HRM and positively contributing to the environment. Few studies explored the strategic HRM impact on employee attitudes and behaviours toward implementing comprehensive green leadership and GHRM (Bhutto *et al.*, 2021). Further studies are needed on GHRM practices and how they contribute to environmental performance, especially in the hospitality sector (Yusoff *et al.*, 2020).

GHRM methods are intended to generate, improve, and maintain each employee's understanding to optimise green contribution (Peerzadah *et al.*, 2018). Consequently, considering employees' behavioural characteristics will enhance their awareness of environmental information, leading to pro-environmental behaviours (PEBs) (Dharmesti *et al.*, 2020). Furthermore, GHRM is generally recognised for improving employees' PEBs, attitudes, and competencies, motivating them to think and act ecologically and providing them with an opportunity to develop information and skills related to environmental sustainability (Bhutto *et al.*, 2021).

Additionally, different researchers have looked into different aspects of GHRM and employee green behaviour, which are green commitment (Cui *et al.*, 2022). There has not been much research on how GHRM motivates employees to involve in PEB. The research into how GHRM affects employee behaviour is still in its early stages, and more organisational context proof is needed (Waheed *et al.*, 2019; Pinzone *et al.*, 2019). Therefore, this study examines the relationship between GIL, GHRM, and proactive PEB of hotel employees. The study investigates the mediating role of GHRM between GIL and proactive PEB.

## Literature review

### *Theoretical underpinning*

In the current study, we consider GIL as an essential intangible resource influencing GHRM and proactive PEB in the hotel industry. The theory of planned behaviour (TPB) by Ajzen (1991) was underpinned to fill the research gap. TPB states that the immediate antecedent of behaviour is intention. Green and inclusive leadership can be defined as the willingness or motivation to manage in a way that benefits the organisation and the environment.

Robertson and Barling (2013) found that descriptive norms affect the intention to engage in green transformational leadership and that green identity affects green conduct. These results are consistent with the subjective norm and attitude, two of the three factors the TPB identifies as influencing behaviour change (Ajzen, 1991, 2002, 2011). Our study also uses Ajzen's TPB because of its illustrious history and standing in the discipline of social psychology (Patwary *et al.*, 2022a, b).

TPB can be used to better understand human social behaviour by linking it to various contextual elements (Ajzen, 2011). It is probable that, in addition to the three fundamental determinants, conduct itself can play a part in motivation, as evidenced by the chain of reasoning that attributes motivation to achievement (Patwary *et al.*, 2020). In keeping with this line of thought, this study employs TPB to investigate the factors that motivate GIL behaviour in Malaysia's hotel industry to deepen our knowledge of human social behaviour and environmentally conscious actions in the hospitality industry (Patwary *et al.*, 2021).

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*Green inclusive leadership and green human resource management*

GHRM refers to strategies and practices that focus on the green behaviour of employees to create green workforce management and resource efficiency in the hotel industry. GHRM is also referred to the environmental practices and employees' commitment to establishing the organisation's environmental sustainability (Chen *et al.*, 2021; Patwary *et al.*, 2020; Rabiul *et al.*, 2022b). GHRM is associated with managing the environment within the organisations. GHRM can reflect the sustainable use of resources in hospitality management and promote environmental practices, boosting employee morale and satisfaction. GIL promotes the green behaviour of hospitality employees (Bhutto *et al.*, 2021). IL is a crucial predictor of green behaviour that demonstrates accessibility and availability of resources and creates innovative employee behaviour in organisations.

GHRM is characterised by vigour, dedication, and total immersion in work-related matters. Previous studies conclude that organisational leadership significantly impacts employees' GHRM because leaders motivate their subordinates (Bhutto *et al.*, 2021; Patwary, 2022). More recent research has linked GHRM's positive impact on leadership to specific leadership styles beyond the general discussion (Leroy *et al.*, 2018; Ashikali and Groeneveld, 2015). IL has not been studied in detail. It's still easy to imagine how a leader who prioritises building relationships with his or her team could increase their employees' loyalty and productivity.

Furthermore, Decuyper and Schaufeli (2020) suggest that followers are more likely to invest their own emotional, mental, and physical energy into their work when their leaders appear approachable and open to collaboration. IL positively impacts GHRM, partly because it prioritises the needs of employees, which is essential for creating a motivated workforce (Fang *et al.*, 2021). Because of this, we expect GIL to increase employees' engagement with green practices in hotels. Because GHRM is considered the number of effort staff put into green tasks, the extent to which they are engaged in such green-related work, and their willingness to put in the effort, GIL can increase GHRM by motivating its employees through its open approach. Thus, the following hypothesis denoted as:

*H1. GIL is positively related to GHRM.*

*Green inclusive leadership and proactive pro-environmental behavior*

A company's pro-environmental stance is symbolised by adopting the GIL model. Leaders, the primary drivers of organisational behaviour (Thabet *et al.*, 2022), can encourage pro-environmental thinking while also serving as role models for others to follow in their footsteps (Ouariachi and Elving, 2020). Presenting relevant policies in a specific manner can also influence the public's perception of climate change (Bhutto *et al.*, 2021). The leadership team's environmental strategy positively affects GIL in a green climate (Javed *et al.*, 2019). Previous studies on leadership recommended that a leader's style strongly influences organisational climate and GIL (Zhou *et al.*, 2018). It has been shown that ethical leadership in higher education and healthcare institutions positively impacts the environment (Saleem *et al.*, 2020).

For this research, an operational description is necessary. Discoveries of the past, the authors discuss the importance of leadership in influencing it. Employees in the tourism and hospitality industries are highlighted as an example of those who "think outside the box" when addressing environmental concerns. These workers propose novel approaches to achieving environmental goals, provide and encourage green-oriented ideas for improving the company's environmental performance, evaluate novel green ideas, and look for novel solutions to environmental problems. According to the definition given, "GIL" is a nuanced expression of green behaviour that can stand in for ecology-oriented innovation in the service of environmental protection. How an organisation is led significantly impacts employees'

thoughts, feelings, and perceptions of the environment in which they work. This belongs to the fourth component of the creation model (Tuan, 2020). GIL in the tourism and hospitality sector may benefit from its openness and accessibility, even though there is no evidence to support this claim (Razzaq *et al.*, 2021). Creating positive perceptions of the organisation's green climate can be achieved by inclusive leaders by establishing green standards, allowing employees to put their efforts independently, and defining achievable green goals. We thus hypothesise the following:

H2. GIL is positively associated with proactive pro-environmental behavior.

### *Green human resource management and proactive pro-environmental behavior*

GHRM and its potential effects were examined empirically by previous studies (Ren *et al.*, 2018). As previously stated, no concise model in the literature elucidates the fundamental instruments associated with GHRM to various PEBs. Service or hospitality and tourism businesses require highly motivated employees to exhibit PEB at high levels due to the successful implementation of greenhouse gas reduction management. According to Zhao *et al.* (2010), high-polluting industries' environmental reputation was influenced by a proactive environmental strategy, and GHRM was found to be a mediator. Green in and out-of-role performance was positively associated with the components of GHRM in China (Naz *et al.*, 2021). Therefore, we propose the following hypothesis:

H3. GIL is positively related to PEB.

### *The mediating role of green human resource management*

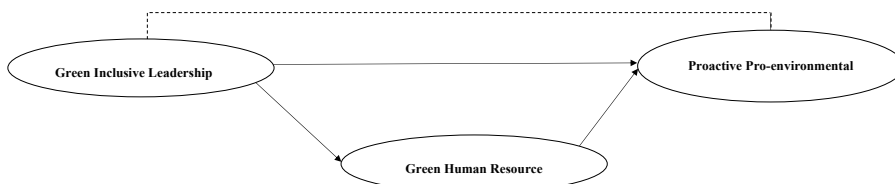
In any organisation, leadership is critical, and human capital is a company's most valuable asset (Antal *et al.*, 2019). Leadership is concerned with understanding, predicting, and controlling personal and interpersonal dynamics of how people influence one another toward common goals (Singh *et al.*, 2020). In contrast, HRM is concerned with the organisation's systems and processes to influence employees systematically, usually on a larger scale (Gahan *et al.*, 2021; Woods *et al.*, 2018). The first evidence suggests that GHRM plays a critical role as a mediating variable in ratifying employee motivation and performance (Arshad, 2019). However, we believe that in the HRM-innovation-performance linkages in SMEs, leadership plays a more critical role as an antecedent than a mediator or moderator because leadership influences HRM practices, which influence innovation and superior performance (Sanders *et al.*, 2021). Therefore, the following hypothesis is denoted as (see Figure 1):

H4. GHRM mediates the relationship between GIL and proactive PEB.

## Method

### *Sample and data collection*

There are 213 hotels (95 five-star and 128 four-star hotels) spread out over the 13 states of Malaysia and the federal territory of Kuala Lumpur as of August 2021 (MOTAC, 2020).



Note(s): (—) Solid indicates direct and (- - -) dotted line indicates indirect hypotheses

Figure 1.  
Conceptual framework

Among them, 165 hotels (77.46%) can be found in six different regions: 51 in Kuala Lumpur, 29 in Penang, 26 in Selangor, 23 in Malacca, 20 in Pahang, and 16 in Kedah. Due to accessibility challenges, we considered hotels in these states only, Kuala Lumpur (51), Penang (29), Selangor (26), Malacca (23), Pahang (20), and Kedah (16). We limited our focus to five- and four-star hotels because these establishments provide a more accurate representation of the country's hotel business (AlAbri *et al.*, 2022).

Data collection was conducted from March to April 2022, as Nulty (2008) recommended that having 50% response in a pen-and-paper survey was considered satisfactory. We followed the recommendation of Thompson (2012) that examining a minimum of 384 cases is an acceptable hypothesis testing of an unknown population. Since a large area had to be covered, an online survey using Google forms and printed versions of the questionnaire were used. For the latter, the questionnaires were personally distributed to hotels in Kuala Lumpur, Pahang (Cameron Highland), Malacca, Penang, Selangor, and Kedah. Since our goal was to reach a sample size of 384, we randomly communicated with human resource managers of hotels in the target areas. Forty managers indicated that they were eager to take part in the survey. We made sure to deliver 15 questionnaires to employees at each hotel while keeping in mind that only 40 managers would be present to assist in the data collection from their staff. We sent out  $(40 * 15) = 600$  questionnaires and received 380 responses, yielding a response rate of 63.33%. Three hundred seventy-four responses were proceeded for data analysis and hypothesis testing after removing the missing data and outliers.

Demographic distributions of participants are shown in Table 1 for gender, marital status, age, education level, job experience, affiliated department, and job position. For gender, 47.94% were male, and 52.1% were female. Many respondents were single (54.5%). Regarding the age group, 37.1% were between 26 and 29. Regarding education, 31.1% had a diploma, and 26.3% had a skills certificate. On industrial experience, 38.2% had between five and eight years of work experience. For the department working in hotels, the majority worked in food and beverage (32.1%), housekeeping (27.9%), sales and marketing (16.6%), accounts (13.4%), HRM (7.6%), and front office (2.4%). Regarding job positions, many were lower-level employees (75.8%), followed by supervisory positions (17.6%) and junior assistant managers (6.6%). While reporting on the position of employees in the hotel industry, Rabiul *et al.* (2022a) also followed these categories (lower-level employees, supervisory positions, and junior assistant managers).

### *Measurement*

Hotel employees rated their opinion on GIL, GHRM, and proactive PEB on a seven-point Likert scale ("strongly agree = 7" to "strongly disagree = 1"). GIL was measured using a nine-item scale developed and validated by Carmeli *et al.* (2010). The items included "The manager is open to hearing new pro-environmental ideas". Six items were adapted from Dumount *et al.* (2017) to measure GHRM. The items included "My company provides employees with green training to promote green values". Three items adapted from Bissing-Olson *et al.* (2013) to measure proactive PEB were further validated by Zacher and Bissing-Olson (2018). The sample item included "I take a chance to get actively involved in environmental protection at work".

### *Data analysis*

Data analysis was conducted using PLS-SEM (Nitzl *et al.*, 2016). At the same time that it measures and adjusts for observed variables, structural equation modelling (SEM) can also explain causal relationships between the latent and observed variables (Hair *et al.*, 2014). In addition, PLS-SEM with many latent variables can be used to address some measurement errors that commonly occur with tourism resources.

Characteristics	Frequency	Percentage	Investigation among Malaysian hotel employees
<i>Gender</i>			
Male	182	47.9	
Female	198	52.1	
<i>Marital status</i>			
Single	207	54.5	
Married	160	42.1	
Widow	10	2.6	
Divorced	3	0.8	
<i>Age (Years)</i>			
18–21	12	3.2	
22–25	73	19.2	
26–29	141	37.1	
30–33	121	31.8	
34 and above	33	8.7	
<i>Education level</i>			
Primary school	29	7.6	
Secondary school	36	9.5	
Skills certificate	100	26.3	
Diploma	118	31.1	
Degree/Bachelor	65	17.1	
Masters	30	7.9	
PhD/Doctoral	2	0.5	
<i>Industry experience</i>			
0–2 years	28	7.4	
>2–5	70	18.4	
>5–8	145	38.2	
>8–10	111	29.2	
>10–15	26	6.8	
<i>Departments of works</i>			
Front office	9	2.4	
Food and beverage	122	32.1	
Housekeeping	106	27.9	
Sales and marketing	63	16.6	
HRM	29	7.6	
Accounts	51	13.4	
<i>Position of employees</i>			
Lower-level employees	288	75.8	Table 1. Demographic profile of the respondents (n = 380)
Supervisory position	67	17.6	
Junior assistant manager	25	6.6	

## Results

### *Outliers, multicollinearity, and normality*

First, multivariate outliers were checked and deleted with a significance level of more than 0.001, as Lynch (2013) recommended. Due to the data coming from a single source, measures were taken procedurally and statistically to eliminate the possibility of common method variance (Podsakoff *et al.*, 2012). Variable measurements were placed randomly in different places, such as GHRM, proactive PEB, and GIL. In addition, we made sure there was no overlap between the constructs by using a condensed form of GHRM, proactive PEB, GIL and behavioural intention measurement by using the recommendation of Podsakoff *et al.* (2012).

After that, Harman's one-factor analysis was performed. The findings showed that only one factor accounted for 16.54% of the total variance (63.23%). With a value lower than 50%, the risk of common method variance was eliminated (Podsakoff and Organ, 1986). Table 2 shows variance inflation factor (VIF) values, indicating no high collinearity among the constructs and their items.

Using previously conducted studies and multi-item assessments, we looked at several aspects of the operation to determine content validity. The constructs' validity, reliability, and content validity were determined through critical procedures. Both confirmatory and exploratory analyses confirmed the variables' factorability.

#### *Construct validity, reliability, and model quality*

A consistent approach throughout the study was used to analyse the convergent and divergent validity of the variables, as recommended by Dijkstra and Henseler (2015). All items should load at least 0.60; Figure 2 displays that all items in the constructs had acceptable loadings of between 0.753 and 0.908 (Ramayah *et al.*, 2011). Table 3 also shows that the Cronbach alpha was more than 0.70, the composite reliability (CR) must be greater than 0.70, and the average variance extracted (AVE) must be greater than 0.50 (Dijkstra and Henseler, 2015).

Besides, the AVE values were more than the suggested values of 0.50 (see Figure 2 in the blue circle and Table 2). The CR value of GHRM was 0.936, proactive PEB was 0.899, and GIL was 0.945. Thus, all constructs met the criterion for convergent validity (Cheah *et al.*, 2018).

As shown in Table 4, the heterotrait-and-monotrait (HTMT) ratio and the Fornell–Larcker criterion were applied to measure discriminant validity among the constructs. In order to validate the discriminant power of a test, the HTMT ratio should fall somewhere between 0.85 and 0.90 (Cheah *et al.*, 2018). The HTMT ratios were significantly lower than the acceptable threshold of 0.85 (see Table 2). Besides, each indicator construct (primary) scored higher than the other constructs. The Fornell–Larcker criterion, as seen in Table 2, also satisfied the requirement of discriminant validity (Henseler *et al.*, 2015).

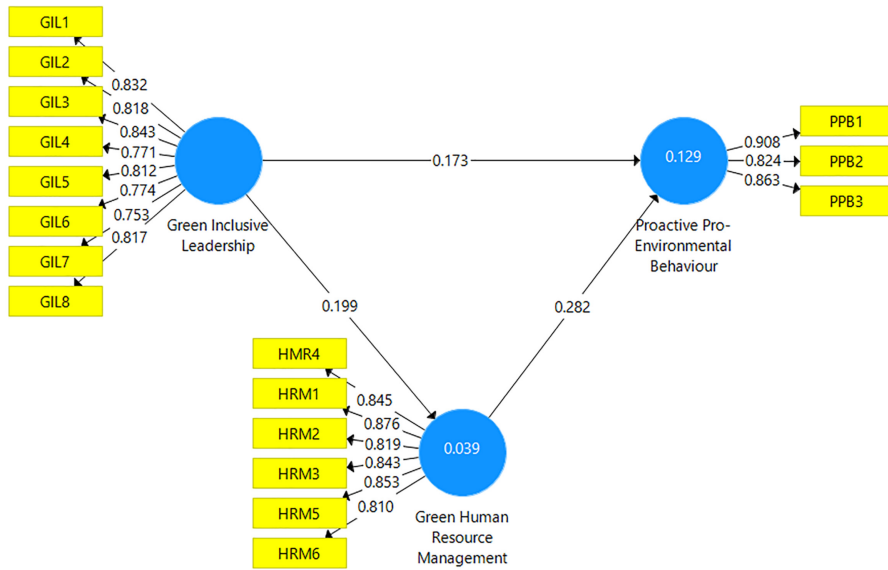
To evaluate the model's accuracy, we calculated the standard deviation of the residuals, the coefficient of determination, and the cross-validated redundancy (Hair *et al.*, 2014) (see Table 5).

Constructs	Items	Loadings	VIF (variance inflation factors)
Green inclusive leadership	GIL1	0.832	3.718
	GIL2	0.818	3.376
	GIL3	0.843	2.802
	GIL4	0.771	3.184
	GIL5	0.812	3.522
	GIL6	0.774	2.223
	GIL7	0.753	2.571
	GIL8	0.817	3.386
Green human resource management	HMR4	0.845	2.442
	HRM1	0.876	3.079
	HRM2	0.819	2.590
	HRM3	0.843	2.606
	HRM5	0.853	2.832
	HRM6	0.810	2.315
Proactive pro-environmental behaviour	PPB1	0.908	2.370
	PPB2	0.824	1.763
	PPB3	0.863	1.951

**Table 2.**  
Factor loadings and  
variance inflation  
factors



Investigation among Malaysian hotel employees



**Figure 2.** Measurement model (loading and AVE)

Constructs	Cronbach alpha	Composite reliability	AVE (average variance extracted)
Green human resource management	0.917	0.936	0.708
Green inclusive leadership	0.922	0.936	0.645
Proactive pro-environmental behaviour	0.832	0.899	0.749

**Table 3.** Convergent validity

	Green human resource management	Green inclusive leadership	Proactive pro-environmental behaviour
<i>HTMT (Heterotrait and Monotrait) ratio</i>			
Green human resource management			
Green inclusive leadership	0.197		
Proactive pro-environmental behaviour	0.355	0.250	
<i>Fornell-Larcker criterion</i>			
Green human resource management	0.841		
Green inclusive leadership	0.199	0.803	
Proactive pro-environmental behaviour	0.316	0.229	0.866

**Table 4.** Criteria for discriminant validity

The model was good, as shown by the values and evaluation in Table 5 (Hair *et al.*, 2020). A good PLS model has a  $Q^2$  value greater than 0.02 and an SRMR less than 0.08 (Hair *et al.*, 2020). Satisfaction is indicated by an  $R^2$  of 0.10, but a weak influence is indicated by a value of 0.039, and a moderate influence is indicated by a value of 0.129 (Hair *et al.*, 2020).

*Hypothesis testing*

After employing the bootstrapping method suggested by Nitzl *et al.* (2016), four were supported out of all the hypotheses (see Tables 4 and 6). For example, as shown in Table 6 and Figure 3, GHRM, GIL, and proactive PEB had direct effects. GHRM ( $\beta = 0.282$ ;  $t = 4.992$ ,  $p = 0.000$ ), and GIL ( $\beta = 0.173$ ;  $t = 3.118$ ,  $p = 0.002$ ) had a relationship with proactive PEB. Besides, GIL ( $\beta = 0.199$ ;  $t = 3.577$ ,  $p = 0.000$ ) had a relationship with GHRM. Therefore, H1, H2 and H3 were supported.

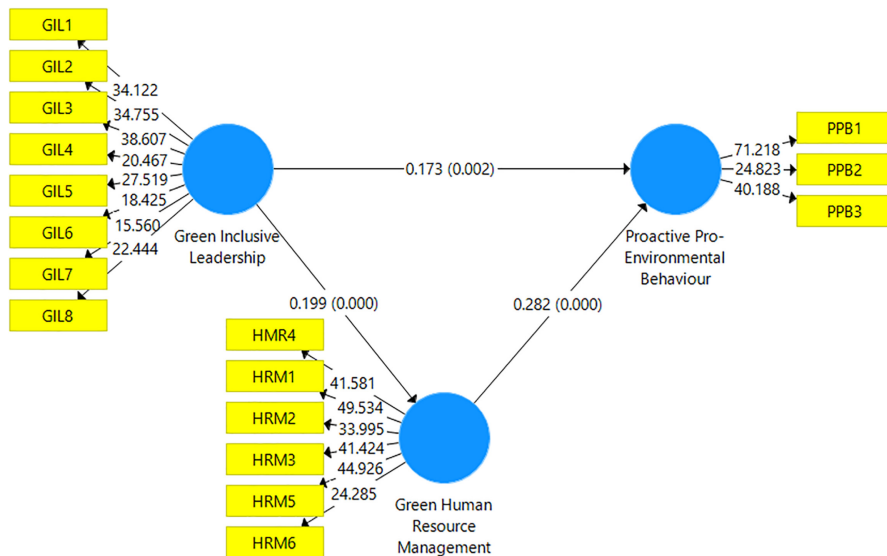
For the indirect effect, if an independent variable's effect on the dependent variable is insignificant while connecting with the mediator (Zhao *et al.*, 2010). Indirect effects of the relationship are demonstrated in Table 4, which shows that GHRM ( $\beta = 0.056$ ;  $t$  value = 2.846;  $p$ -value = 0.005) mediated between GIL and proactive PEB. Therefore, H4 was also supported.

**Table 5.**  
Quality of the model

Variables	$R^2$	$Q^2$	SRMR
Green human resource management	0.039	0.037	0.059
Proactive pro-environmental behaviour	0.129	0.124	

**Table 6.**  
Direct effect

Hypothesis	$\beta$	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	p values	Supported
H1 Green human resource management → Proactive pro-environmental behaviour	0.282	0.286	0.057	4.992	0.000	Yes
H2 Green inclusive leadership → Green human resource management	0.199	0.205	0.056	3.577	0.000	Yes
H3 Green inclusive leadership → Proactive pro-environmental behaviour	0.173	0.172	0.055	3.118	0.002	Yes
<i>Indirect effect</i>						
H4 Green inclusive leadership → Green human resource management → Proactive pro-environmental behaviour	0.056	0.059	0.020	2.846	0.005	Yes



**Figure 3.** Structural model (*p*-values and path coefficients)

The bootstrapping method was performed in Smart PLS 3 to examine the direct effects. The *t*-values showed high efficiency in the model structure (See Figure 3 for the structural model). The relationship between the independent variable and the dependent variable was significantly positive.

## Discussion and conclusions

### Conclusions

This study examined the relationship between GIL, GHRM, and proactive PEB of hotel employees. One of the key contributions of this study is its focus on employees' proactive PEB in the tourism and hospitality industry. The findings suggest that GIL reflects GHRM and employees' proactive PEB. Green inclusive leaders can promote GHRM to drive employees to demonstrate proactive PEB in the hotel industry. Malaysia's hotel industry and tourism hospitality providers can formulate green processes, policies, procedures, and practices to encourage employees to engage in proactive PEB. Employees who devote significant time and effort to fulfilling their environmental responsibilities are likely to suggest, promote, and encourage new green initiatives and improve the already implemented green practices. The assumptions of this study were based on the TPB, which asserts that a supportive work environment fosters innovative green thinking among employees. A more thorough investigation into the unexpected outcomes is needed because organisational behaviour is a complex phenomenon that needs to be studied in various settings and with a wide range of demographics and other socioeconomic variables.

### Theoretical implications

Based on the research gaps established in the literature, we developed a theoretical model to explain the link between GIL, GHRM, and proactive PEB of hotel employees in achieving sustainable hotel environmental performance. Theoretical contributions are offered by constructing a new structural model supported by the TPB and the induction of GIL, GHRM,

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and proactive PEB. This study contributes to TPB by expanding and aligning the proactive PEB among hotel employees in Malaysia. The mediation for GHRM between GIL and proactive PEB further contributes to the theoretical development.

The results revealed a positive relationship between GIL and HRM. This finding is consistent with [Bhutto et al. \(2021\)](#). They found GIL in different contexts and postulated that GIL is a crucial predictor of green behaviour. According to [Alabri et al. \(2022\)](#) and [Chen et al. \(2021\)](#), IL leads to employee performance, work engagement, organisational commitment, enhanced service quality, positive attitude toward work-related outcomes, customer satisfaction and increased employee retention in the organisation. GIL can lead to HRM and PEB in hospitality organisations ([Aslan et al., 2021](#)).

Motivating employees to devote their emotional, cognitive, or physical resources to green work or increase their desire to engage in green work in a meaningful manner. In addition, inclusive leaders demonstrate availability, accessibility, and openness, fostering PEB among their followers ([Vakira et al., 2022](#)). The finding is consistent with previous studies by [Dirani et al. \(2020\)](#) and [Singh et al. \(2020\)](#). Employees may need some intervening mechanism to increase PEB if the leaders are unavailable.

The findings indicated that HRMGHRM was positively related to proactive PEB. Our finding supports [Decuyper and Schaufeli \(2020\)](#). They found the impact of GHRM on PEB in different contexts, such as small tourism enterprises. [Ansari et al. \(2021\)](#) identified that GHRM is important for employee PEB because HRM stimulates the green PEB of employees to create efficient resources and a socially responsible organisation. By demonstrating to their employees that their company is committed to environmental sustainability and is ready to assist in environmental protection efforts, leaders can demonstrate to their workforce that their company is cognizant of its environmental responsibilities.

The findings also revealed that GIL positively and significantly impacted PEB. The findings are aligned with [Al-Swidi \(2021\)](#). They demonstrated that green inclusive behaviour was crucial to influence employee green PEB in the organisation. [Bhutto et al. \(2021\)](#) stated that GIL could play a significant role in tourism and hospitality management as IL could foster employees' creativity to interact with customers. For mediating effects, the findings suggest that GHRM significantly mediates the relationship between GIL and proactive PEB. [Cheema and Javed \(2017\)](#) also found that GHRM is mediating while examining hotels' environmental performances.

#### *Practical implications*

This study presents three important practical implications for the hotel industry by encouraging employees' environmentally responsible behaviour. The results demonstrated that adopting a green inclusive approach to leadership does away with various levelled hurdles and encourages individuals to exhibit environmentally conscious behaviour. Enlightening the role of environmentally open and accepting ways to promote positive employee behaviour is of considerable practical use not solely for the organisations but additionally for culture as a whole. Given the service-oriented environment nature of the hospitality industry in which employees create one-of-a-kind customer-facing experiences that significantly improve their green behaviour, understanding the role of GIL is particularly important. Consistently, we advise hoteliers to educate and train the leadership teams to become more approachable and transparent. We encourage firms to consider organising monthly get-togethers for all employees, including the leadership team, to break the ice for better work results. Such events could be a useful starting point for applying IL.

#### *Limitations and future research*

This study has some limitations, which could be addressed in future studies. One of the limitations of this study is related to the cross-sectional study design. The temporal link

between variables cannot be determined because the variables were measured at the same time. This study design limits the ability to derive a causal relationship between variables. Therefore, a cohort or an experimental study design could be employed in the future to determine causality.

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